

**PROPOSED INCHAMORE WIND FARM**

**SCREENING FOR APPROPRIATE ASSESSMENT**

**AND**

**NATURA IMPACT STATEMENT**

**MAY 2023**

*Prepared for*

**Inchamore Wind DAC**

*by*

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## **1 INTRODUCTION**

BioSphere Environmental Services has been appointed by Inchamore Wind DAC to prepare a report to inform screening for appropriate assessment and a Natura Impact Statement (NIS) for the proposed Inchamore Wind Farm in Counties Cork and Kerry (the Project).

The purpose of the report is to provide the information required to assist the competent authority, in this case Cork County Council, to undertake a screening for appropriate assessment and, if considered necessary, an appropriate assessment. This will determine the effects, if any, of the Project on Natura 2000 (European) sites. The potential impacts on European sites, both as a result of the Project by itself and in-combination with other plans and projects, are appraised in this report.

The requirements for “Appropriate Assessment” are set out *under Article 6 of the EU Habitats Directive 92/43/EEC (as amended), transposed into Irish law through the European Union (Birds and Natural Habitats) Regulations 2011-2015 and the Planning and Development Act, 2000 (as amended).*

The assessment in this report is based on a desk study and various field surveys undertaken between 2017 and 2022.

### **1.1 Regulatory Context**

The Council Directive 92/43/EEC (as amended) on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as “The Habitats Directive”, provides the framework for legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (2009/147/EC) (as amended) (better known as “The Birds Directive”).

Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (see below).

*“Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”*

The Appropriate Assessment provisions have been transposed under Part XAB of the Planning and Development Act, 2000 (as amended).

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The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the AA process to the point, where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, it may be rejected. However this may not be the case if no alternative solutions are identified and the project is required for imperative reasons of overriding public interest (IROPI test) under Article 6 (4) of the Habitats Directive.

### **1.2 Stages of the Appropriate Assessment Process**

This Appropriate Assessment Report / Natura Impact Statement has been prepared in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland*. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, 2010 revision;
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. European Commission Environment DG, 2021;
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC*. Guidance issued by European Commission (21<sup>st</sup> November 2018).
- *Assessment of Plans and Projects in relation to Natura 2000 sites – (Revised) Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Guidance issued by European Commission (28.9.2021 C(2021) 6913 final)
- *ANNEX to the Commission notice to the Assessment of Plans and Projects in relation to Natura 2000 sites – (Revised) Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC: Examples of Practices, Case Studies, Methods and National Guidance*. Issued by European Commission (28.9.2021 C(2021) 6913 final)
- OPR Practice Note PN01 Appropriate Assessment Screening for Development Management. March 2021.

There are up to four successive stages involved in the Appropriate Assessment process. The outcome at each stage determines whether the next stage in the process is required. The following describes each of the four stages:

#### **Stage 1 – Screening**

The purpose of the screening stage is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in-combination with other plans or projects, could have significant effects on a Natura 2000 site in view of the site's conservation objectives.

There is no necessity to establish such an effect; it is merely necessary for the competent authority to determine that there may be such an effect. The need to apply the precautionary principle in making any key decisions in relation to the tests of Appropriate Assessment (AA) has been confirmed by the

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case law of the Court of Justice of the European Union (CJEU). Plans or projects that have no appreciable effect on a European site may be excluded. The threshold at this first stage is a very low one and operates as a trigger in order to determine whether a Stage Two AA must be undertaken by the competent authority on the implications of the proposed development for the conservation objectives of a European site. Therefore, where significant effects are likely, uncertain or unknown at screening stage, a second stage AA will be required.

### **Stage 2 – Appropriate Assessment**

A Stage Two AA is a focused and detailed examination, analysis and evaluation carried out by the competent authority (in this case, Cork County Council) to determine whether the plan or project, alone and in-combination with other plans and projects, will have an adverse effect on the integrity of a European site in view of that site's conservation objectives. Case law has established that such an Appropriate Assessment, to be lawfully conducted, in summary:

(i) must identify, in the light of the best scientific knowledge in the field, all aspects of the proposed development which can, by itself or in-combination with other plans or projects, affect the conservation objectives of the European site;

(ii) must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and

(iii) may only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of the identified potential effects. If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to stage three and, if necessary, stage four.

### **Stage 3 – Assessment of Alternatives**

This stage of the potential process arises where adverse effects on the integrity of a European site cannot be excluded and examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site.

### **Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI)**

This is the derogation process of Article 6(4), which examines whether there are imperative reasons of overriding public interest [IROPI] for allowing a project to proceed where adverse effects on the integrity of a European site have been predicted. Compensatory measures must be proposed and assessed as part of this stage.

### **1.3 Statement of Authority**

This report was prepared by Dr Brian Madden and is informed by the ecological survey data and relevant technical reports which accompany the planning application and a comprehensive literature review.

Brian Madden (BA. Mod. Hons., Ph.D., MCIEEM) qualified in Natural Sciences from Trinity College Dublin in the early 1980s and earned a doctorate degree from the National University of Ireland in 1990 for research in peatland ecosystem processes. Brian has worked on a wide range of wind farm and energy related projects since the late 1990s, from the planning stage through to construction and post-construction monitoring. Examples of projects include Grousemount Wind Farm, Cos. Cork/Kerry, Oweninny Wind Farm Phase 1 & Phase 2, Co. Mayo, Castlepook Wind Farm, Co. Cork, Letteragh Wind Farm, Co. Clare, Kiltumper Wind Farm Co. Clare, Eglis Wind Farm, Co Tyrone, Carrickatane Wind Farm, Co. Derry.

Ecological surveys associated with the project were carried out by the following:

***Dr John Conaghan BSc., PhD, MCIEEM*** is an experienced plant ecologist who has worked as a consultant ecologist in Ireland since 1994. He is a specialist in the survey and assessment of wetland vegetation and habitats with bogs and fens his main area of expertise. These surveys and assessments have contributed towards Environmental Impact Assessments of a range of wind farm, power line, road, and gas pipeline developments. John carried out the habitat and flora surveys for the project.

***Dr Patrick Crushell BSc MSc PhD MCIEEM CEcol*** holds an honours degree in Applied Ecology from UCC, a Masters degree in Environmental Resource Management from UCD and a PhD on peatland ecology from Wageningen University, the Netherlands. Patrick carried out the surveys for Kerry Slug for the project.

***Dr Tina Aughney*** holds a BSc in Environmental Science and a PhD degree from NUI Galway and has been working as a bat specialist since 2000. Tina carried out bat surveys at the proposed Inchamore Wind Farm in 2022 and prepared the bat impact assessment for the project.

***Mr Paul Murphy CEnv MCIEEM (EirEco Environmental Consultants)*** holds a MSc in Environmental Science and is a Member of the Institute of Fisheries Management. Paul carried out the aquatic studies for the project and prepared the Biodiversity Aquatic Ecology chapter of EIAR.

***Dr Jonathon Dunn (Fehily Timoney Consultants)*** – conducted bat static detector surveys in 2019/2020, Jonathon is an ecologist with over seven years' experience in the environmental sector and holds a BA (Hons) in Natural Sciences (Zoology) from the University of Cambridge, an MSc in Ecology, Evolution and Conservation from Imperial College London and a PhD in Avian Ecology from Newcastle University.

## **1.4 Data Sources to Carry Out Assessment**

The assessment is supported by the following sources of data and information, including chapters of the accompanying EIAR:

- Review of relevant environmental databases including National Biodiversity Ireland Database available online, last accessed 10<sup>th</sup> March 2023.
- Review of NPWS Site Synopses & Conservation Objectives for relevant European sites, available on <http://www.npws.ie/en/ProtectedSites/>. Last accessed 20<sup>th</sup> March 2023.
- Review of NPWS (2019) The Status of EU Protected Habitats and Species in Ireland report
- Review of online web-mappers: National Parks and Wildlife Service (NPWS) & EPA, last checked 31<sup>st</sup> March 2023
- Review of OS map and aerial photographs of the site and surroundings of the proposed project, available online <http://www.geohive.ie>. Last checked 31<sup>st</sup> March 2023
- Review of other relevant plans and projects within the area
- EIAR Chapter 2. Project Description prepared by Jennings O'Donovan
- EIAR Chapter 5. Terrestrial Ecology prepared by BioSphere Environmental Services
- EIAR Chapter 7. Aquatic Ecology prepared by EirEco
- EIAR Chapter 8. Soils and Geology prepared by RSK Consultants
- EIAR Chapter 9. Hydrology and Hydrogeology prepared by RSK Consultants
- EIAR Volume IV (Appendix 2.1): Construction Environmental Management Plan (CEMP) prepared by Jennings O'Donovan
- EIAR Volume IV (Appendix 2.3): A Grid Route Assessment report prepared by TLI Group.

## **2 SCREENING FOR APPROPRIATE ASSESSMENT**

Screening determines whether appropriate assessment is necessary by examining:

1. Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a Natura 2000 site;
2. Whether it is possible that the project may have a significant effect on a Natura 2000 site, either alone or in combination with other projects or plans, in view of the site's conservation objectives.

Screening involves the following:

- i. Description of plan or project;
- ii. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives;
- iii. Assessment of likely effects – direct, indirect and cumulative – undertaken on the basis of available information as a desk study or field survey or primary research as necessary;

- iv. Screening Statement with conclusions.

## **2.1 Site Description**

The Project is situated on the border of Counties Cork and Kerry and is approximately 5.9 km west of Ballyvourney (see Figure 1). The lands are within the townlands of Inchamore, Mileeny, Derryreag and Derreenaling.

The Project is located within the Derrynasaggart Mountains and situated within a landscape dominated by agricultural land (mainly used for stock grazing), commercial forestry and bog and heath of varying quality. There are a number of established wind farms in the region, including Coomagearlahy Wind Farm (c.2.7 km), Coolknoohil Kilgarvan Wind Farm (4.4 km), Glanlee Wind Farm (4.9 km) and Grousemount Wind Farm (7.5 km) (all southwest of the Site).

The altitude of the site ranges from approximately 300 m to 460 m AOD, with the local peak of Knockbwee at 461 m AOD. The mapped geological formation underlying the site is classified as the Gun Point Formation (DUGNPT), which is comprised of Green-grey sandstone and Purple siltstone (see Chapter 8 for details). The primary soil type across the site is blanket peat, with some outcropping bedrock. Peat depth is generally shallow though localised pockets of deeper peat (> 2 m) occur in places.

The topography of the site varies, ranging from mostly gently to occasional steep inclinations. The site for the Project is located within the Lee, Cork Harbour and Youghal Bay catchment. The site lies entirely within the Inchamore Stream sub-catchment where five tributaries flow into the Bardinch River, which then joins the Sullane River, a tributary of the Lee. All surface water drainage from the Development eventually combine in Carrigdrohid Reservoir, from which waters eventually flow to Cork Harbour. The Wind Farm Site itself is characterised by a relatively extensive network of non-mapped natural and artificial drainage channels. The natural streams within the Site are small 1<sup>st</sup> order tributaries which have high gradients and do not provide suitable habitat for fish or larger aquatic organisms. The Water Framework Directive status (2013-2018) for the mapped surface water body / river (Sullane\_010) directly draining the Site is classified as 'Good'.

The Grid Connection Route runs in an east to north-easterly direction from the Inchamore site to the existing Ballyvouskill 220kV substation (see Figure 2). Much of the drainage along the route corridor is to the Clydagh River.

Ecologically, the site for the proposed Wind Farm can be described as being dominated by conifer plantation (WD4 of Fossitt 2000). The unplanted area of the site is mostly wet heath (HH3), with areas of upland blanket bog (PB2) and cutover bog (PB4). Other habitats represented within the Site are dry siliceous heath (HH1), exposed siliceous rock (ER1) and eroding/upland rivers (FW1). The grid connection route is almost entirely along forest tracks.

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A full description of the Habitats, Flora and Fauna associated with the project site is presented in Chapter 5 of the accompanying EIAR, with Aquatic Ecology presented in Chapter 6 and Ornithology in Chapter 7. These chapters have been informed by the completion of the following surveys:

- Habitat, vegetation and flora surveys
- Mammal (terrestrial), amphibian and reptile surveys
- Bat survey, inc. activity surveys, static detector surveys and roost surveys
- Kerry slug survey
- Bird surveys, inc. activity surveys, transect surveys, merlin survey, red grouse survey, hinterland surveys
- Aquatic and fishery surveys

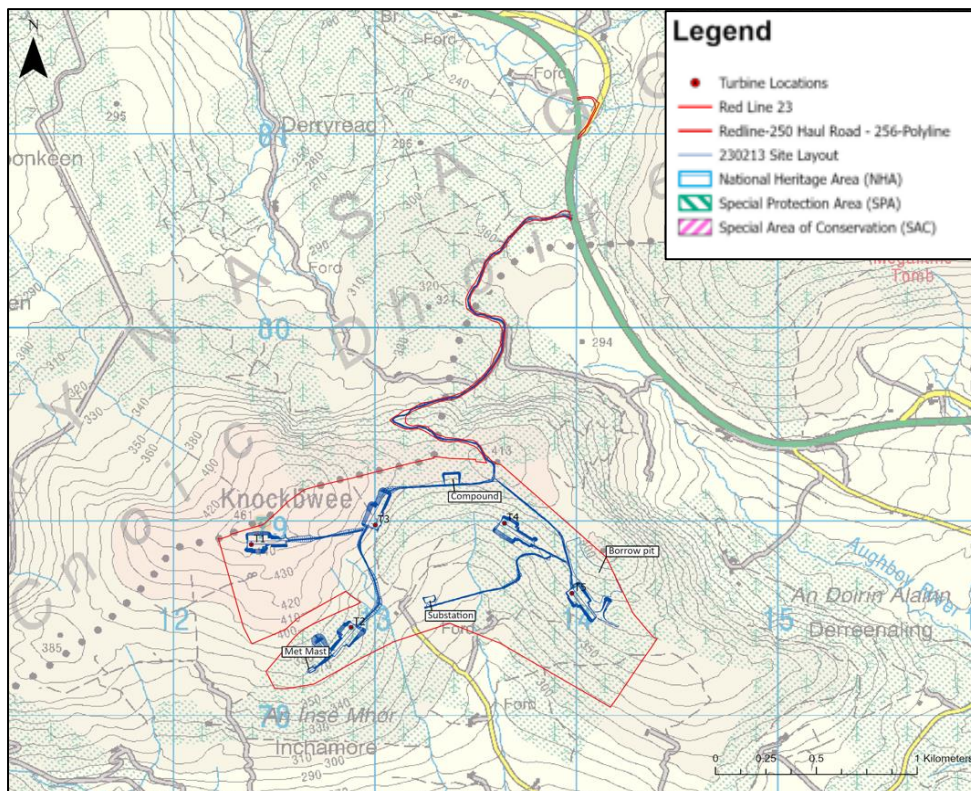
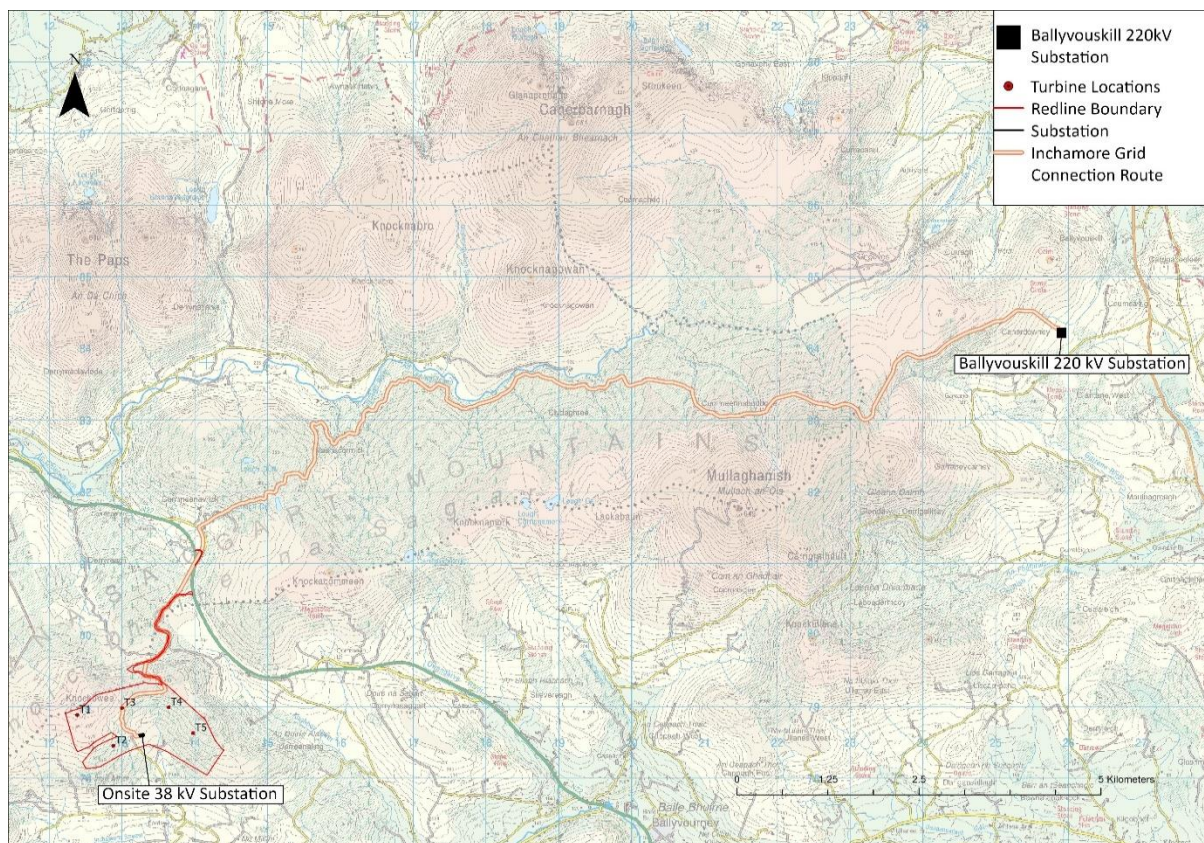


Figure 1: Location of site for proposed Inchamore Wind Farm.



**Figure 2: Route of grid connection from site for proposed wind farm at Inchamore and the existing Ballyvouskill 220kV substation. Overview of the Proposed Development**

Permission is being sought by the Developer for the construction of 5 No. Wind Turbines, an on-site substation, all ancillary works and/including and works along the turbine delivery route.

The Development will consist of the following main components:

- Construction of five wind turbines with an overall ground to blade tip height ranging from 177 m to 185 m inclusive. The wind turbines will have a rotor diameter ranging from 149 m to 155 m inclusive and a hub height ranging from 102.5 m to 110.5 m inclusive.
- Construction of permanent turbine hardstands and turbine foundations.
- Construction of a temporary construction compound with associated temporary site offices, parking areas and security fencing.
- Installation of a (35-year life cycle) meteorological mast with a height of 110 m and a 4 m lightning pole on top.
- Development of an on-site borrow pit.
- Construction of new permanent internal site access roads and upgrade of existing internal site access to include passing bays and all associated drainage infrastructure.
- Development of an internal site drainage network and sediment control systems.
- Construction of a permanent 38 kV electrical substation including a control building with welfare facilities, all associated electrical plant and equipment, security fencing and gates, all associated underground cabling, wastewater holding tank, and all ancillary structures and works.

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- All associated underground electrical and communications cabling connecting the wind turbines to the wind farm substation.
- Ancillary forestry felling to facilitate construction of the Development.
- All associated site development works including berms, landscaping, and soil excavation.
- Upgrade works on the Turbine Delivery Route to include the following:
- Improvement of an entrance to an existing forest road off the N22 to include the following:
  - Works at an entrance to an existing forest road off the N22 to include localised widening of the road and creation of a splayed entrance, removal of existing vegetation for visibility splays and removal of street furniture to facilitate the delivery of abnormal loads and turbine component deliveries.
- The construction of a temporary access road off the N22 in the townland of Cummeenavrick to facilitate 180 degrees turning manoeuvre by construction vehicles.

A 10-year planning permission and 35-year operational life from the date of commissioning of the entire wind farm is being sought. This reflects the lifespan of modern-day turbines.

A permanent planning permission is being sought for the substation and all associated electrical plant, equipment cabling security fencing and gates, wastewater holding tank, and all ancillary structures and works as these will become an asset of the national grid under the management of ESB & EirGrid and will remain in place upon decommissioning of the wind farm.

The Inchamore Wind Farm 38kV substation will be connected to the existing Ballyvouskill 220kV substation via underground cabling (UGC)<sup>1</sup>. The UGC route is approximately 19.9 km in length and traverses in an east to south-easterly direction from the existing Ballyvouskill 220kV substation to the Inchamore Wind Farm substation location. Of the 19.9 km, 1.3 km is within the Site, with the remaining 18.6 km located off-road and in third-party lands. The grid connection is not part of the planning application for the Development but has been fully assessed within the associated EIAR as part of the Project.

The underground cable route initially begins within the townland of Caherdowney, Co. Cork where from Ballyvouskil 220kV substation compound, the UGC departs the substation on the north western boundary, converging onto a permanent access track to be constructed as part of this development within agricultural lands and traverses on an upward trajectory for approximately 950 m prior to entering into forested plantations propertyed by Coillte.

The UGC will consist of 3 No. 110 mm diameter HDPE power cable ducts and 1 No. 110 mm diameter HDPE communications duct to be installed in an excavated trench, typically 600 mm wide by 1,220 mm deep, with variations on this design to adapt to bridge crossings, service crossings and watercourse

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<sup>1</sup> It is noted that while the UGC is not being applied for as part of the planning permission, it has been fully assessed within this NIS.

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crossings, etc. It has been determined that no more than 100 m section of trench will be excavated at a time and it is anticipated to take (1 no.) day to complete each 100 m excavation, installation of ducting and reinstatement of material. In its entirety, the UGC will have a total of 18 No. Cable Joint Bays (CJBs) and 115 No. identified culvert crossings. 3 No. identified bridge crossings which have insufficient clearance within each structure and will require a Horizontal Directional Drill method to cross. An additional HDD crossing will be required to cross the N22.

### **2.2 Method and Identification of Relevant European Sites**

The approach to screening is likely to differ somewhat between plans and projects, depending on scale and on the likely effects, but the following should be included (following the “Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities”, Department of Environment, Heritage and Local Government):

1. Any Natura 2000 sites within or adjacent to the plan or project area.
2. Any Natura 2000 sites within the likely zone of impact of the plan or project. A distance of 15 km is used in the case of plans, and derives from UK guidance (Scott Wilson et al. 2006). 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, and the sensitivities of the ecological receptors, and the potential for in-combination effects.
3. Natura 2000 sites that are more than 15 km from the plan or project area depending on the likely impacts, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle. In the case of sites with water dependent habitats or species, and a plan or project that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment.

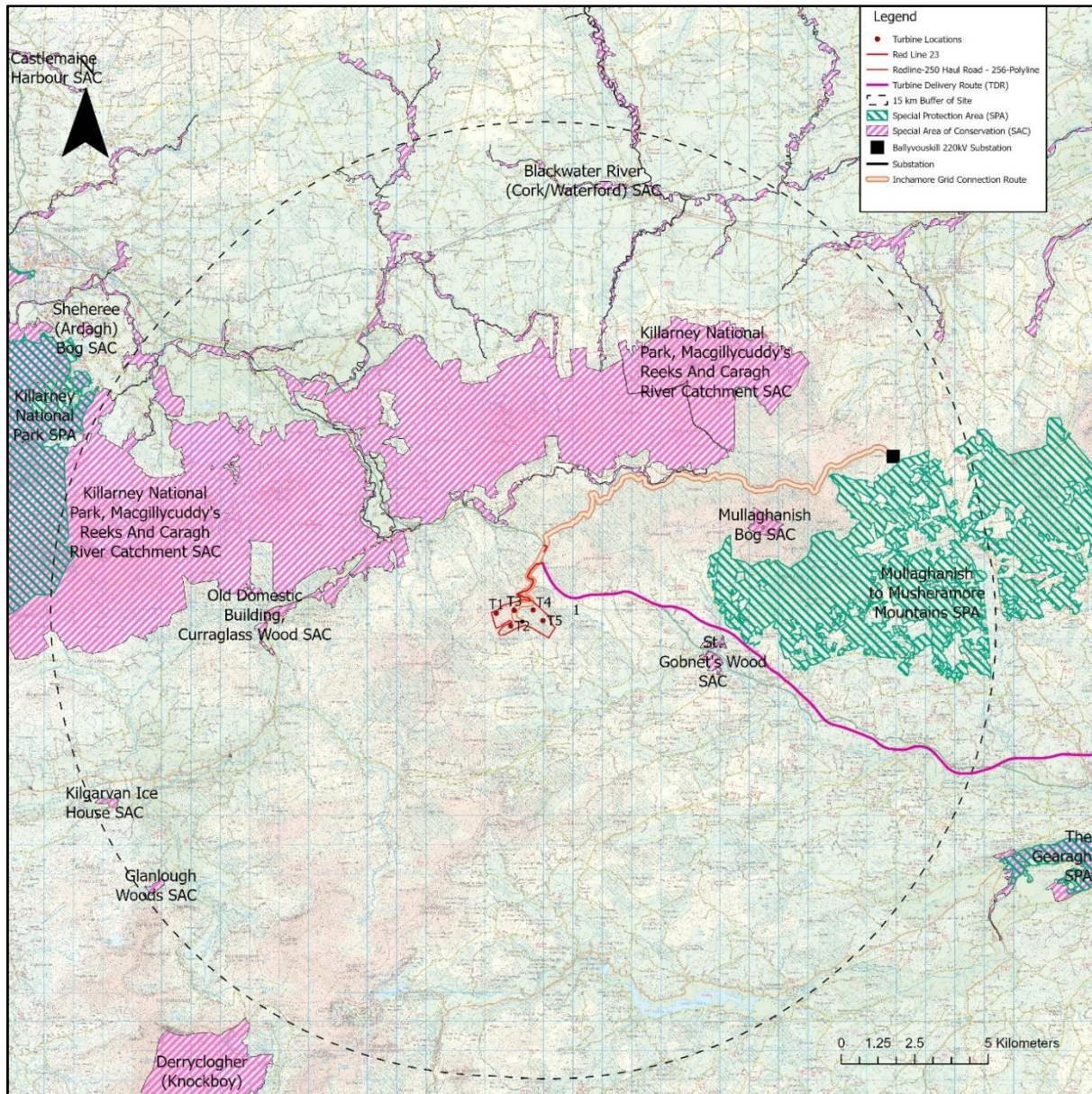
The “Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities” notes the following in section 3.2.3 “Natura 2000 Sites”:

*“The second stage (of the AA Screening process) is an examination of what Natura 2000 sites might be affected. These sites should be identified and listed, bearing in mind the potential for a plan or project, whether it is within or outside a Natura 2000 site, to have direct, indirect or cumulative effects, and taking a precautionary approach so that a site is included if doubt exists”.*

For the Inchamore project, all European Sites that could potentially be affected were identified using a Source-Pathway-Receptor conceptual model for environmental management risk assessment. To provide context for the assessment, European Sites within a distance of 15 km surrounding the development site are shown on Figure 3. Four European sites, situated at distances further than 15 km, are also included in the assessment as these are located on the River Lee system which receives

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drainage from the site. Information on the sites with regard to their conservation objectives and connectivity to the Inchamore site is provided in Table 1.



**Figure 3.** Locations of European designated sites within a 15 km radius of the site for the proposed Inchamore Wind Farm.

Table 1. Relevant European sites, reasons for designation, distances from Inchamore site and summary of ecological connectivity.

Note that in the following, the use of the term 'Project' includes the grid connection route and turbine delivery route.

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
<b>SPECIAL AREAS OF CONSERVATION</b>		
Killarney National Park, Macgillycuddy's Reeks & Caragh River Catchment SAC (site code 000365)	<p>Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]</p> <p>Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130]</p> <p>Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion vegetation</i> [3260]</p> <p>Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]</p> <p>European dry heaths [4030]</p> <p>Alpine and Boreal heaths [4060]</p> <p><i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</p> <p>Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130]</p> <p>Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410]</p> <p>Blanket bogs (* if active bog) [7130]</p> <p>Depressions on peat substrates of the <i>Rhynchosporion</i> [7150]</p> <p>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</p> <p>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</p> <p><i>Taxus baccata</i> woods of the British Isles [91J0]</p> <p><i>Geomalacus maculosus</i> (Kerry Slug) [1024]</p> <p><i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Euphydrias aurinia</i> (Marsh Fritillary) [1065]</p> <p><i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p><i>Lampetra planeri</i> (Brook Lamprey) [1096]</p> <p><i>Lampetra fluviatilis</i> (River Lamprey) [1099]</p> <p><i>Salmo salar</i> (Salmon) [1106]</p> <p><i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p> <p><i>Lutra lutra</i> (Otter) [1355]</p> <p><i>Trichomanes speciosum</i> (Killarney Fern) [1421]</p> <p><i>Najas flexilis</i> (Slender Naiad) [1833]</p>	<p>The Site at Inchamore is approximately 1.4 km south of the Caragh River component of the SAC. The closest point to the Turbine Delivery Route (along the access road from the N22 entrance) is 1.62 km south east of the SAC.</p> <p>The Site entrance/closest point of the TDR is located 1.75 km south east to the SAC.</p> <p>There are no ecological or hydrological linkages between the Project and the SAC.</p> <p>The location of the Development from the SAC is greater than the normal distance that foraging lesser horse-shoe bats would normally fly. McAney (in Lysaght &amp; Marnell 2016) notes that the normal foraging distance is less than 2 km, while Schofield (cited in the NPWS Conservation Objectives for the site) notes that linear features such as hedgerows, treelines and stone walls provide vital connectivity for this species within</p>

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
	<p><i>Alosa fallax killarnensis</i> (Killarney Shad) [5046]</p> <p>According to this SAC's site Conservation Objectives document (Version 1.0. Department of Culture, Heritage and the Gaeltacht, 23<sup>rd</sup> October 2017), for each of the listed QIs, the Conservation Objective is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.</p>	<p>2.5 km around each roost.</p> <p>The majority of the grid connection route is located along the route of an existing forestry road which runs parallel to the Clydagh River. The closest distance between the cable route corridor and the SAC is 41 m. The route crosses three main streams and numerous drains which flow into the Clydagh.</p> <p><b>It is concluded that hydrological connectivity exists between the Project (by way of the grid connection) and the SAC and that further assessment is required.</b></p>
<p>Mullaghanish Bog SAC (site code: 001890)</p>	<p>Blanket bogs (* if active bog) [7130]</p> <p>According to this SAC's site Conservation Objectives document (Version 1.0. Department of Arts, Heritage Regional, Rural &amp; Gaeltacht Affairs, 16<sup>th</sup> May 2017) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>The Site is approximately 6.9 km south-southwest of the SAC.</p> <p>The Turbine Delivery Route is 7.1 km at its closest point to the SAC. There are no hydrological links between these areas and the SAC.</p> <p>While a section of the grid connection corridor runs within a forest track 632 m from the SAC, the SAC is on higher ground to the forest track with established forestry and open heath in between.</p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		<p><b>It is considered that there is no potential for significant effects on this SAC.</b></p>
<p>St Gobnet's Wood SAC (site code: 000106)</p>	<p>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</p> <p>According to this SAC's site Conservation Objectives document (Version 1.0. Department of Housing, Local Government and Gaeltacht, NPWS 11<sup>th</sup> January 2022) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>The Site is approximately 5 km west-northwest of the SAC.</p> <p>The Turbine Delivery Route at its nearest point (existing road of the N22) is 185 m northwest of the SAC. However, the closest point to proposed works (site entrance) is 6.08 km in distance from the SAC.</p> <p>The closest point along the Grid Connection Route is 5.46 km northwest of the SAC.</p> <p>There are no hydrological links between the TDR and GCR to the SAC.</p> <p>The Site and the SAC are linked hydrologically by the Sullane River (channel length c.8 km).</p> <p>However, the qualifying interest of the SAC, Old Sessile Oak Woods, occurs on ground above the high water mark and could not be affected in any way by potential pollutants from the project site which could be carried in the river water.</p> <p><b>It is concluded that while hydrological</b></p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		<p><b>connectivity exists between the Project area and the SAC, there is no potential for significant effects on the qualifying interest of this SAC.</b></p>
<p>Blackwater River (Cork/Waterford) (site code 002170)</p>	<p>Estuaries [1130]  Mudflats and sandflats not covered by seawater at low tide [1140]  Perennial vegetation of stony banks [1220]  Salicornia and other annuals colonising mud and sand [1310]  Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]  Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]  Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]  Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]  Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]  <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]  <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092]  <i>Petromyzon marinus</i> (Sea Lamprey) [1095]  <i>Lampetra planeri</i> (Brook Lamprey) [1096]  <i>Lampetra fluviatilis</i> (River Lamprey) [1099]  <i>Alosa fallax fallax</i> (Twaite Shad) [1103]  <i>Salmo salar</i> (Salmon) [1106]  <i>Lutra lutra</i> (Otter) [1355]  <i>Trichomanes speciosum</i> (Killarney Fern) [1421]</p> <p>According to this SAC's site Conservation Objectives document (NPWS 31<sup>st</sup> July 2012, Conservation objectives for Blackwater River SAC [002170]. Version 1.0. Department of Arts, Heritage and the Gaeltacht) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>The site is approximately 11 km southwest of the SAC; the Grid Connection Route is located 4.1 km south of this SAC; the Turbine Delivery route is located 9.0 km south of this SAC; with no hydrological or ecological linkages between the locations and the SAC.</p> <p><b>It is considered that there is no potential for significant effects on this SAC.</b></p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
<p>Glanlough Woods SAC (site code: 002315)</p>	<p><i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p> <p>According to this SAC's site Conservation Objectives document (NPWS 28<sup>th</sup> September 2018 Conservation objectives for Glanlough Woods SAC [002315]. Version 1.0. Department of Culture, Heritage and the Gaeltacht) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>The Site is approximately 14 km northeast of the SAC. The Turbine Delivery Route is located 16.6 km to the northeast of the SAC. The Grid Connection Route is located to 16.6 km to the northeast of the SAC. There are no hydrological links between these areas and the SAC.</p> <p>The location of the Development from the SAC is greater than the normal distance that foraging lesser horseshoe bats would normally fly. McAney (in Lysaght &amp; Marnell 2016) notes that the normal foraging distance is less than 2 km, while Schofield (cited in the NPWS Conservation Objectives for the site) notes that linear features such as hedgerows, treelines and stone walls provide vital connectivity for this species within 2.5 km around each roost.</p> <p><b>It is considered that there is no potential for significant effects on this SAC.</b></p>
<p>Kilgarvan Ice House SAC (site code 000364)</p>	<p><i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p> <p>According to this SAC's site Conservation Objectives document (NPWS 6<sup>th</sup> November 2018, Conservation objectives for Kilgarvan Ice House SAC [00364].</p>	<p>The Site is approximately 10 km northeast of the SAC. The Turbine Delivery Route is located 12.5 km northeast of the SAC.</p>

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
	<p>Version 1.0. Department of Culture, Heritage, and the Gaeltacht) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>The Grid Connection Route is located 12.3 km northeast of the SAC.</p> <p>There are no hydrological links between the Project and the SAC.</p> <p>The proposed wind farm site location from the SAC is greater than the normal distance that foraging lesser horse-shoe bats would normally fly. McAney (in Lysaght &amp; Marnell 2016) notes that the normal foraging distance is less than 2 km, while Schofield (cited in the NPWS Conservation Objectives for the site) notes that linear features such as hedgerows, treelines and stone walls provide vital connectivity for this species within 2.5 km around each roost.</p> <p><b>It is considered that there is no potential for significant effects on this SAC and no further assessment is required.</b></p>
<p>Old Domestic Building, Curraglass Wood SAC (site code 002041)</p>	<p><i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p> <p>According to this SAC's site Conservation Objectives document (NPWS 27<sup>th</sup> August 2018, Conservation objectives for Old Domestic Building, Curraglass Wood SAC [002041]. Version 1.0. Department of Culture, Heritage, and the Gaeltacht) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected</p>	<p>The Site is approximately 8.1 km east of the SAC. The Grid Connection Route is located 9.8 km east of the SAC. The Turbine Delivery Route is located 9.8 km east of the SAC. There are no hydrological links</p>

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		<p>between the Project and the SAC.</p> <p>The location of the Site from the SAC is greater than the normal distance that foraging lesser horse-shoe bats would normally fly. McAney (in Lysaght &amp; Marnell 2016) notes that the normal foraging distance is less than 2 km, while Schofield (cited in the NPWS Conservation Objectives for the site) notes that linear features such as hedgerows, treelines and stone walls provide vital connectivity for this species within 2.5 km around each roost.</p> <p><b>It is considered that there is no potential for significant effects on this SAC.</b></p>
<p>The Gearagh SAC (site code 000108)</p>	<p>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]</p> <p>Rivers with muddy banks with Chenopodium rubri p.p. and Bidens p.p. vegetation [3270]</p> <p>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]</p> <p>Alluvial forests with Alnus glutinosa and Fraxinus excelsior (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</p> <p><i>Lutra lutra</i> (Otter) [1355]</p> <p>According to this SAC's site Conservation Objectives document (Version 1.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, 15th September 2016) for each of the listed QIs, the Conservation</p>	<p>The Site is located 16.8 km northwest of the SAC. The Turbine Delivery Route (where works are proposed) is located 18.3 km northwest of the SAC. The Grid Connection Route (at its nearest point) is located 18.3 km northwest of the SAC.</p> <p>The Sullane River, which drains the Site for the proposed wind farm, flows in a south and then east direction for a distance of</p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
	<p>Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>approximately 24 km before it enters the River Lee system at Coolcour, approximately 3 km downstream of the Lee Bridge, which marks the eastern extremity of the Gearagh SAC. Flow continues eastwards towards Cork Harbour. Taking into account (i) that the flow from the area of the proposed wind farm does not mix with water within the SAC, and (ii) the channel distance of over 20 km between the two locations, there is no realistic potential for water from the wind farm area (which could carry contaminants in absence of mitigation) to have effects on the qualifying interests of the SAC.</p> <p><b>It is considered that there is no potential for significant effects on this SAC.</b></p>
<p>Great Island Channel SAC (site code 001058)</p>	<p>Mudflats and sandflats not covered by seawater at low tide [1140]                      Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</p> <p>According to this SAC's site Conservation Objectives document (Version 1.0. Department of Arts, Heritage and the Gaeltacht, 6<sup>th</sup> June 2014) for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and/or the Annex II species for which the SAC has been selected.</p>	<p>The Site is located 62.2 km west of the SAC.</p> <p>The nearest point along the Turbine Delivery Route is located 5.9 km from the SAC. The nearest point along the Turbine Delivery Route where works are proposed (site entrance) is a distance of 62.8 km west of the SAC.</p> <p>The closest point along the Grid Connection</p>

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		<p>Route is near the existing 220 kV Ballyvouskill Substation at a distance of 51.7 km northwest of the SAC.</p> <p>The Sullane River, which drains the Site for the proposed wind farm, enters the River Lee system at Coolcour, approximately 24 km from the site of the proposed wind farm. The Lee then flows for approximately 40 km before entering Cork Harbour. There is a further 5 km distance across the harbour to the SAC.</p> <p>While there is a total distance of approximately 69 km from the Inchamore site to the SAC, hydrological connectivity does exist. However, in view of the distance between the two locations, it is considered that there is no potential for measurable effects on the qualifying interests of the SAC. Any pollutants or silts entering the drainage network at the site for the proposed wind farm, even in the most extreme scenarios and without mitigation of any form, would be completely attenuated by the dilution, dispersal and settlement that would occur within the</p>

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		river and estuarine system.  <b>It is considered that there is no potential for significant effects on this SAC.</b>
<b>SPECIAL PROTECTION AREAS</b>		
Mullaghanish to Musheramore Mountains SPA (site code: 004162)	<p>Hen Harrier (<i>Circus cyaneus</i>) [A082]</p> <p>According to the First Order Site-specific Conservation Objectives Version 1.0 for Mullaghanish to Musheramore Mountains SPA (NPWS 2022, Department of Housing, Local Government and Heritage), for each of the listed SCIs, the Conservation Objective is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>	<p>The site of the proposed wind farm at Inchamore is approximately 6 km west of the SPA.</p> <p>Habitats suitable for foraging by hen harrier, including bog, heath, wet grassland and scrub, occur fairly widely between the SPA and the wind farm site.</p> <p>The habitats within the wind farm site have potential to support foraging hen harriers.</p> <p>A section of the grid connection route is located along the route of an existing forestry road which runs north of the SPA. The closest distance between the cable route corridor and the SPA is 170 m.</p> <p>The proposed works on the Turbine Delivery Route are at a distance of 5.6 km west of the SPA.</p> <p><b>As the potential for significant effects on this SPA cannot be excluded, further assessment is required.</b></p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
Killarney National Park SPA (site code 004038)	<p>Merlin (<i>Falco columbarius</i>) [A098]</p> <p>Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]</p> <p>According to the First Order Site-specific Conservation Objectives Version 1.0 for Killarney National Park SPA (NPWS 2022, Department of Housing, Local Government and Heritage), for each of the listed SCIs, the Conservation Objective is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>	<p>The Site is approximately 14.5 km east of the SPA.</p> <p>Habitats suitable for foraging by merlin, including bog, heath, wet grassland and scrub, occur fairly widely between the SPA and the wind farm site.</p> <p>The habitats within the wind farm site have potential to support foraging merlin.</p> <p>From a review of the literature (Cramp 1980, Newton et al. 1978, Orchel 1992, Sale 2016), it can be concluded with certainty that the hunting range of merlins breeding within the Killarney National Park SPA, a nearest distance of 14.5 km from Inchamore, could not extend to the site for the proposed wind farm at Inchamore.</p> <p>Habitats outside of the National Park, or within the vicinity of the Inchamore site, are not suitable for supporting Greenland white-fronted goose (the other SCI for this SPA) and there are no historic or recent records of the species from these areas.</p> <p>The works along the Turbine Delivery Route are located 16.0 km east of the SPA.</p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		<p>The Grid Connection Route is located 15.8 km east of the SPA.</p> <p><b>It is considered that there is no potential for significant effects on this SPA.</b></p>
<p>The Gearagh SPA (site code 0004109)</p>	<p>Wigeon (<i>Anas penelope</i>) [A050]                      Teal (<i>Anas crecca</i>) [A052]                      Mallard (<i>Anas platyrhynchos</i>) [A053]                      Coot (<i>Fulica atra</i>) [A125]                      Wetland and Waterbirds [A999]</p> <p>According to the First Order Site-specific Conservation Objectives Version 1.0 for The Gearagh SPA (NPWS 2022, Department of Housing, Local Government and Heritage), for each of the listed SCIs, the Conservation Objective is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>	<p>The Site is 16.8 km northwest of the SPA.</p> <p>The proposed works along the Turbine Delivery Route are located 18.3 km northwest of the SPA.</p> <p>The Grid Connection Route is 18.5 km northwest of the SPA.</p> <p>The Sullane River, which drains the Site for the proposed wind farm, flows in a south and then east direction for a distance of approximately 24 km before it enters the River Lee system at Coolcour, approximately 4 km downstream of the SPA. Flow continues eastwards towards Cork Harbour. Taking into account (i) that the flow from the area of the proposed wind farm is not likely to mix with water within the SPA, and (ii) the channel distance of approximately 28 km between the two locations, there is no realistic potential for water from the wind farm area (which could carry</p>

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European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
		<p>contaminants in absence of mitigation) to have effects on the Special Conservation Interests of the SPA,</p> <p>The habitats within the proposed wind farm site do not have potential to support any of the SCIs of the SPA.</p> <p><b>It is considered that there is no potential for significant effects on this SPA.</b></p>
<p>Cork Harbour SPA (site code 0004040)</p>	<p>Little Grebe (<i>Tachybaptus ruficollis</i>) [A004]                      Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]                      Cormorant (<i>Phalacrocorax carbo</i>) [A017]                      Grey Heron (<i>Ardea cinerea</i>) [A028]                      Shelduck (<i>Tadorna tadorna</i>) [A048]                      Wigeon (<i>Anas penelope</i>) [A050]                      Teal (<i>Anas crecca</i>) [A052]                      Pintail (<i>Anas acuta</i>) [A054]                      Shoveler (<i>Anas clypeata</i>) [A056]                      Red-breasted Merganser (<i>Mergus serrator</i>) [A069]                      Oystercatcher (<i>Haematopus ostralegus</i>) [A130]                      Golden Plover (<i>Pluvialis apricaria</i>) [A140]                      Grey Plover (<i>Pluvialis squatarola</i>) [A141]                      Lapwing (<i>Vanellus vanellus</i>) [A142]                      Dunlin (<i>Calidris alpina</i>) [A149]                      Black-tailed Godwit (<i>Limosa limosa</i>) [A156]                      Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]                      Curlew (<i>Numenius arquata</i>) [A160]                      Redshank (<i>Tringa totanus</i>) [A162]                      Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]                      Common Gull (<i>Larus canus</i>) [A182]                      Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]                      Common Tern (<i>Sterna hirundo</i>) [A193]                      Wetland and Waterbirds [A999]</p>	<p>The closest point along the Turbine Delivery Route is 14 m from the SPA where the road is already in existence. However, the proposed works (site entrance) is located 57 km northwest of the SPA.</p> <p>The Grid Connection Route is located 57.1 km from the SPA.</p> <p>The Sullane River, which drains the site for the proposed wind farm, enters the River Lee system at Coolcour, approximately 24 km from the site of the proposed wind farm. The Lee then flows for approximately 40 km before entering Cork Harbour.</p> <p>While there is a total distance of approximately 64 km from the Inchamore site</p>

European Site	Reasons for designation (information correct as of 23 <sup>rd</sup> January 2023) (*denotes a priority habitat)	Distance from proposed Inchamore Wind Farm Project Area and summary of ecological connectivity
	<p>According to the First Order Site-specific Conservation Objectives Version 1.0 for Cork Harbour SPA (NPWS 2022, Department of Housing, Local Government and Heritage), for each of the listed SCIs, the Conservation Objective is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>	<p>to the SPA, hydrological connectivity does exist. However, in view of the distance between the two locations, it is considered that there is no potential for measurable effects on the SCIS of the SAC. Any pollutants or silts entering the drainage network at the site for the proposed wind farm, even in the most extreme scenarios and without mitigation of any form, would be completely attenuated by the dilution, dispersal and settlement that would occur within the river and estuarine system.</p> <p><b>It is considered that there is no potential for significant effects on this SPA.</b></p>

### **2.3 Assessment of Potential for Impacts and Significant Effects**

A total of 13 European sites are identified where consideration is given for the potential of the Project (including the Grid Connection Route and Turbine Delivery Route) to have effects on their qualifying interests and/or Special Conservation Interests. These sites are listed in **Table 1** and mapped in Figure 4. The 13 sites are:

- Killarney National Park, Macgillycuddy’s Reeks and Caragh River Catchment SAC (code 000365)
- Mullaghanish Bog SAC (code 001890)
- St. Gobnet’s Wood SAC (code 00106)
- Blackwater River (Cork/Waterford) SAC (code 002170)
- Glanlough Woods SAC (code 002315)

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- Kilgarvan Ice House SAC (code 000364)
- Old Domestic Building, Curraglass Wood SAC (code 002041)
- The Gearagh SAC (code 000108)
- Great Island Channel SAC (code 001058)
- Mullaghanish to Musheramore Mountains SPA (code 004162)
- Killarney National Park SPA (code 004038)
- The Gearagh SPA (code 004109)
- Cork Harbour SPA (code 004040)

The assessment of potential impacts considers all scenarios within the range of turbine parameters proposed for the Development as shown in Table 2 below. Ecologically, the different turbine parameters are relevant to collision risk to birds and bats, and in the respective assessments the worst-case scenario is assumed. For habitats loss, the impact assessment is based on the largest turbine foundation diameter.

**Table 2: Turbine Parameters**

<b>Turbine Parameter</b>	<b>Assessment Parameters</b>
Turbine Blade Tip Height	177 m to 185 m
Rotor Diameter	149 m to 155 m
Hub Height	102.5 m to 110.5 m
Turbine Foundations (Diameter)	22 m to 25.5 m

There follows an evaluation of each of the 13 sites (as summarised in Table 2) in respect of the potential for effects on the conservation objectives as a result of the proposed project during construction, operational and decommissioning phases.

### **2.3.1 Killarney National Park, Macgillycuddy's Reeks & Caragh River Catchment SAC**

The Site for the proposed wind farm at Inchamore is approximately 1.4 km south of the SAC and has no hydrological connectivity with the SAC. The Site entrance/closest point of the TDR is located 1.75 km southeast to the SAC and has no hydrological connectivity with the SAC. Also, there are no ecological corridors (such as woodland strips) between the two locations and the proposed wind farm site is greater than the normal distance (c.2 km) that foraging lesser horse-shoe bats would normally fly.

However, the majority of the grid connection route is located along the route of an existing forestry road which runs parallel to the Clydagh River (part of SAC), with the route crossing three main streams and

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numerous drains which flow into the Clydagh. The closest distance between the cable route corridor and the SAC is 41 m (chainage 9,050 m).

Construction of the grid connection has the potential to cause negative effects to receiving watercourses and ultimately relevant qualifying interests of the above listed European site. It is noted that the grid connection will remain in place after the 35-year life of the project as it will be under the ownership of the ESB.

The principal potential construction phase effects of the works relate to the release of suspended solids/nutrients, concrete and hydrocarbons into the drainage network arising from the works.

As the conservation objectives of the identified European site could potentially be affected adversely, measures are required to avoid or reduce harmful effects of the proposed project (*i.e.* mitigation measures). Therefore, as the risk of potential significant effects on this European site cannot be ruled out, Section 3 of this report provides information to allow the competent planning authority to carry out appropriate assessment for the Project.

### **2.3.2 Mullaghanish Bog SAC**

The Site at Inchamore is approximately 6.9 km from the SAC and there is no hydrological connectivity between the two locations.

The Turbine Delivery Route is 7.1 km distant from the SAC and has no hydrological link to the SAC.

While a section of the grid connection route runs within a forest track 632 m from the SAC, the SAC is on higher ground to the forest track and thus has no hydrological connectivity, with established forestry and open heath in between.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction works for the grid connection, it is concluded that there is no potential for effects on the conservation objectives of this SAC and further assessment is not required.

### **2.3.3 St Gobnet's Wood SAC**

The site for the proposed wind farm at Inchamore is approximately 5 km from the SAC, with hydrological connectivity between the two locations via the Sullane River.

However, the qualifying interest of the SAC, Old Sessile Oak Woods, occurs on ground above the high-water mark and could not be affected in any way by potential pollutants from the project site which could be carried in the river water.

The Turbine Delivery Route at its nearest point (existing road of the N22) is 185 m northwest of the SAC. However, the closest point to proposed works (site entrance) is 6.08 km in distance from the SAC.

The closest point along the Grid Connection Route is 5.46 km northwest of the SAC.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the

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Project, it is concluded that there is no potential for effects on the conservation objectives of this SAC and further assessment is not required.

### **2.3.4 Blackwater River (Cork/Waterford) SAC**

The site for the proposed wind farm at Inchamore is approximately 11 km from the SAC, and there is no hydrological connectivity between the two locations.

The Grid Connection Route is located 4.1 km south of this SAC and the Turbine Delivery route is located 9.0 km south of this SAC. There are no hydrological or ecological linkages between the locations and the SAC.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the project, it is concluded that there is no potential for effects on the conservation objectives of this SAC and further assessment is not required.

### **2.3.5 Glanlough Woods SAC**

The Site for the proposed wind farm at Inchamore is approximately 14 km from the SAC, and there is no hydrological connectivity between the two locations. Also, there are no ecological corridors (such as woodland strips) between the two locations and the Site is greater than the normal distance (c.2 km) that foraging lesser horse-shoe bats (the qualifying interest for this SAC) would normally fly.

The Turbine Delivery Route is located 16.6 km to the northeast of the SAC. The Grid Connection Route is located to 16.6 km to the northeast of the SAC. There are no hydrological links between these areas and the SAC.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the Project, it is concluded that there is no potential for effects on the conservation objectives of this SAC and further assessment is not required.

### **2.3.6 Kilgarvan Ice House SAC**

The Site for the proposed wind farm at Inchamore is approximately 10 km from the SAC, and there is no hydrological connectivity between the two locations. Also, there are no ecological corridors (such as woodland strips) between the two locations and the proposed wind farm site is greater than the normal distance (c.2 km) that foraging lesser horse-shoe bats (the qualifying interest for this SAC) would normally fly.

The Turbine Delivery Route is located 12.5 km northeast of the SAC. The Grid Connection Route is located 12.3 km northeast of the SAC.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the

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project, it is concluded that there is no potential for effects on the conservation objectives of this SAC and further assessment is not required.

### **2.3.7 Old Domestic Building, Curraglass Wood SAC**

The Site for the proposed wind farm at Inchamore is approximately 8.1 km from the SAC, and there is no hydrological connectivity between the two locations. Also, there are no ecological corridors (such as woodland strips) between the two locations and the proposed wind farm site is greater than the normal distance (c.2 km) that foraging lesser horse-shoe bats (the qualifying interest for this SAC) would normally fly.

The Grid Connection Route is located 9.8 km east of the SAC. The Turbine Delivery Route is located 9.8 km east of the SAC. There are no hydrological links between the Project and the SAC.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the Project, it is concluded that there is no potential for effects on the conservation objectives of this SAC and further assessment is not required.

### **2.3.8 The Gearagh SAC**

The Site is located 16.8 km northwest of the SAC. The Turbine Delivery Route (where works are proposed) is located 18.3 km northwest of the SAC. The Grid Connection Route (at its nearest point) is located 18.3 km northwest of the SAC.

The Sullane River, which drains the site for the proposed wind farm, flows from the site in a south and then east direction for a distance of approximately 24 km before it enters the River Lee system at Coolcour, approximately 3 km downstream of the Lee Bridge, which marks the eastern extremity of the Gearagh SAC. Flow continues eastwards towards Cork Harbour.

Taking into account (i) that the flow from the area of the proposed wind farm does not mix with water within the SAC, and (ii) the length of the channel distance (24 km) between the two locations, it is considered that there is no realistic potential for water from the wind farm area (which could carry contaminants in absence of mitigation) to have effects on the qualifying interests of the SAC,

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the Project, it is concluded that there is no potential for effects on the conservation objectives of this SAC, and further assessment is not required.

### **2.3.9 Great Island Channel SAC**

The Site is located 62.2 km west of the SAC. The nearest point along the Turbine Delivery Route is located 5.9 km from the SAC. The nearest point along the Turbine Delivery Route where works are proposed (site entrance) is a distance of 62.8 km west of the SAC. The closest point along the Grid Connection Route is near the existing 220 kV Ballyvouskill Substation at a distance of 51.7 km northwest of the SAC.

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The Sullane River, which drains the site for the proposed wind farm, enters the River Lee system at Coolcour, approximately 24 km from the site of the proposed wind farm. The Lee then flows for approximately 40 km before entering Cork Harbour. There is a further 5 km distance across the harbour to the SAC.

While there is a total distance of approximately 69 km from the Inchamore site to the SAC, hydrological connectivity does exist. However, in view of the distance between the two locations, it is considered that there is no potential for measurable effects on the qualifying interests of the SAC. Any pollutants or silts entering the drainage network at the site for the proposed wind farm, even in the most extreme scenarios and without mitigation of any form, would be completely attenuated by the dilution, dispersal and settlement that would occur within the river and estuarine system.

As it is considered that the qualifying interest of the SAC would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the Project, it is concluded that there is no potential for effects on the conservation objectives of this SAC, and further assessment is not required.

### **2.3.10 Mullaghanish to Musheramore Mountains SPA**

The Site is approximately 6 km from the SPA. Habitats between the two locations are generally suitable for foraging hen harriers (the SCI for this SPA), as are habitats within the Inchamore site.

Part of the grid connection route is located along the route of an existing forestry road which runs north of the SPA. The closest distance between the cable route corridor and the SPA is 170 m (chainage 9,600 m).

Construction works along the grid connection route carried out during the breeding season could have disturbance effects on hen harriers breeding within the SPA. The significance of any potential effect is unknown as such would be dependent on the locations of the nesting sites and the foraging ranges of the breeding pairs at the time of the works.

The proposed works on the Turbine Delivery Route are at a distance of 5.6 km west of the SPA.

The baseline ornithological survey for the project (**Chapter 7: Ornithology**) has shown that hen harrier is an occasional winter visitor (October to March) to the site for the wind farm at Inchamore. Birds were recorded either foraging or merely flying through the site and/or adjoining areas, though there was no evidence of winter roosting within the site or its surroundings. The presence of birds in winter in areas such as the site for the proposed wind farm is consistent with their dispersal from breeding areas.

It is considered that the construction of the section of grid connection cable route which passes close to the SPA could have a significant adverse effect on breeding hen harriers within the SPA should works be carried out during the breeding season.

As the conservation objectives of the identified European site could potentially be affected adversely, measures are required to avoid or reduce harmful effects of the proposed project (i.e., mitigation measures). Therefore, as the risk of potential significant effects on this European site cannot be ruled

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out, Section 3 of this report provides information to allow the competent planning authority to carry out appropriate assessment for the Project.

### **2.3.11 Killarney National Park SPA**

The site for the proposed wind farm at Inchamore is approximately 14.5 km from the SPA. The works along the Turbine Delivery Route are located 16.0 km east of the SPA. The Grid Connection Route is located 15.8 km east of the SPA.

Some areas of habitats between the two locations are suitable for foraging merlin (an SCI for this SPA), as are habitats within the Inchamore site.

The baseline ornithological survey for the project (**Chapter 7: Ornithology**) has shown that merlin is an occasional visitor to the site for the wind farm at Inchamore. However, no evidence of local breeding was found in any of the summer bird surveys.

The population in the Killarney National Park SPA is estimated at 5 pairs (source: Site Synopsis). Merlins hold traditional territories with some being used repeatedly from year to year and even by successive generations (Cramp 1980). In areas with suitable nest sites in south-western Scotland, most territories are regularly spaced and may be 3-4.5 km apart. It is not known if hunting ranges of adjacent pairs overlap, but males may fly several kilometres to hunt (Cramp 1980). In a study of breeding merlins in northern England, Newton *et al.* (1978) noted that merlins frequently flew further to hunt than the minimum distance between nests, while in a study in Sweden it was found that the hunting range could be twice the pair's territory, the latter averaging about 2 km<sup>2</sup> (cited in Sale 2016). In a study in southwest Scotland, Orchel (1992) calculated the minimum area of grass and heather moorland required to support a breeding pair of merlins as 20 km<sup>2</sup>.

From the above, it can be concluded with certainty that the hunting range of merlin breeding within the Killarney National Park SPA, a nearest distance of 14.5 km from Inchamore, could not extend to the site for the proposed wind farm at Inchamore.

Habitats outside of the National Park, or within the vicinity of the Inchamore site, are not suitable for supporting Greenland white-fronted goose (the other SCI for this SPA) and there are no historic or recent records of the species from these areas.

As it is considered that the Special Conservation Interests for this SPA would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the Project, it is concluded that there is no potential for effects on the conservation objectives of this SPA and further assessment is not required.

### **2.3.12 The Gearagh SPA**

The Site is 16.8 km northwest of the SPA. The proposed works along the Turbine Delivery Route are located 18.3 km northwest of the SPA. The Grid Connection Route is 18.5 km northwest of the SPA.

The Sullane River, which drains the site for the proposed wind farm, flows from the site in a south and then east direction for a distance of approximately 24 km before it enters the River Lee system at

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Coolcour, approximately 4 km downstream of the SPA. Flow continues eastwards towards Cork Harbour. Taking into account (i) that the flow from the area of the proposed wind farm is not likely to mix with water within the SPA, and (ii) the channel distance of approximately 28 km between the two locations, it is considered that there is no realistic potential for water from the wind farm area (which could carry contaminants in the absence of mitigation) to have effects on the Special Conservation Interests of the SPA.

It is noted that the habitats within the proposed wind farm site do not have potential to support any of the SCIs of the SPA.

As it is considered that the Special Conservation Interests for this SPA would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the project, it is concluded that there is no potential for effects on the conservation objectives of this SPA and further assessment is not required.

### **2.3.13 Cork Harbour SPA**

The closest point along the Turbine Delivery Route is 14 m from the SPA where the road is already in existence. However, the proposed works (site entrance) is located 57 km northwest of the SPA. The Grid Connection Route is located 57.1 km from the SPA.

The Sullane River, which drains the site for the proposed wind farm, enters the River Lee system at Coolcour, approximately 24 km from the site of the proposed wind farm. The Lee then flows for approximately 40 km before entering Cork Harbour.

While there is a total distance of approximately 64 km from the Inchamore site to the SPA, hydrological connectivity does exist. However, in view of the large distance between the two locations, it is considered that there is no potential for measurable effects on the SCIs of the SAC. Any pollutants or silts entering the drainage network at the site for the proposed wind farm, even in the most extreme scenarios and without mitigation of any form, would be completely attenuated by the dilution, dispersal and settlement that would occur within the river and estuarine system.

As it is considered that the Special Conservation Interests for this SPA would not be affected in any way by the construction and/or decommissioning works, or by any activities during the operational phase of the Project, it is concluded that there is no potential for effects on the conservation objectives of this SPA and further assessment is not required.

## **2.4 In-combination Effects**

Where the potential for significant effects on European sites has been identified in the preceding sections of this report, the potential for the proposed development to result in cumulative or in-combination effects requires assessment. This will be provided in the Natura Impact Statement prepared for the proposed project.

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Where no pathway for effect on a particular European Site is identified, it follows that the proposed Project cannot contribute to any in-combination effect and further assessment is not required for such sites.

### **2.5 AA Screening Report Concluding Statement**

It is concluded that in the absence of mitigation, it cannot be excluded beyond reasonable scientific doubt, on the basis of objective evidence and in view of best scientific knowledge, that the project (including the grid connection route and turbine delivery route), individually or in combination with other plans and projects, will have a significant effect on the following European sites:

- Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (code 000365)
- Mullaghanish to Musheramore Mountains SPA (code 004162)

As a result, a Natura Impact Statement has been prepared.

For the other sites (no. 11) within the identified zone of influence, no realistic pathway is identified between the site for the proposed wind farm (Source) and the relevant European site (Receptor) and it is concluded beyond reasonable scientific doubt, and in view of the best available scientific knowledge, that there is no potential for likely significant effects on these sites in view of their conservation objectives as a result of the Project when considered alone or in combination with other plans and projects. It is concluded that no further assessment is required for these 11 sites and that they can be 'screened-out'.

- Mullaghanish Bog SAC (code 001890)
- St. Gobnet's Wood SAC (code 00106)
- Blackwater River (Cork/Waterford) SAC (code 002170)
- Glanlough Woods SAC (code 002315)
- Kilgarvan Ice House SAC (code 000364)
- Old Domestic Building, Curraglass Wood SAC (code 002041)
- The Gearagh SAC (code 000108)
- Great Island Channel SAC (code 001058)
- Killarney National Park SPA (code 004038)
- The Gearagh SPA (code 004109)
- Cork Harbour SPA (code 004040)

No mitigation or best practice measures have been taken into account in this AA screening assessment.

### **3 NATURA IMPACT STATEMENT**

The assessment for screening for appropriate assessment presented in Section 2 concludes that in the absence of mitigation, likely significant effects on European sites may arise as a result of the Project on 2 no. European sites, as follows:

- Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (code 000365)
- Mullaghanish to Musheramore Mountains SPA (code 004162)

The following assessments consider, in absence of mitigation, the potential of the Project to cause effects on the qualifying interests or the Special Conservation Interests of these two sites either directly or indirectly alone and in-combination with other plans and projects.

#### **3.1 Potential for Effects on Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC**

As noted in section 2.4.1 above, the majority of the grid connection route is located along the route of an existing forestry road which runs parallel to the Clydagh River (part of SAC), with the route crossing three main streams and numerous drains which flow into the Clydagh. The three streams will be crossed by horizontal directional drilling (HDD), while the minor streams and drains will be crossed on existing culverts as they have adequate depth of fill to accommodate the cable.

Construction of the grid connection has the potential to cause negative effects to receiving watercourses and ultimately relevant qualifying interests of the SAC site. Effects during the operational phase of the grid connection are not anticipated, and the grid connection will remain in situ as part of the ESB network after the life of the wind farm project.

The principal potential construction phase effects of the works relate to the release of suspended solids/nutrients, concrete and hydrocarbons into the drainage network arising from the grid works.

For most of the watercourse crossings along the Grid Connection Route, there is sufficient depth over existing culverts to accommodate trenching of the cable within the road structure. This operation will result in no instream works and presents a low risk of generating suspended solids or other pollutants, which are readily controlled by mitigation. There are three water crossings along the Grid Connection Route which do not have sufficient depth of material on the existing culverts. To avoid instream works, these will be crossed by means of directional drilling technology. Details of the directional drilling procedure are outlined in **Chapter 2: Project Description (Section 2.9.5.2)**. This methodology addresses the potential risks of siltation or other pollutants entering the watercourses during the construction phase.

There are in addition, a number of minor ditches running under the existing road, which are either dry or have minimal flows, that will be crossed by damming the ditch upstream and over-pumping (if

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necessary) during the trenching operation. Without mitigation, these crossings present a temporary minor risk of sediment release and of other pollutants entering the Clydagh River downstream.

A review of the conservation objectives for this SAC site indicates that the relevant qualifying interests which conceivably could be affected by the input of pollutants to the estuarine system are as listed below. This is based on the given attribute and target for each habitat or species, as well as the distribution of the habitats and species within the designated sites (all such information is contained within the Conservation Objectives for the site, [www.npws.ie/protected-sites](http://www.npws.ie/protected-sites)).

### **Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC**

Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation [3260]

*Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]

*Petromyzon marinus* (Sea Lamprey) [1095]

*Lampetra planeri* (Brook Lamprey) [1096]

*Lampetra fluviatilis* (River Lamprey) [1099]

*Salmo salar* (Salmon) [1106]

*Lutra lutra* (Otter) [1355]

**Table 3: Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC: Attributes and Targets associated with identified Habitats and Species potentially affected by water pollution.**

<b>Habitat / Species</b>	<b>Relevant Attribute</b>	<b>Relevant Target</b>	<b>Distribution</b>
<b>Water courses of plain to montane levels</b>	Substratum composition: particle size range	Maintain / restore appropriate substratum particle size range, quantity and quality, subject to natural process.	Main rivers including Clydagh.
	Water quality	Maintain / restore appropriate water quality to support the natural structure and functioning of the habitat.	
<b>Freshwater Pearl Mussel</b>	Distribution: <u>Note:</u> while the relevant population with connectivity to the Clydagh River is in the River Flesk, and hence outside of the SAC, potential effects from the project are still considered owing to the high conservation importance of FPM	Maintain the present distribution of the River Flesk population	River Flesk, downstream of the Clydagh River.
	Water quality: macroinvertebrate	Restore water quality – macroinvertebrates: EQR greater the 0.90 (Q4-5 or Q5);	

Habitat / Species	Relevant Attribute	Relevant Target	Distribution
	and phytobenthos (diatoms)	phytobenthos: EQR greater than 0.93.  [The EQR targets correspond to high ecological status for these two Water Framework Directive biological quality elements.]	
	Substratum quality: sediment	Restore sediment quality – stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment.	
<b>Sea Lamprey</b> <b>Brook Lamprey</b> <b>River Lamprey</b>	Extent and distribution of spawning habitat	No decline in extent and distribution of spawning habitat.  [Lampreys require clean gravels for spawning]	Rivers
<b>Salmon</b>	Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes.  [Salmon spawn in clean gravels]	Main rivers including Clydagh.
<b>Otter</b>	Fish biomass available	No significant decline	Rivers

In the absence of mitigation, the significance of an effect on the above listed qualifying interests of the SAC by contaminants derived from activities associated with the wind farm project (grid connection component) entering the Clydagh River would depend on the type of pollutant, as well as the magnitude and duration of a pollution event.

Aquatic invertebrate communities and aquatic macrophytes can be affected by sediment loading which reduces both the biotic diversity and the food resource for fish populations through direct toxicity to fish and invertebrates, and also indirectly affecting top predators such as otter through a reduction in prey availability. Suspended solids often hold nutrients such as phosphorus that can result in eutrophication and reduced oxygen levels, which can affect aquatic communities.

### **3.2 Potential for Effects on Mullaghanish to Musheramore Mountains SPA**

As noted in section 2.4.8 above, the site for the proposed wind farm at Inchamore is approximately 8 km from the SPA. Habitats between the two locations are generally suitable for foraging hen harriers (the SCI for this SPA), as are habitats within the Inchamore site.

The baseline ornithological survey for the project (**Chapter 7: Ornithology**) has shown that hen harrier is an occasional winter visitor (October to March) to the site for the wind farm at Inchamore. Birds were recorded either foraging or merely flying through the site and/or adjoining areas, though there was no

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evidence of winter roosting within the site or its surroundings. The presence of birds in winter in areas such as the site for the proposed wind farm is consistent with their dispersal from breeding areas.

Part of the grid connection route is located along the route of an existing forestry road which runs north of the SPA. The closest distance between the cable route corridor and the SPA is 170 m (chainage 9,600 m).

Construction works along the grid connection route carried out during the breeding season could have disturbance effects on hen harriers breeding within the SPA. Breeding activities such as display rituals, foraging and nest attendance could be affected by construction works. The significance of any potential effect is unknown as such would be dependent on the locations of the nesting sites and the foraging ranges of the breeding pairs at the time of the works.

It is considered that in the absence of mitigation, the construction of the section of grid connection cable route which passes close to the SPA could have a significant adverse effect on breeding hen harriers within the SPA should works be carried out during the breeding season.

A review of the conservation objectives for this SPA site indicates the relevant qualifying interest which conceivably could be affected by the construction works along the route of the grid connection as listed below. This is based on the given attribute and target for the species, as well as the distribution of the species within the designated site (all such information is contained within the Conservation Objectives for the site).

### **Mullaghanish to Musheramore Mountains SPA**

*Circus cyaneus* (Hen harrier) [A082]

**Table 4: Mullaghanish to Musheramore Mountains SPA: Attributes and Targets associated with identified Species potentially affected by disturbance.**

<b>Habitat / Species</b>	<b>Relevant Attribute</b>	<b>Relevant Target</b>	<b>Distribution</b>
Hen harrier	Disturbance to breeding sites	Disturbance occurs at levels that does not significantly impact upon breeding hen harriers.	Breeding activity in SPA area within at least 1 km from the grid route corridor.

In the absence of mitigation, the effect on the above listed Special Conservation Interest of the SPA by disturbance to breeding pairs of hen harrier as a result of construction works could be Significant.

### **3.3 Mitigation Measures During Construction Phase – Maintenance of Water Quality**

The objective of the mitigation measures is to avoid, minimise and control potential contaminated run-off entering drains and local watercourses and the identified European sites which are hydrologically linked to the project site (and in particular the Clydagh River component of the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC). The achievement of this objective is outlined in the following sections, with details in the accompanying EIAR (specifically Chapter 6: Aquatic Ecology & Chapter 9: Hydrology and Hydrogeology).

All of the described measures are focused on preventing contaminated water from entering local watercourses which are linked to European sites. When in force, the mitigation measures will be monitored to ensure their efficacy. Should a failure in the mitigation occur, immediate action will be taken in accordance with the site-specific Emergency Plan (CEMP – Management Plan 1).

#### **3.3.1.1 Mitigation by Avoidance**

The greatest risk of adverse impacts on the aquatic environment will occur during the construction phase of the Project. Key to minimising this risk has been the siting of all turbine locations and other key infrastructure at a minimum set-back from watercourses (65 m). Along the grid connection route the minimum setback will be less than 65 m, with the closest distance 41 m between the cable route and the designated Clydagh River. Specific mitigation is given for set-backs less than 65 m. In designing the layout of the access roads careful consideration has been given to minimise the numbers of watercourse crossings.

#### **3.3.1.2 Mitigation by Design**

Drainage measures, as detailed in **EIAR Chapter 9: Hydrology and Hydrogeology**, have been developed to protect all receiving waters from potential impacts during the construction of the Project in the catchment of the site and along the proposed grid connection route. These measures are aimed at preventing sediments or other pollutants from entering watercourses through the containment and treatment on-site of all surface water run-off from areas of works. The appointed contractor will have appropriately qualified environmental personnel to ensure compliance during the construction stage with all mitigation measures, planning conditions and legislative requirements related to the maintenance of water quality. An Ecological Clerk of Works (ECoW) will be appointed as part of the environmental team for the duration of the project.

The mitigation measures have been incorporated into a Construction and Environmental Management Plan (CEMP) for the development which includes Construction Method Statements for key works. The CEMP has been developed using the Institute of Environmental Management and Assessment (IEMA) Practitioner "*Environmental Management Plans*", Best Practice Series, Volume 12, December 2008. The CEMP includes a Surface Water Management Plan (SWMP), a Water Quality Monitoring Plan and

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Watercourse Crossing Plan (WQMP) and a Waste Management Plan (WMP). This document will be a key construction contract document, which will ensure that all mitigation measures are implemented.

The development of the mitigation measures and all method statements for watercourse crossings follows all relevant guidance and current best practice, as detailed in:

- CIRIA (2001). Control of water pollution from construction sites - Guidance for consultants and contractors (C532). Construction Industry Research and Information Association, London.
- CIRIA (2019). Culvert, screen and outfall manual (C786). Construction Industry Research and Information Association, London.
- Enterprise Ireland (unknown). Best Practice Guide (BPGCS005) Oil storage guidelines.
- IFI (2016). Guidelines on Protection of Fisheries during Construction Works in and adjacent to waters. Inland Fisheries Ireland, Dublin.
- IWEA (2012). Best Practice Guidelines for the Irish Wind Energy Industry. Guidance prepared by Fehily Timoney & Company for the Irish Wind Energy Association.
- Kilfeather, P.K. (2007). Maintenance and protection of the Inland Fisheries resource during road construction and improvement works. Southern Regional Fisheries Board.
- NRA (2008). Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes. National Roads Authority.
- SNH (2019). Good Practice during Wind Farm Construction (4th edition). Scottish Natural Heritage.

The use of Sustainable Drainage Systems (SuDS) on site will minimise risk to watercourses from sedimentation during the construction and operational phases of the Project.

Surface water management measures will be put in place concurrently during the development of the road network. The measures entail the following key elements which are described in detail within the Surface Water Management Plan (**Appendix 2.1, CEMP**):

- Open Constructed drains for development run-off collection and treatment;
- Collection Drains for upslope “clean” water collection and dispersion;
- Filtration Check Dams to reduce velocities along sections of road which run perpendicular to contours;
- Settlement Ponds, Settlement Lagoons and Buffered Outfalls to control and store development runoff to encourage settlement prior to discharge at Greenfield runoff rates.

There will be no direct site run-off to watercourses during the construction phase with all outflows from drainage via settlement ponds from which treated surface water is released by diffuse overland flow at appropriate locations. To reduce the amount of silt laden water to be treated, clean water drains will be created upstream of the works area to divert water away from construction areas, thereby lessening the volume of water to be treated onsite.

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De-watering of excavations, where required, will be through filtered 'silt socks' / dewatering bags or a 'Siltbuster' or similar system, prior to discharge. Excavations will be kept to the absolute minimum for the specific task and undertaken on a 'just in time' basis to minimise the extent of silty water generated and requiring treatment prior to discharge.

The directional drilling of the three watercourses on the grid connection route will be undertaken by either Horizontal Directional Drilling (HDD) in accordance with the method statements provided in the CEMP. These methods detail the potential risks of pollutants or contaminants arising during the works and provide specific measures to neutralise the risks.

### **3.3.1.3 Mitigation by Reduction**

Implementation of the following specific measures will ensure the protection of water quality in local watercourses and will ensure that contaminated water does not reach the identified European sites which have hydrological connectivity with the Project area.

This is a summary of the required mitigation measures, with full details being presented in the EIAR (**Chapter 9: Hydrogeology and Hydrology**) and the Construction Environmental Management Plan.

- No works will take place within the 65 m buffer zone of watercourses except for construction of the clear span and box culverts on the access road network. Also, for sections along the grid route there are distances less than 65 m to watercourses (see measures at end of this section for set-backs less than 65 m along grid route).
- Site compounds and Soil storage areas will be located at a minimum distance of 65 m from any watercourse. All drainage from these facilities will be directed through a settlement pond with appropriate capacity and measures to provide spill containment.
- Sediment traps or settlement ponds will be provided at all outfalls during construction. Total suspended solid levels in all waters discharging to any watercourse will not exceed 25 mg/l (Inland Fisheries Ireland, 2016)<sup>2</sup>. All construction site run-off will be channelled through a stilling process to allow suspended solids to settle out and through a spill-containment facility prior to discharge.
- Daily monitoring of all sediment traps and settlement ponds will be undertaken by the Contractor and supervised by the Environmental Manager to ensure satisfactory operation and/or maintenance requirements.
- The storage of oils, hydraulic fluids, etc., will be undertaken in accordance with current best practice for oil storage (Enterprise Ireland, BPGCS005).
- The pouring of concrete, sealing of joints, application of water-proofing paint or protective systems, curing agents, etc., will be completed in the dry to avoid pollution of the freshwater environment. There will be no batching or storage of cementitious materials in the vicinity of any watercourse crossing a construction area.

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<sup>2</sup> Inland Fisheries Ireland (2016) *Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters*.

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- Vehicles will be refuelled off-site where possible. For vehicles that require refuelling on-site, fuels will be stored in the temporary construction compound and bunded to at least 110% of the storage capacity of fuels to be stored. Refuelling will take place via a mobile double skinned fuel bowser. The bowser will be a double axle refuelling trailer which will be towed to the refuelling locations by a 4x4 vehicle. The 4x4 will carry, a drip tray, spill kit and absorbent mats in case of any accidental spillages. Only designated competent personnel will refuel plant and machinery on the Site.
- All machinery operating on water course crossings will be steam-cleaned in advance of works and routinely checked to ensure no leakage of oils or lubricants occurs. All fueling of machinery will be undertaken on dry land.
- Instream works will be undertaken during the period 1<sup>st</sup> July to 30<sup>th</sup> September as required by Inland Fisheries Ireland Guidance (2016) to avoid accidental damage or siltation of spawning beds, and unless otherwise specified by IFI during consultations in advance of works.
- Culverting works will be undertaken in dry conditions and in low flow conditions on drains that do not run dry. This will be within the summer period during periods of dry stable weather.
- During the culvert installation and associated construction work, double silt fences will be emplaced immediately downgradient and downstream of the construction area for the duration of the construction phase.
- In order to mitigate the potential impact posed by the use of concrete and the associated effects on surface water in the receiving environment, the following precautions and measures will be adhered to during the construction phase (full details in EIAR **Chapter 9: Hydrology and Hydrogeology**):
  1. The acquisition, transport and use of any cement or concrete on site will be planned fully in advance of commencing works by the Contractor's Environmental Manager and supervised at all times by the Developer appointed Environmental Clerk of Works (EnvCoW).
  2. Precast concrete will be used wherever possible i.e., formed offsite. Elements of the Project where precast concrete will be used have been identified and are indicated in the CEMP, **Appendix 2.1**. Elements of the Project where the use of precast concrete will be used include structural elements of watercourse crossings, as well as Cable Joint Bays. Elements of the Project where the use of precast concrete is not possible includes turbine foundations and joint bay pit excavations. Where the use of precast concrete is not possible the following mitigation measures will apply.
    - Lean mix concrete can alter the pH of water if introduced, which would then require the treatment of acid before being discharged to the surrounding environment. The use of lean mix concrete will be minimized, limited to the requirement of turbine foundations. The risk of

- runoff will be minimal, as concrete will be contained in an enclosed, excavated area.
- Vehicles transporting such material will be relatively clean upon arrival on site, *i.e.* vehicles will be washed/rinsed removing cementitious material leaving the source location of the material. There will be no excess cementitious material on the vehicle which could be deposited on trackways or anywhere else on site. To this end, vehicles will undergo a visual inspection prior to being permitted to drive onto the proposed site or progress beyond the Contractor's yard. Vehicles will also be in good working order.
3. Concrete will be poured during metrological dry periods/seasons (detailed in **Appendix 2.1 of the EIAR: Construction Environmental Management Plan**). This will reduce the potential for surface water run off being significantly affected by freshly poured concrete. This will require limiting these works to dry meteorological conditions and will not proceed during any yellow (or worse) rainfall warning issued by Met Éireann.
  4. Excavations will be prepared before pouring of concrete by pumping standing water out of excavations to the treatment train and buffered surface water discharge systems in place.
  5. Covers will be available so that areas can be covered if heavy rain arrives during the curing process which will prevent runoff of concrete which has a high pH.
  6. No surplus concrete will be stored or deposited anywhere on site. Such material will be returned to the source location or disposed of off-site appropriately at a suitable licensed facility. Concrete washing will be contained and managed similarly.
  7. Designated washout of concrete trucks will be strictly confined to the batching facility and will not be located within the vicinity of watercourses or drainage channels. Only the chutes will be cleaned prior to departure from Site and this will take place at a designated area at the Temporary Construction Site Compound. The contents will be allowed to settle and the supernatant will be removed off site by licenced generator to a licenced waste water treatment plant.
  8. Ground crew will have a spill kit readily available, and any spillages or deposits will be cleaned/removed as soon as possible and disposed of appropriately.
- In the unlikely event of any incidents of pollution to watercourses, immediate steps will be undertaken to resolve the cause of the pollution and mitigate against the impact of pollution, following the advice set out in, the site-specific Emergency Response Plan (**CEMP-Management Plan 1**).

**Approach to Grid Connection Route where it is within the 65 m watercourse set-back buffer**

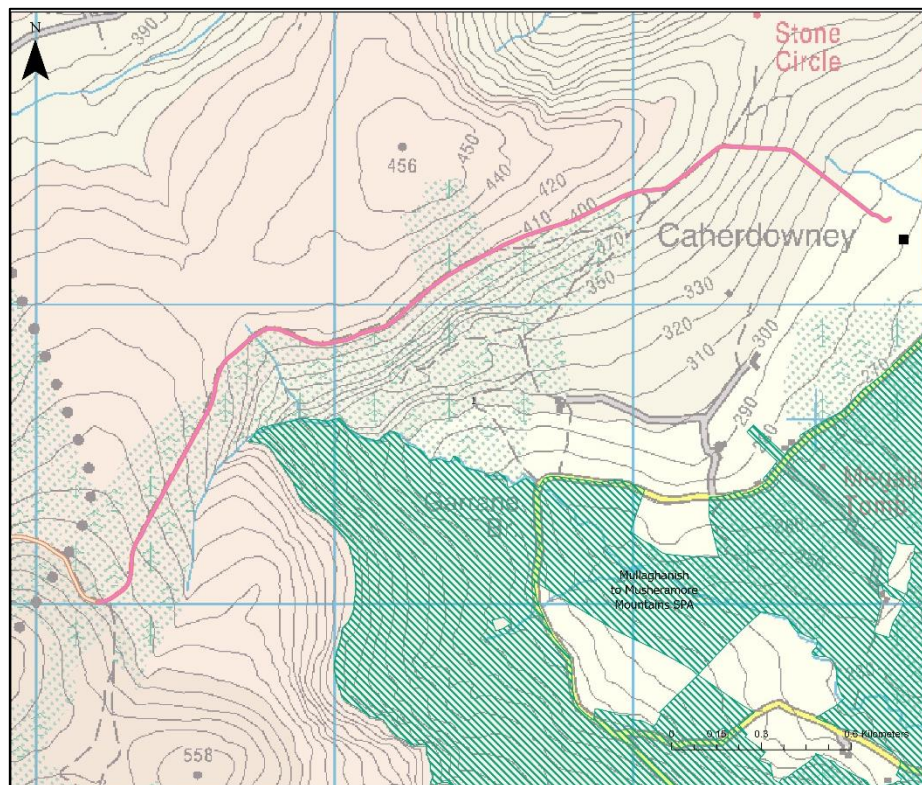
The Grid Connection Route (GCR) will require some temporary stockpiling. These temporary stockpiles will be located a minimum of 25 m from surface water features and all stockpiling locations will be subject to approval by the Site Manager and Project Ecological Clerk of Works (ECoW).

- Excavated trenches will be dewatered if required, from a sump installed within the low section of the opened trench. Where dewatering is required, dirty water will be fully and attenuated, through silt bags, before being discharged to surface water drainage feature. Where required, grass will be reinstated by seeding or through the replacement of grass turves to prevent loose soil/sediment material from entering surface water features.
- Drainage measures will be provided to attenuate runoff, guard against soil erosion, soil compaction, and safeguard local water quality.
- A silt fencing filtration system will be installed on all existing drainage channels before and for the duration of the cable construction to prevent contamination of any watercourse.
- The finished surface of the road will be reinstated and finished with a bituminous layer. For off-road sections of the Grid Connection Route, the trenches will be reinstated with the related excavated material.
- Precast concrete cable joint bays (junction boxes see Section 2.5.9.1 of Chapter 2: Project Description) will be installed within the excavated trench.
- The surface above each cable joint bay will be finished with a bituminous layer to the satisfaction of the Local Authority and as good as the pre-existing condition.

**3.4 Mitigation Measures to Avoid Disturbance to Breeding Hen Harriers**

A section of the grid connection cable (at chainage 9,600 m) will be laid within a forest track that runs close (within 180 m) to the Mullaghanish to Magheramore Mountain SPA. For the relevant section, cable laying works will take place outside of the bird nesting season (March-August inclusive) so as to avoid any risk of disturbance to breeding hen harrier (the Special Conservation Interest of the SPA). This section is shown in **Figure 5**.

A similar approach would be taken for the removal of the cable during the decommissioning stage. This would be subject to review of the boundary of the SPA at the time (which may have changed over 35 years).



**Figure 5: Section of grid connection cable where works will take place outside of the bird nesting season (highlighted in pink).**

### **3.5 Mitigation Measures During Operational Phase**

The following measure will be implemented during the operational phase to ensure the ongoing protection of watercourses and water quality at the Site and in downstream reaches leading towards the identified European sites which have hydrological connectivity with the proposed development site:

- The site compound / office will house all potential pollutants within a secure bunded store for the operational phase of the project (in accordance with Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 to 2021.).
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### **3.6 Mitigation Measures During Decommissioning Phase**

Decommissioning of the Project will be scheduled to take place after the proposed 35 year lifespan of the project. It is noted that the grid connection cable and the on-site substation will be left in-situ as these infrastructure will remain under the ownership of ESB.

Potential impacts on European sites from the decommissioning phase of the Project are likely to be broadly similar to construction phase impacts, in terms of potential surface water quality impacts from ground disturbance, refuelling and the storage of potentially hazardous materials onsite. The implementation of all

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mitigation measures detailed for the construction phase will be adopted in full during the decommissioning phase to ensure all such impacts are avoided.

When the final Decommissioning Plan is prepared prior to decommissioning and presented as a standalone document, all drainage management measures, which will include maintenance of the operational drainage measures, will be included in that document, as required. However, it should be noted that by the time decommissioning is undertaken after the planned 35 year lifespan of the Project, the areas within the Site will have re-vegetated resulting in a resumption of the natural drainage management that will have existed prior to any construction. It is not anticipated that the decommissioning phase will interrupt this restored drainage regime in any way with the works proposed. As a minimum measure, areas where freshly placed soil material as part of turbine foundation reinstatement work will be surrounded by silt fencing if deemed necessary until the area has naturally revegetated.

Restoration of the Wind Farm Site following decommissioning of infrastructure will require the prior establishment of the new baseline conditions at the site which will have developed over the intervening 35 years life of the project. These studies will inform any modification or additional sensitivities that may need to be factored in on restoration and site-specific measures.

### **3.7 Analysis of “In-combination” Effects**

The Habitats Directive requires competent authorities to make an appropriate assessment of any plan or project which is likely to have a significant effect alone or in-combination with other plans and projects.

There are 27 wind farms within 20 km<sup>3</sup> of the Site. **Figure 4** shows the location of proposed, permitted and operational wind farms within a 20 km radius of the proposed turbines. **Appendix 2.2 in EIAR** provides further information on these wind farms.

- The nearest operational wind farm is Coomagearlaghy Kilgarvin Wind Farm which is located 2.7 km to the south-west of the Site.
- The nearest permitted but not yet constructed wind farm is Gortnakilla, Clonkeen Killarney, 1.87 km to the west.
- Gortyrhilly Wind Farm is a proposed 14 No. turbine wind farm located 4.95 km south of Inchamore Wind Farm. Gortyrhilly Wind Farm has the same developers as Inchamore Wind farm.
- Wind farms which are in the pre-application stages have also been included. Cummeennabuddoge Wind Farm has been included and is being designed and developed by the same developers as the proposed Inchamore Wind Farm.

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<sup>3</sup> A distance of 20 km is taken as a precautionary distance for potential in-combination effects to occur – such a distance is beyond the normal foraging range of bird species associated with SPAs.

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Most of the wind farms are clustered to the north-east, south and south-west of the Inchamore site.

The Inchamore project will add a further 5 turbines to the total of 231 turbines.

A detailed inventory of permitted projects within a 5 km radius of the site for the Inchamore Wind Farm and 50 m either side of the Grid Connection Route has been compiled (see **Appendix 2.5**, Chapter 2 of EIAR). These projects received planning permission between 2017 and 2023. Most of the projects are domestic scale developments or agricultural related developments and no potential pathways to European sites are identified. Potentially relevant projects which have received planning permission are:

Planning Ref. 174167 – A solar photovoltaic panel array consisting of up to 37,800 m<sup>2</sup> of solar panels on ground mounted steel frames and all associated infrastructure and site works. Located at Coumaclouane, Coolea, Co. Cork. Permission granted by Cork County Council 01/07/2017.

Planning Ref. 215127 – The erection of a temporary meteorological mast for a period of 5 years, located at Inchamore, Coolea, Co. Cork. This consists of a 100 m high lattice mast and associated stay wires. Permission granted by Cork County Council 31/08/2021.

Planning Ref. 217318 – A 30 m high telecommunications structure together with antennas, dishes and associated telecommunications equipment and all associated works. Permission granted by Cork County Council 15/02/2022.

All of the wind farm and other projects will have been assessed by the competent authority for potential adverse effects on relevant European sites. As it has been demonstrated in this report that the Project, with mitigation in place, will not have adverse effects on the integrity of any Natura 2000 (European) sites it can be concluded that there is no pathway for it to act in-combination with other plans and



## **4 CONCLUSION**

This Natura Impact Statement has considered the potential impacts of the proposed Inchamore Wind Farm Project (including the Grid Connection Route and the Turbine Delivery Route) on European sites. As noted in the Appropriate Assessment Screening, 13 No. European sites were identified within the Zone of Influence.

For the reasons set out in detail in this NIS, in the light of the best scientific knowledge in the field, all aspects of the Project, including the grid route connection and turbine delivery route, which, by itself or in combination with other plans or projects, which may affect the relevant European Sites have been considered.

The NIS contains information that Cork County Council, as competent authority, may consider in making its own complete, precise and definitive findings and conclusions and upon which the Council is capable of determining that all reasonable scientific doubt has been removed as to the effects of the Project, alone or in combination with any other plan or project, on the integrity of the relevant Natura 2000 sites.

In conclusion, in the light of the assessment which it shall conduct on the implications for the European sites concerned, the competent authority is enabled to ascertain that the Project will not adversely affect the integrity of any of the European sites concerned.

Table 6: Summary of effects and mitigation

European Site	Potential Effect on Qualifying Interest(s)	Mitigation	Responsibility for Implementation of mitigation	Effect of the proposed Mitigation Measures	Adverse effects on the integrity of the Natura 2000 sites Y/N
<p>Killarney National Park, Macgillycuddy's Reeks &amp; Caragh River Catchment SAC (site code 000365)</p>	<p>The Project (grid connection component) has potential to release contaminated surface water during the construction, operation and decommissioning phases.</p> <p>This could have effects on the following qualifying interests:</p> <p>Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion vegetation</i> [3260]</p> <p><i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p><i>Lampetra planeri</i> (Brook Lamprey) [1096]</p>	<p>The SWMP and detailed drainage design for the development incorporates a large number of tried and tested measures that are used as standard by industry for protection of water quality. The design and mitigation measures are set out in detail in the SWMP but can be summarised as measures to prevent sediment release to surface water features during the construction phase of the development. The SWMP standard measures also include regulation of flow to prevent scouring and allow settlement of sediment to occur. Principal measures are as follows:</p> <ul style="list-style-type: none"> <li>The establishment of a 65 m buffer zone between work areas and watercourses. Where the buffer zone is less than 65 m (as along sections of the cable route), further</li> </ul>	<p>The Environmental Manager working with the appointed construction contractor will implement mitigation during construction and decommissioning.</p> <p>The operator and / or wind farm owner will assume responsibility for implementation and maintenance of mitigation measures during operation.</p>	<p>The mitigation measures are site-specific and are proven techniques that if applied as proposed will avoid any adverse effects on the integrity of the SAC.</p>	<p>No</p>

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European Site	Potential Effect on Qualifying Interest(s)	Mitigation	Responsibility for Implementation of mitigation	Effect of the proposed Mitigation Measures	Adverse effects on the integrity of the Natura 2000 sites Y/N
	<p><i>Lampetra fluviatilis</i> (River Lamprey) [1099]  <i>Salmo salar</i> (Salmon) [1106]  <i>Lutra lutra</i> (Otter) [1355]</p>	<p>specific mitigation will be implemented (see further below):</p> <ul style="list-style-type: none"> <li>• Provision of sediment traps or settlement ponds at all outfalls during construction.</li> <li>• Daily monitoring of all sediment traps and settlement ponds to be undertaken by the Environmental Manager to ensure satisfactory operation and/or maintenance requirements.</li> <li>• Storage of oils, hydraulic fluids, etc. to be undertaken in accordance with current best practice for oil storage (Enterprise Ireland, BPGCS005).</li> <li>• The pouring of concrete, sealing of joints etc. to be completed in the dry to avoid pollution of the freshwater environment.</li> <li>• Refuelling of vehicles will be off-site where possible.</li> <li>• Culverting works will be undertaken in dry flow conditions on drains that</li> </ul>			

European Site	Potential Effect on Qualifying Interest(s)	Mitigation	Responsibility for Implementation of mitigation	Effect of the proposed Mitigation Measures	Adverse effects on the integrity of the Natura 2000 sites Y/N
		<p>do not run dry. During the culvert installation works, double silt fences will be emplaced immediately downgradient and downstream of the construction area for the duration of the construction phase.</p> <ul style="list-style-type: none"> <li>• All bank sides and streambeds will be fully reinstated to avoid ongoing erosion.</li> <li>• There will be no concrete batching on the Site. Rather, it will be transported to the Site as it is required.</li> <li>• In the unlikely event of any incidents of pollution to watercourses, immediate steps will be undertaken to resolve the cause of the pollution and mitigate against the impact of pollution, following the advice set out in the site specific Emergency Response Plan (which is part of the CEMP).</li> </ul> <p>Erosion and sediment controls will be monitored and maintained on a</p>			

European Site	Potential Effect on Qualifying Interest(s)	Mitigation	Responsibility for Implementation of mitigation	Effect of the proposed Mitigation Measures	Adverse effects on the integrity of the Natura 2000 sites Y/N
		<p>continuous basis throughout the construction phase.</p> <p>Measures for buffer zone &lt; 65 m:</p> <ul style="list-style-type: none"> <li>• Excavated trenches will be dewatered if required, from a sump installed within the low section of the opened trench. Where dewatering is required, dirty water will be fully and attenuated, through silt bags, before being discharged to surface water drainage feature. Where required, grass will be reinstated by seeding or through the replacement of grass turves to prevent loose soil/sediment material from entering surface water features.</li> <li>• Drainage measures will be provided to attenuate runoff, guard against soil erosion, soil compaction, and safeguard local water quality.</li> </ul>			

European Site	Potential Effect on Qualifying Interest(s)	Mitigation	Responsibility for Implementation of mitigation	Effect of the proposed Mitigation Measures	Adverse effects on the integrity of the Natura 2000 sites Y/N
		<ul style="list-style-type: none"> <li>• A silt fencing filtration system will be installed on all existing drainage channels before and for the duration of the cable construction to prevent contamination of any watercourse.</li> <li>• The finished surface of the road will be reinstated and finished with a bituminous layer. For off-road sections of the Grid Connection Route, the trenches will be reinstated with the related excavated material.</li> <li>• Precast concrete cable joint bays (junction boxes see Section 2.5.9.1 of Chapter 2: Project Description) will be installed within the excavated trench.</li> <li>• The surface above each cable joint bay will be finished with a bituminous layer to the satisfaction of the Local Authority and as good as the pre-existing condition.</li> </ul>			

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European Site	Potential Effect on Qualifying Interest(s)	Mitigation	Responsibility for Implementation of mitigation	Effect of the proposed Mitigation Measures	Adverse effects on the integrity of the Natura 2000 sites Y/N
<p>Mullaghanish to Musheramore Mountains SPA (code 004162)</p>	<p>The proposed development has potential to cause disturbance to breeding birds during the construction and decommissioning phases.</p> <p>This could have effects on the Special Conservation Interest:</p> <p>A050 Hen Harrier Circus cyaneus</p>	<p>No works will take place along the identified section of the grid connection route in proximity to the SPA during the breeding season (March-August inclusive).</p>	<p>The project manager will ensure that this seasonal restriction is adhered to.</p>	<p>The restriction on works during the breeding season will ensure that breeding birds will not be disturbed.</p>	<p>No</p>

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