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Cork County Council

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An Coimisiún Pleanála Case Number: ACP-324165-26

Re: 10 year planning permission for Maughanaclea Wind Farm consisting of 14 no. wind turbines, a 110kV substation and 110kV underground cabling connection and associated works located in Ardrah, Maughanaclea, Ballynamought, Gortloughra, Cousane, Coomclogh, Derragh, Glanycarney, Keenrath, Derrynacaheragh, Shiplough, Coolsnaghtig and other townlands Co. Cork.

08/06/26

Dear Sir/ Madam,

As required by section 37E(4) of the Planning and Development Act 2000, as amended and as requested in your correspondence dated 02/04/26, attached please find the report of the Planning Authority setting out the views of the authority on the effects of the proposed development on the environment and the proper planning and sustainable development of the area.

Please be advised that the report was submitted to the members of Cork County Council at the full Council Meeting on 08/06/26, as required by s.37E(5) of the Planning and Development Act, 2000 as amended. Please also be advised that no recommendations by resolution under s.37E(6) were made at this meeting.

Yours sincerely,

G. O'Mahony

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G.O'Mahony
Senior Planner
Planning and Environment Directorate
Cork County Council.

Cork County Council

Planning and Development Act, 2000 (as amended)

Planning and Development (Strategic Infrastructure) Act, 2006

An Coimisiún Pleanála Ref. No:	ACP-324165-26
Applicant:	Maughanaclea Ltd
Agents:	MKO Planning & Environmental Consultants
Site Location:	Ardrah, Maughanaclea, Ballynamought, Gortloughra, Cousane, Coomclogh, Derragh, Glanycarney, Keenrath, Derrynacaheragh, Shiplough, Coolsnaghtig, Mallabracka, Derrylahan, Derreens, Demesne, Dunmanway North, Milleenanannig, and Ballyhalwick, Co. Cork.
Proposed Development:	10 year planning permission for Maughanaclea Wind Farm consisting of 14 no. wind turbines, a 110kV substation and 110kV underground cabling connection and associated works.
Nature of Proposal	RED111 Application

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1. Introduction

This application is being made directly to An Coimisiún Pleanála 'Strategic Infrastructure Development' (SID) under the provisions of Section 37E of the Planning and Development Act 2000 as amended.

This planning report sets out the relevant planning issues in relation to the proposed Maughanaclea Windfarm.

The proposal provides for the construction of 14 no. wind turbines, a 110kV electrical substation and 110kV underground cabling connection and associated works. An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) have been prepared in respect of the proposed development.

2. Purpose of This Report

In accordance with the requirements of section 37E (4) the of the 2000 Act, the purpose of this report is to set out the views of the Planning Authority on the effects of the proposed development on the environment and on the proper planning and sustainable development of the area.

In correspondence dated 02/04/26, An Coimisiún Pleanála have requested that the report addresses, where relevant, all the issues identified in section 7 of the Guidelines for Planning Authorities in respect of Section 37A of the 2000 Act. All relevant issues in regard to the proposed development have been identified and are assessed in this report.

Three appendices are attached to this report which include:

- Appendix A: Suggested Conditions
- Appendix B: Suggested Further Information
- Appendix C: Copies of Internal Technical Reports

3. Development Description

3.1 Site Location and Description

The proposed development would be located in an upland rural area, approx. 2km east of Kealkill village, 12km northwest of Dunmanway town and 9.5km northeast of Bantry town (see Figure 1).

The overall site of the proposed windfarm would comprise of two sites which are accessed off the R585. The sites are currently in use for commercial forestry, grazing pastures and rough grazing. The proposed grid connection route largely comprises of public road corridors with some private land in agricultural use. Predominant land uses in the surrounding wider area include agriculture, commercial forestry and low density housing.

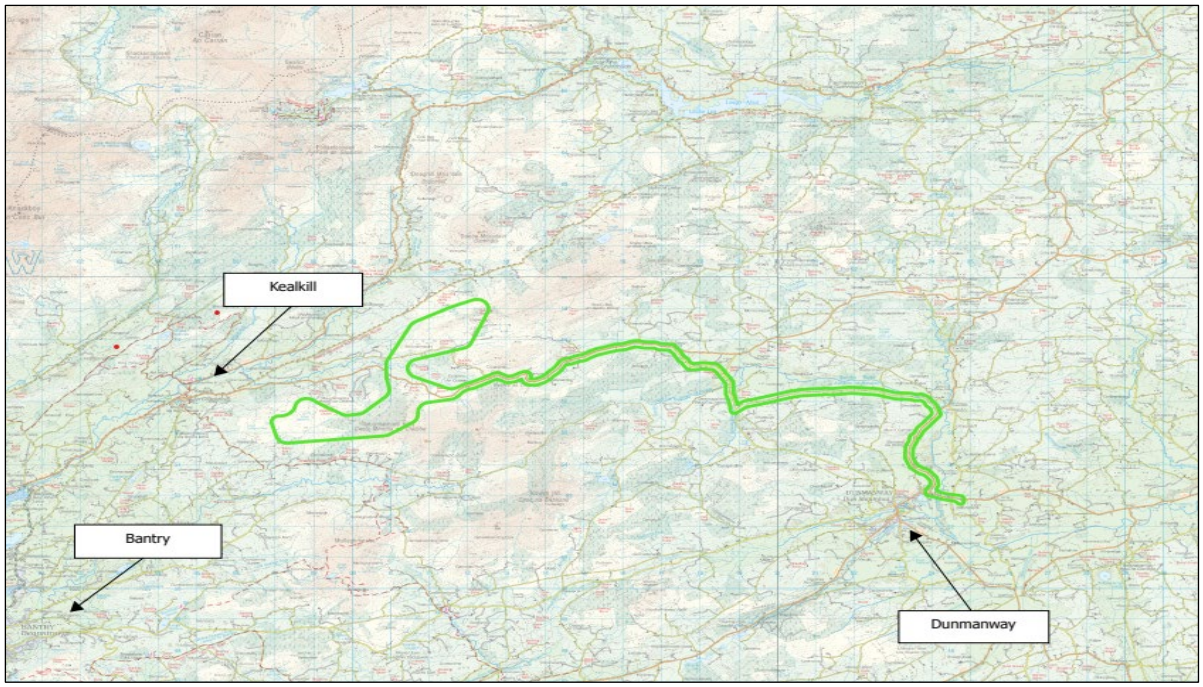

Figure 1: Site Location – Proposed windfarm and grid connection

The proposal, including private access roads and grid connection, would be located in the townlands of Ardrah, Maughanaclea, Ballynamought, Gortloughra, Cousane, Coomclogh, Derragh, Glanycarney, Keenrath, Derrynacaheragh, Shiplough, Coolsnaghtig, Mallabracka, Derrylahan, Derreens, Demesne, Dunmanway North, Milleenanannig and Ballyhalwick.

3.2 Proposed Development Description

The proposal, a RED III development, is described as follows:

a. 14 no. wind turbines with an overall turbine tip height of 169 metres, a rotor blade diameter of 133 metres, and turbine hub height of 102.5 metres, and a meteorological mast with a height of 30 metres, and subsequent decommissioning of the wind turbines and meteorological mast, following a thirty five-year operational period from the date of full commissioning of the wind turbines;
b. Associated wind turbines and meteorological mast foundations and hardstanding areas;
c. A 110kV substation compound (Including control buildings (with a combined floor area of 594Sq.m) with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, lightening protection poles, underground wastewater holding tank, site drainage and all ancillary works);
d. Underground electrical (110kV) and communications cabling from the proposed 110kV substation to the existing Dunmanway 110kV substation in the townland of Ballyhalwick (including joint bays, communication chambers, earth sheath links, and ancillary works along the underground electrical cabling route). This cabling route is primarily located within the public road corridor;
e. Underground electrical (33kV) and communications cabling connecting the wind turbines and meteorological mast to the proposed 110kV substation;
f. 3 no. temporary construction compounds (including site offices and welfare facilities (with a combined floor area of 585Sq.m);
g. 2 no. temporary security cabins (with a combined floor area of 28.8Sq.m);
h. Junction accommodation works to facilitate turbine delivery and construction access to the site, including the upgrade of an existing site entrance off the R585 regional road, and the

construction of a new access road off the R585 regional road, crossing the L8777 Local Road; including new permanent gated site entrances;

i. Upgrade of existing site tracks/ roads and provision of new site access roads, junctions and hardstand areas (including upgrade of a short section of the L8777 local road);
j. 4 no. borrow pits;
k. Peat and Spoil Management;
l. Site Drainage;
m. Tree felling and vegetation removal;
n. Biodiversity Enhancement measures (peatland habitat enhancement, Kerry slug habitat enhancement, and native woodland planting);
o. Operational stage site signage and;
p. All associated site development works and apparatus.

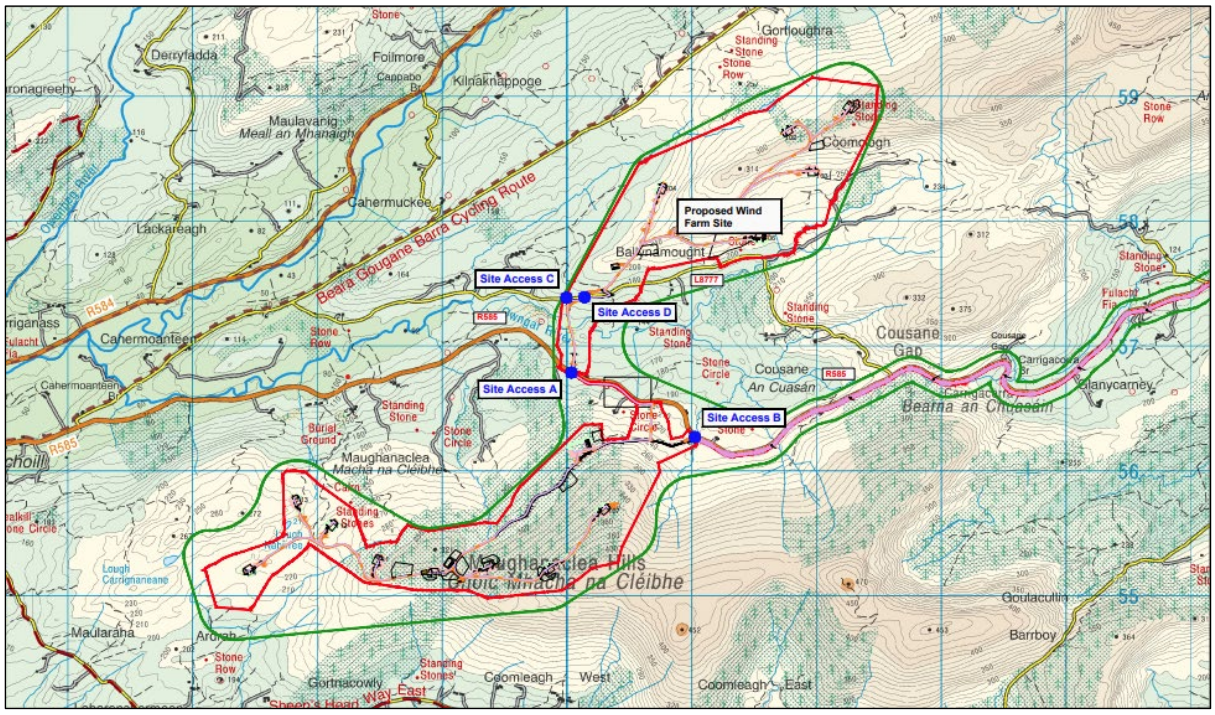

Figure 2: Site of proposed windfarm detailing the turbines and access junctions .

The proposed windfarm would comprise of two turbine clusters on the northern and southern side of the R585. These include:

- a northern turbine cluster comprising of 6 turbines (T01– T06),
- a southern turbine cluster comprising of 8 turbines (T07–T14).

Each of the proposed turbines would have a stated output of 4.8MW, giving a total generating capacity of 67.2MW. Dimensions of the proposed turbines are stated to be as follows:

- Turbine tip height of 169 metres,
- Blade rotor diameter of 133 metres,
- Hub height of 102.5 metres.

Access to the proposed windfarm would be via an existing commercial forestry road off the R585 for the southern turbine cluster and via a new entrance off the R585 for the northern turbine cluster. The access arrangements would include the upgrade of approximately 350m of the L8777.

River waterbodies which flow through the proposed site include the Owngar River, Mealagh River and Bandon River and associated tributaries. Five new water crossings are proposed as part of the current

proposal. Two watercourse crossings are proposed in the northern turbine cluster, one crossing the Owngar River to facilitate the proposed site entrance and delivery of turbine components and a second watercourse crossing along the access road to T4. The three new watercourse crossings in the southern turbine cluster include a crossing on the new road southwest of the proposed 110kV onsite substation, a crossing on the access road to T13 and a crossing on the access road between T11 and T12. Three existing watercourse crossings require upgrading as part of the proposed windfarm which are all located on the existing forestry road, southwest of the proposed 110kv substation.

The proposal includes a stated 20.5km of underground cabling which would connect the proposed onsite 110kV substation to the existing 110kV substation at Ballyhalwick, east of Dunmanway Town. The proposed grid connection would largely be located along the public road corridor including the R585, L4909, L4609, L4615, R587 and the R586 to the existing Dunmanway substation.

The proposed grid connection would pass through 15 no. townlands (Maughanaclea, Cousane, Glancarney, Derragh, Keenrath, Derrynacaheragh, Shiplough, Coolsnaghtig, Mallabracka, Derrylahan, Derreens, Demesne, Dunmanway North, Milleenanannig, Ballyhalwick). The townlands of Shanacrane East, Inchireagh, Keelaraheen, and Gortanure, are located adjacent to the proposed grid connection but are not located within the planning application (red line) boundary.

An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) accompany the application. Both documents include assessment of temporary accommodation works to facilitate the delivery of turbine components from the Port of Cork, Ringaskiddy, to the site entrances via the national (N28, N40 & N22) and regional (R585) public road network. A Construction Environmental Management Plan (CEMP) and a Biodiversity Management and Enhancement Plan (BMEP) have also been provided.

The applicants are seeking a ten-year permission with an operational period of thirty-five-years from the date of commissioning of the wind turbines.

It is estimated that the construction phase of the Proposed Project would be between 18-24 months.

3.3 Recent Relevant Planning History

Plan Reg. Ref. No.	*Description*	*Decision*
25/142	Erection of eight wind turbines with an overall ground to blade tip height of 175m consisting of a rotor diameter of 150m; and a hub height of 100m, Construction of permanent Turbine hardstands and Turbine Foundations, Construction of one temporary Construction Compound with associated temporary site offices parking areas and security fencing, Installation of meteorological mast with a height of 100m, Development of one on-site Borrow pit, Construction of new permanent internal site access roads and upgrade of existing internal site access roads to include passing bays and all associated drainage infrastructure, Development of a permanent internal site drainage network and sediment control systems, All associated underground electrical power and communications cabling connecting the wind turbines to the on-site substation, Biodiversity enhancement measures. Recreational community improvements including the erection of 4 no. permanent information boards relating to cultural heritage and upgrades to amenity	Refused. Currently on appeal, ABP-322743-25

	tracks across the site, all associated site development works at tSeithe Bheag (Shehy Beg), Gortloughra, Cloghboola & Inchinroe, Co. Cork.	
25/126:	Construct a new dwelling house at Coolsnaghtig, Dunmanway, Co. Cork.	Granted 2025
24/0048	Extend and alter house and install septic tank and percolation area at Coolsnaghtig, Dunmanway.	Granted 2024
23/654	Uprate (refurbishment) of the existing Bandon to Dunmanway 110kv OHL, which consists of the : (i) replacement ("restringing") of the existing OHL conductor wires with a new higher capacity conductor including installation of a new fibre optic communication connection; (ii) replacement of 12 no. of the 13 no. existing steel towers including 11 no. angle masts (AM) and 1 no. end mast (EM) and their foundations with similar structures and member replacement and new bolts at 1 no. EM. Any replacement AMs will be constructed at, or immediately adjacent to the existing structures that they will replace, with a height difference of between 0.5-1.5m; (iii) Replacement of 16 no. of the 127 no. existing intermediate Polesets (IMPs); with similar structures. Any replacement IMPs will be constructed in situ, with the exception of IMP128 which will be replaced at an offset of 10m. The height differences of the replacements will be 1m, with the exception of IMP113 and IMP115 which will be a 2m and 3m increase in height respectively, (iv) Carrying out of civil works for tower foundation strengthening at 1 no. location; (v) Replacement of hardware and fittings at all locations, including insulators, clamps, anti-climb guards, vibration dampers, and installation of new jumper arrangements, suspension weights, plump poles, pole bolts and anti-climb guards; (vi) replacement of a crossarm at 1 no. location; (vii) all associated works within the existing Dunmanway Substation to accommodate the uprated 110 kV OHL and all associated site development works including above and below the ground works to gain access to the existing structures including timber cutting and vegetation clearance, painting, renumbering of replacement structures, installation of line identification labels and danger notices and other ancillary works necessary to facilitate the proposed development; and (viii) Other temporary associated and ancillary development works. Natura Impact Statement submitted.	Granted 2024.
21/902	Ten year planning permission for proposed development consisting of a 20 kilovolt (kV) electrical powerline grid connection, approximately 10,117 metres in overall length (made up of approximately 9,983 metres of underground cable and approximately 134 metres of Over Head Line with three wooden support single poles), connecting the approved electrical substation at Knockeenboy Wind Farm (Planning Register Reference No. 11/00059 & An Bord Pleanala Ref. PL88.240070) to the existing Dunmanway 110kV ESB Networks substation at Ballyhalwick; together with all ancillary works and apparatus. The grid connection will be developed from the approved substation through the townlands of Knockeenboy, Kilronane West, Kilronane East, Moreagh, Nedinagh West, Acres and Ballyhalwick townlands. The proposed development is located to the east, south and southwest of Dunmanway, Co. Cork. Environmental Impact Assessment Report and Natura Impact Statement submitted.	Granted 2022

21/857	Renovate and alter existing farmhouse, install new foul water drainage system, landscaping works and alteration to entrance at Maughanaclea, Kealkill.	Granted 2022.
21/ 186	Retain cattle house and tanks and to construct aa new cattle house with two slurry tanks at Keenrath, Dunmanway.	Granted 2021.
20/523	Relocate entrance to dwelling granted under 13/544, closure of existing entrance to dwelling as granted under 13/544 and all associated siteworks at Cousane, Kealkill.	Granted 2020.
18/575	Construction of extension to house at Ballyhalwick, Dunmanway.	Granted 2018.
17/431	10 year permission for proposed development consisting of: (1) A 110kV electricity substation including 2 no. control buildings associated electrical plant and equipment, underground electricity cabling, fencing, alterations to a previously permitted borrow pit and temporary construction compound at the Carrigarierk Wind Farm (An Bord Pleanala Ref. PL04.246353, Cork County Council Ref. 15/730) in the townland of Carrigdangan; (2) 110kV underground electricity cabling connecting the proposed substation to the existing Dunmanway ESB substation in the townlands of Carrigdangan, Inchincurka, Kilnadur, Aultaghreagh, Aultagh, Ardcahan, Knockduff, Gurteennasowna and Ballyhalwick; (3) 33kV underground electricity cabling connecting the proposed substation to the permitted Carrigarierk Wind Farm through the townlands of Carrigdangan and Gortatanavally and the permitted Shehy More Wind Farm (ABP Ref. PL04.243486; Cork County Council Ref. 13/551), through the townlands of Shehy More, Coolcaum, Coolmountain, Tullagh, Lackabaun, Clogher, Farrannahineeny, Crushterra, Gurteen and Carrigdangan. Together with all ancillary works and apparatus. Environmental Impact Statement and Natura Impact Statement submitted.	Decision upheld by An Coimisiún Pleanála on appeal (ABP-301563-18).

4. <u>An Coimisiún Pleanála</u>

4.1 Pre-application consultations with An Coimisiún Pleanála

The applicants engaged in pre-application consultations with An Coimisiún Pleanála (pre-application ref.no. ABP321826-25) under s.37B of the Planning and Development Act 2000 as amended.

The Commission determined, in a letter dated 10/02/26, that the proposed development falls within the scope of paragraphs 37A(2)(a) and (b) of the Act and that the proposed development would be strategic infrastructure within the meaning of section 37A of the Planning and Development Act 2000, as amended.

A copy of the SID Determination accompanies the application for the proposed development. The SID Determination advises that no design flexibility opinion was being sought at the time of the pre-application consultations.

4.2 RED 111 Completeness Check

Confirmation issued from An Coimisiún Pleanála on 01/05/26 advising that An Coimisiún Pleanála are satisfied that the application includes all the information required to process the application in relation to the proposed development.

5. Planning Policy Context

5.1 Relevant European Policy

European Renewable Energy Directive (RED III) (EU/2023/2413)

The Renewable Energy Directive sets an overall renewable energy target of 42.5% at EU level by 2030, with an aim of achieving 45%, to achieve climate neutrality and strengthen energy supply. Ireland is required to contribute nationally to the 42.5% target.

European Wind Power Action Plan

The Plan aims to accelerate the deployment of wind energy, support EU renewable energy targets and assist the European wind energy sector.

REPowerEU Plan 2022 and Directive EU 2018/2001, as amended 18.05.2022

The plan amends the Directive on the Promotion of the Use of Energy from Renewable Sources (Directive EU 2018/2001) to require that 45% of energy is from renewable sources and includes accelerated rollout of renewable energy.

5.2 Relevant National Policy and Other Relevant Guidance

National Planning Framework, First Revision 2025

Includes National Policy Objective 70 to promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a climate neutral economy by 2050.

Includes National Policy Objective 71 to support the development and upgrading of the national electricity grid infrastructure, including supporting the delivery of renewable electricity generating development.

Climate Action Plan 2025

The Plan aims to deliver a 51% reduction in greenhouse emissions by 2030 and achieve net-zero emissions by 2050. The Plan has a key target to achieve 9GW for onshore wind by 2030.

National Biodiversity Plan 2023-2030

Sets out key national objectives to support biodiversity.

National Development Plan 2021-2030 and 2025 Review

Sets out infrastructure investment priorities to support the implementation of the National Planning Framework.

Wind Energy Development Guidelines, 2006

Provides guidance for onshore windfarm developments.

Draft Wind Energy Development Guidelines, 2019

Provides revised advice on noise, visual amenity, shadow flicker and community engagement for wind energy projects.

Climate Action and Low Carbon Development (Amendment) Act, 2021

The enabling Acts set the national target of achieving a carbon neutral economy by 2050, with binding targets to reduce emissions by 51% in 2030.

5.3 Relevant Regional Policy

Regional Spatial and Economic Strategy for the Southern Region, 2020-2032.

Seeks to support the delivery of the National Planning Framework and the National Development Plan at regional level. Recognises the role of wind energy with relevant regional policy objectives including RPO 56 Low Carbon Economy, RPO 95 Sustainable Renewable Energy Generation and RPO 99 Renewable Wind Energy.

5.4 Relevant Local Plans

Cork County Council Local Authority Climate Action Plan 2024-2029
Seeks to support the delivery of national policy and targets.

Cork County Development Plan, 2022

The proposed windfarm would be located within a Landscape Character Type: Ridged and Peaked Upland.

The proposed windfarm would be located in an area designated as 'Open to Consideration' for windfarms, as set out in the Cork County Development Plan, 2022.

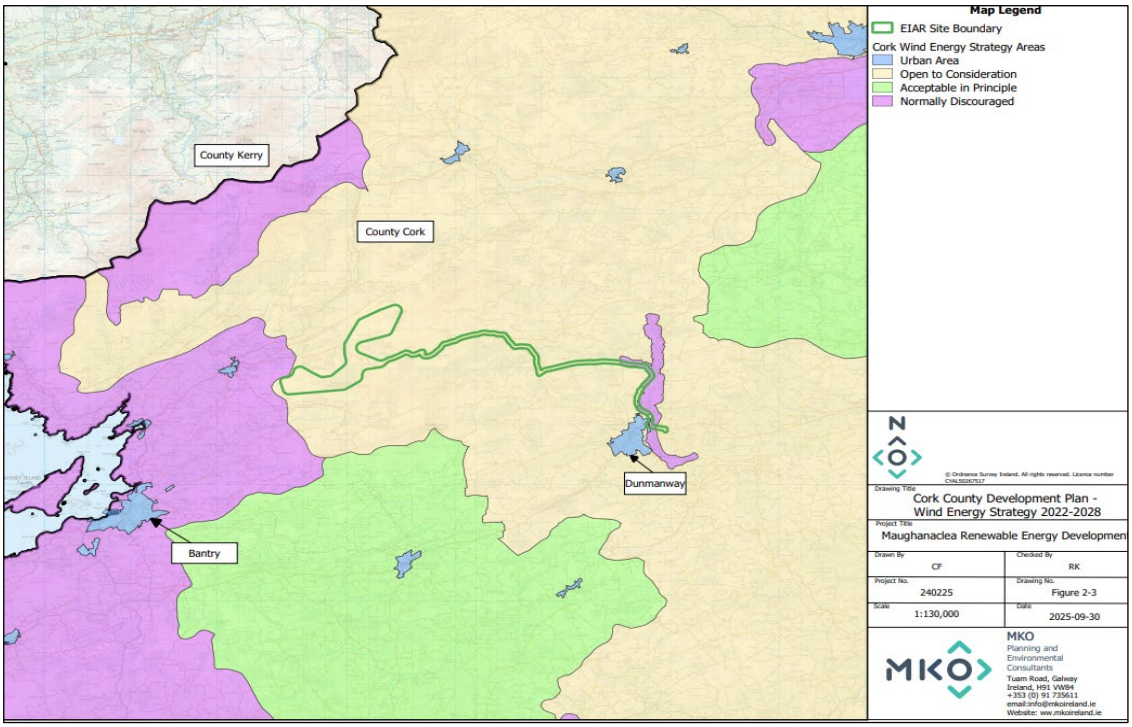

Figure 3: Wind Energy Strategy Areas, Cork County Development Plan, 2022

Chapter 13 of the Cork County Development Plan, 2022 sets out the policy considerations in regard to renewable infrastructure in addition to the following relevant Policy Objectives:

Objective ET 13-1 Energy
a) Ensure that County Cork fulfils its potential in contributing to the sustainable delivery of a diverse and secure energy supply and to harness the potential of the county to assist in meeting renewable energy targets and managing overall energy demand.
b) During the life of this plan, the Planning Authority will prepare a renewable energy strategy for the county.

Objective ET 13-2 Renewable Energy
a) Support Ireland's renewable energy commitments as outlined in Government Energy and Climate Change policies by facilitating the development of renewable energy sources such as wind, solar, geothermal, hydro and bio-energy and energy storage at suitable locations within the county where such development has satisfactorily demonstrated that it will not have adverse impacts on the surrounding environment (including water quality), landscape, biodiversity or amenities.

b) Support and facilitate renewable energy proposals that bring about a direct socio-economic benefit to the local community. The Council will engage with local communities and stakeholders in energy and encourage developers to consult with local communities to identify how they can invest in/gain from significant renewable energy development.
c) Support the development of new and emerging renewable energy technologies / fuels for the transport sector.
d) To promote the potential of micro renewables where it can be demonstrated that that it will not have adverse impacts on the surrounding environment (including water quality), landscape, biodiversity, or amenities.

Objective ET 13-4: Wind Energy
In order to facilitate increased levels of renewable energy production consistent with national targets on renewable energy and climate change mitigation as set out in the National Energy and Climate Plan 2021-2030, the Climate Action Plan 2021, and any updates to these targets, and in accordance with Ministerial Guidelines on Wind Energy Development, the Council will support further development of on-shore wind energy projects including the upgrading, repowering or expansion of existing infrastructure, at appropriate locations within the county in line with the Wind Energy Strategy and objectives detailed in this chapter and other objectives of this plan in relation to climate change, biodiversity, landscape, heritage, water management and environment etc.

Objective ET 13-5: Wind Energy Projects
a) Support a plan led approach to wind energy development in County Cork through the identification of areas for wind energy development. The aim in identifying these areas is to ensure that there are minimal environmental constraints, which could be foreseen to arise in advance of the planning process.
b) On-shore wind energy projects should focus on areas considered 'Acceptable in Principle' and 'Areas Open to Consideration' and generally avoid "Normally Discouraged" areas as well as sites and locations of ecological sensitivity.

Objective ET 13-7: Open to Consideration
Commercial wind energy development is open to consideration in these areas where proposals can avoid adverse impacts on:

- Residential amenity particularly in respect of noise, shadow flicker and visual impact.
- Urban areas and Metropolitan/Town Green Belts.
- Natura 2000 Sites (SPA's and SAC's), Natural Heritage Areas (NHA's), proposed Natural Heritage Areas and other sites and locations of significant ecological value.
- Architectural and archaeological heritage.
- Visual quality of the landscape and the degree to which impacts are highly visible over wider areas. In planning such development, consideration should also be given to the cumulative impacts of such proposals.

Other relevant objectives in the Cork County Development Plan, 2022 include:

Objective GI 14-9: Landscape
a) Protect the visual and scenic amenities of County Cork's built and natural environment.
b) Landscape issues will be an important factor in all land-use proposals, ensuring that a pro-active view of development is undertaken while protecting the environment and heritage generally in line with the principle of sustainability.
c) Ensure that new development meets high standards of siting and design.
d) Protect skylines and ridgelines from development.
e) Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments.

Objective GI 14-12: General Views and Prospects
Preserve the character of all important views and prospects, particularly sea views, river or lake views, views of unspoilt mountains, upland or coastal landscapes, views of historical or cultural significance (including buildings and townscapes) and views of natural beauty as recognized in the Draft Landscape Strategy

Objective GI 14-13 - Scenic Routes
Protect the character of those views and prospects obtainable from scenic routes and in stretches of scenic routes that have very special views and prospects identified in this Plan. The scenic routes identified in this Plan are shown on the scenic amenity maps in the COP Map Browser and are listed in Volume 2 Heritage and Amenity Chapter 5 Scenic Routes of this Plan.

Objective GI 14-14 - Development on Scenic Routes
a) Require those seeking to carry out development in the environs of a scenic route and/or an area with important views and prospects, to demonstrate that there will be no adverse obstruction or degradation of the views towards and from vulnerable landscape features. In such areas, the appropriateness of the design, site layout, and landscaping of the proposed development must be demonstrated along with mitigation measures to prevent significant alterations to the appearance or character of the area.
b) Encourage appropriate landscaping and screen planting of developments along scenic routes (See Chapter 16 Built and Cultural Heritage).

Objective BE 15-2: Protect sites, habitats, and species
a) Protect all natural heritage sites which are designated or proposed for designation under European legislation, National legislation, and International Agreements. Maintain and where possible enhance appropriate ecological linkages between these. This includes Special Areas of Conservation, Special Protection Areas, Marine Protected Areas, Natural Heritage Areas, proposed Natural Heritage Areas, Statutory Nature Reserves, Refuges for Fauna and Ramsar Sites. These sites are listed in Volume 2 of the Plan.
b) Provide protection to species listed in the Flora Protection Order 2015, to Annexes of the Habitats and Birds Directives, and to animal species protected under the Wildlife Acts in accordance with relevant legal requirements. These species are listed in Volume 2 of the Plan.
c) Protect and where possible enhance areas of local biodiversity value, ecological corridors and habitats that are features of the County's ecological network. This includes rivers, lakes, streams and ponds, peatland and other wetland habitats, woodlands, hedgerows, tree lines, veteran trees, natural and semi-natural grasslands as well as coastal and marine habitats. It particularly includes habitats of special conservation significance in Cork as listed in Volume 2 of the Plan.
d) Recognise the value of protecting geological heritage sites of local and national interest, as they become notified to the local authority, and protect them from inappropriate development
e) Encourage, pursuant to Article 10 of the Habitats Directive, the protection and enhancement of features of the landscape, such as traditional field boundaries, important for the ecological coherence of the Natura 2000 network and essential for the migration, dispersal and genetic exchange of wild species.

Objective BE 15-6: Biodiversity and New Development
Provide for the protection and enhancement of biodiversity in the development management process and when licensing or permitting other activities by: a) Providing ongoing support and guidance to developers on incorporating biodiversity considerations into new development through preplanning communications and the Council's guidance document 'Biodiversity and the Planning Process – guidance for developments on the management of biodiversity issues during the planning process' and any updated versions of this advice; b) Encouraging the retention and integration of existing trees, hedgerows and other features of high natural value within new developments; c) Requiring the incorporation of primarily native tree and other plant species,

particularly pollinator friendly species in the landscaping of new developments; d) Fulfilling Appropriate Assessment and Environmental Impact Assessment obligations and carrying out Ecological Impact Assessment in relation to development and activities, as appropriate; e) Ensuring that an appropriate level of assessment is completed in relation to wetland habitats subject to proposals which would involve drainage or reclamation. This includes lakes and ponds, watercourses, springs and swamps, marshes, heath, peatlands, some woodlands as well as some coastal and marine habitats; f) Ensuring that the implementation of appropriate mitigation (including habitat enhancement, new planting or other habitat creation initiatives) is incorporated into new development, where the implementation of such development would result in unavoidable impacts on biodiversity - supporting the principle of biodiversity net gain.

Objective HE 16-2: Protection of Archaeological Sites and Monuments
Secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments and their setting included in the Sites and Monuments Record (SMR) (see www.archaeology.ie) and the Record of Monuments and Places (RMP) and of sites, features and objects of archaeological and historical interest generally. In securing such preservation, the planning authority will have regard to the advice and recommendations of the Development Applications Unit of the Department of Housing, Local Government and Heritage as outlined in the Frameworks and Principles for the Protection of the Archaeological Heritage policy document or any changes to the policy within the lifetime of the Plan.

Objective HE 16-3: Underwater Archaeology
Protect and preserve the archaeological value of underwater archaeological sites and associated underwater and terrestrial features. In assessing proposals for development, the development will take account of the potential underwater archaeology of rivers, lakes, wetlands, intertidal and sub-tidal environments through appropriate archaeological assessment by a suitably qualified archaeologist.

Objective HE 16-5: Zones of Archaeological Potential
Protect the Zones of Archaeological Potential (ZAPs) located within historic towns, urban areas and around archaeological monuments generally. Any development within the ZAPs will need to take cognisance of the upstanding and potential for subsurface archaeology, through appropriate archaeological assessment.

Objective HE 16-6: Industrial and Post Medieval Archaeology
Protect and preserve industrial and post-medieval archaeology and long-term management of heritage features such as mills, limekilns, forges, bridges, piers and harbours, water-related engineering works and buildings, penal chapels, dwellings, walls and boundaries, farm buildings, estate features, military and coastal installations. There is a general presumption for retention of these structures and features. Proposals for appropriate redevelopment including conversion should be subject to an appropriate assessment and record by a suitably qualified specialist/s.

Objective HE 16-7: Battlefield, Ambush and Siege Sites and Defensive Archaeology
Protect and preserve the defensive archaeological record of County Cork including strategic battlefield, ambush and siege sites, and coastal fortifications and their associated landscape due to their historical and cultural value. Any development within or adjoining these areas shall undertake a historic assessment by a suitably qualified specialist to ensure development does not negatively impact on this historic landscape.

Objective HE 16-8: Burial Places
Protect all historical burial places and their setting in County Cork and encourage their maintenance and care in accordance with appropriate conservation principles.

Objective HE 16-9: Archaeology and Infrastructure Schemes

All large-scale planning applications (i.e., development of lands on 0.5 ha or more in area or 1km or more in length) and Infrastructure schemes and proposed roadworks are subjected to an archaeological assessment as part of the planning application process which should comply with the Department of Arts, Heritage and the Gaeltacht's codes of practice. It is recommended that the assessment is carried out following pre planning consultation with the County Archaeologist, by an appropriately experienced archaeologist to guide the design and layout of the proposed scheme/development, safeguarding the archaeological heritage in line with Development Management Guidelines.

Objective HE 16-10: Management of Monuments within Development Sites
Where archaeological sites are accommodated within a development it shall be appropriately conservation/ protection with provision for a suitable buffer zone and long-term management plan put in place all to be agreed in advance with the County Archaeologist.

Objective HE 16-11: Archaeological Landscapes
To protect archaeological landscapes and their setting where the number and extent of archaeological monuments are significant and as a collective are considered an important archaeological landscape of heritage value.

Objective HE 16-12: Raising Archaeological Awareness
As part of the Heritage Plan, it is an objective to develop a management plan, if resources allow, for the archaeology of County Cork, which could include an evaluation of the Historic Character Assessment of Cork County helping to identify areas for tourism potential, and strategic research while also promoting best practice in archaeology and encouraging the interpretation, publication and dissemination of archaeological findings from the development application process.

Objective HE 16-13: Undiscovered Archaeological Sites
To protect and preserve previously unrecorded archaeological sites within County Cork as part of any development proposals. The Council will require preservation in situ to protect archaeological monuments discovered. Preservation by record will only be considered in exceptional circumstances.

Objective CA 17-1 Support national and local climate change objectives set out in the following:
- National Planning Framework
- Southern Region Spatial and Economic Strategy
- Climate Action Plan (2021 or any successor plan).
- National Climate Change Adaptation Framework (2018 or any successor framework).
- National Mitigation Plan (2017 or any successor plan).
- Cork County Council Climate Change Adaptation Strategy.

Objective CA 17-2 -In order to achieve a reduction in greenhouse gas emissions, an increase in renewable energy production, an increase in energy efficiency and enhanced biodiversity, support the transition to a low carbon, competitive, climate resilient and environmentally sustainable economy by 2050 through implementation of the polices of this plan that seek to deliver the following:
- compact growth,
- integrated land use and transport,
- sustainable transport choices,
- liveable settlements,
- renewable energy production and reduced energy consumption,
- enhanced ecological biodiversity and
- climate adaptation measures such as through flood risk management, sustainable urban drainage systems, and high quality placemaking and design.

6 Technical Reports

Relevant Internal Reports include:

6.1 Archaeological Officer

Chapter 14 has been reviewed in respect to Archaeology, Architectural and Cultural Heritage. The Archaeological Officer notes that in regard to current land use, a large portion of land-use is also represented by upland mountainous peat which are areas where huts sites, pre-bog walls and enclosures are typically found.

The study areas for assessing known archaeology, allowing 10km for National Monuments, 5km for Recorded Monuments and 2km for those not subject to statutory protection and a 100m corridor along the grid connection route, are considered appropriate.

Direct negative effects on Archaeology and Cultural Heritage at construction stage

The Environmental Impact Assessment Report identifies two direct impacts:

1. The proposed new internal wind farm road passes through field boundary AH58 (Recorded Monument CO092-089 and CO092-094), which comprises a c. 200m length of a drystone wall, largely covered by earth and grass. Construction of the proposed new road would result in removal of a c. 12m section of the field boundary, which would have a direct permanent negative effect on the monument. This is of concern and would be contrary Policy Objective HE 16-2 of the Cork County Development Plan, 2022. Considered as Slight Negative in Appendix 14-2 Construction Phase Residual Effects of the Environmental Impact Assessment Report, the Archaeological Officer does not agree that removal of a 12m section of a Recorded monument (even if it recoded/surveyed prior to removal) can be assessed as slight.
2. The construction of the proposed windfarm would result in one direct, negative significant effect on a previously unrecorded cultural heritage site. This is CH55, a field containing north–south orientated lazy beds situated within a sub-oval enclosure. The enclosure and lazy beds, the applicant's archaeologist notes, may relate to nearby recorded monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095) and possibly represent part of a larger field system. Proposed Turbine T03 and its associated hardstand are located directly on the site of CH55 and ground disturbance associated with the construction of the Proposed Project would have a direct permanent negative effect on these remains.

In respect to field boundary AH58 (Recorded Monument CO092-089 and CO092-094), the Archaeological Officer advises that further information should be sought seeking a revised engineering solution to avoid impacts to the Recorded Monument such as bridging over the monument.

If CH55 enclosure and lazy bed system is related to Recorded Monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095), this should be explored prior to a decision being made and further information should be sought for a re-design to avoid impacting on the identified features. Turbine 3 should be re-located as it is identified as a Significant effect in the Environmental Impact Assessment Report (Chapter 14, Section 14.4.3).

Watercourses and underwater Archaeology
No instream works are required according to the Environmental Impact Assessment Report either within the Wind Farm site boundary or along the proposed grid connection route.

Townland Boundaries
A number of townland boundaries would be directly impacted and it is proposed to record prior to removal. This is considered acceptable, apart from Recorded Monument AH58 mentioned above.

Sub-Surface archaeology

The Archaeological Officer considers that apart from the sections of commercial forestry, the assessment of sub-surface archaeology has not been addressed. The Archaeological Officer advises that the mitigation measures proposed to alleviate such impacts are based on an assumption of preservation by record/ excavation/ removal of such features as a re-design of turbines (to avoid impacting on archaeology, if identified) would be difficult to achieve post-consent without another planning application or loss of the turbine to achieve preservation in situ. This does not allow preservation in situ of significant sub-surface archaeology which is State Policy and required by Objective HE16-13 of the Cork County Development Plan, 2022.

In the context of a RED III application, the Archaeological Officer notes that this should have been addressed by archaeological testing in accessible areas of the site. The Archaeological Officer recommends that a programme of archaeological testing be undertaken by way of further information in lands outside the extent of commercial forestry. This is to ensure that any significant archaeology can be preserved in situ and direct negative effects at construction stage can avoided by re-designing the proposal prior to a decision being made by An Coimisiún Pleanála.

Visual Impacts on Setting (indirect effects)
The Archaeological Officer notes that operational (visual) impacts are difficult/ not possible to mitigate and therefore the findings of the Environmental Impact Assessment Report should be evidence based with monuments plotted/ annotated on the Zone of Theoretical Visibility (ZTV) and it should be clear which monuments/ areas have no visibility. Photomontages should also be provided for National monuments within 10km if they are located within areas with visibility on the ZTV.

The Archaeological Officer advises of further deficiencies including:

- There are no cross references between Chapter 14 and Chapter 13 regarding how the significance of effects on setting of monuments was arrived at.
- Appendix 13-1 Landscape and Visual Impact Assessment (LVIA) does not specifically include Archaeological/ National Monuments in the Viewpoint Selection process.
- Appendix 13-4 Baseline Mapping shows the ZTV and some receptors but not specifically archaeology. Chapter 14 should overlay the Recorded/National Monuments on the ZTV.
- Appendix 13-3 LVIA Photomontages only reference one Recorded Monument - Kealkill Stone Circle (VP4). This Protected Monument is not referenced in Chapter 14 of the Environmental Impact Assessment Report and, therefore, it is not clear on what basis the assessment arrived at the significance of effects.

Overall, visual impacts, as a result of 14 turbines alone and cumulatively in the context of nearby windfarms, are a concern, particularly as the density of Recorded Monuments and National Monuments within 5 and 10km is notably high.

The Archaeological Officer advises that it must be clear to the Competent Authority how the Archaeological Assessment arrived at the Significance of Impacts in Appendix 14-2 and the conclusions should be accompanied by photomontages where relevant and based on the ZTV results. The Archaeological Officer further advises that Chapter 14 (Appendix 14-2 Assessment of Impacts) should ideally provide commentary on how many turbines are visible from each asset (Recorded/National Monument) and if there is no visibility, then this should be clearly stated. The ability to see turbines from archaeological monuments does not necessarily imply visual impact but the number of turbines visible from the asset as well as distance affects the Significance of Impacts. This information is not presented in Chapter 14.

Carriganass Castle Recorded Monument
Clarification is needed in regard to conflicting assessment impacts on Carriganass Castle (Recorded Monument CO106-001; CO106-001001). In Appendix 14-2 AH144 the impact on Carriganass Castle is

considered to be a moderate negative impact. However, the impact is considered to be slight in Chapter 13 (Section 13.7.3.4.9), a moderate effect in Chapter 14 and a 'not significant in Chapter 13.

Table 13-12 of the LVIA presents information on views/visibility from key assets (mainly National Monuments with public access) which has not been referenced in Chapter 14. The results are key to the findings of Chapter 14.

Objective HE16-2 of the Cork County Development Plan, 2022 seeks to protect the setting of Recorded Monuments. Given that it is not possible to mitigate the operational effects (impacts on setting) of turbines on Archaeology, it is essential that the conclusions drawn are evidence based. Further information should, therefore, be sought regarding the visual impacts of the proposal on Archaeology and National Monuments. The Archaeology Officer advises that it needs to be clear how the conclusions on the significance of effects were drawn in Appendix 14-2 and if the ZTV was utilised, then the results of the analysis should be clearly presented. It should also be clear how many turbines are theoretically visible from each monument presented in Appendix 14-2. The 'visibility' or otherwise, coupled with the distance from the monument should demonstrate a level of impact. Photomontages from specific monuments should be presented where moderate to significant effects have been identified. The LVIA Chapter 13 and Chapter 14 should be cross referenced where relevant.

The cumulative assessment on archaeology is not considered to be adequate and evidence-based conclusions should be presented based on the ZTV and photomontages/visualisations.

The Archaeological Officer recommends seeking **Further Information** on direct negative effects to Recorded Monuments and regarding impacts to the Setting of Recorded and National Monuments.

In the event that a grant of planning permission by An Coimisiún Pleanála, six conditions have been recommended by the Archaeological Officer who advises that effects to the setting of Recorded and National Monuments are difficult to mitigate post consent.

6.2 Area Engineer Report, Dunmanway

The Area Engineer advises that 10.82km of the total length of the proposed grid connection underground cable route (20.5km) would be in the Dunmanway Engineering Area. Full road reinstatement would be required for the following roads:

- 1*,221m -L4609-Keenrath, Derrynacaheragh, Inchireagh, Shiplough Road***-** - Junction Bay/Box no. 14- Water Crossing 05 (Direction Drilling) &06(Direction Drilling)& Drawing 2403225-27&
- 5*,669m -L4615-Coolsnaghtig, Mallabracka, Derrylahan, Keelaraheen Road***-** - Junction Bay/Box's no. 15, 16, 17, 18, 19, 20, 21, 22 - Water Crossing 07&08 Drawing 2403225-29& 30 Road Section RI to be completed in 2023 – Full Road reinstatement Required**.**
- *3,103m -R587 Derreens, Demesne, Dunmanway North*- Junction Bay/Box's no. 23, 24,25,26- Water Crossing 09 Drawing 2403225-31- Road - RI & RM to be completed in 2026 – Full Road reinstatement Required.
- *829m - R586 Dunmanway North, and Ballyhalwick***-**Junction Bay/Box no. 27- Water Crossing 10, 11,11a (Long Bridge - Dunmanway Town – (Direction Drilling under the Bandon River) Drawing 2403225-32,33,34- Road - RI completed in 2025 – Full Road reinstatement Required.

Six conditions have been recommended by the Aea Engineer in the event of a grant of permission by An Coimisiún Pleanála.

6.3 Senior Executive Engineer, Macroom MD

The Senior Executive Engineer notes that while the application lies outside of Macroom Municipal District, the proposed turbine delivery route does pass through the Macroom Municipal District. As such, the turbine deliveries would be subject to an Abnormal Load Permit application where all related issues will be conditioned.

6.4 Ecology Officer

The Ecology Officer, having reviewed the submitted Environmental Impact Assessment Report, the Natura Impact Statement (NIS) and the supporting ecological survey information, advises of three primary ecological considerations:

- Potential for the proposed development to give rise to negative effects on habitats of high natural value, including peatland habitats, and habitats deemed to be a potential critical resource (foraging, commuting and/or breeding habitat) to protected species.
- Potential for the proposed development to give rise to negative effects on conservation objectives of Natura 2000 sites.
- Potential for the proposed development to give rise to negative effects on protected invertebrates, terrestrial mammals and avian species.

Appropriate Assessment
Given that the windfarm site is situated almost entirely outside of the Bandon catchment, the Ecology Officer agrees that the proposal would not adversely affect the Bandon River SAC at construction, operational, or decommissioning stages. In regard to the grid connection route, the potential effects on the SAC (impacts to water quality, siltation, release of hydrocarbons, etc) are noted and the mitigation measures outlined in the Natura Impact Statement are considered sufficient.

Having regard to the Mullaghanish to Musheramore Mountains SPA, given the intervening distance between the SPA and the proposed windfarm site, the Ecology Officer concurs with the NIS in that breeding pairs associated with the SPA would not be adversely affected by the windfarm, nor would breeding and foraging opportunities within the SPA. Having regard to ex-situ impacts, the Ecology Officer considers the intervening distance to be too great for any significant adverse effects to occur.

The Ecology Officer has significant concerns regarding the siting of the proposal within habitats of County/ National Importance and the inadequacy of the information and assessment provided by the applicants in the supporting documentation.

Habitats
In regard to habitats, the Ecology Officer advises that the new road leading to Turbine 6 and Turbine 6 may hinder the peat enhancement measures and that an alternative location for the peatland enhancement area should be sought. Turbine 2 would be proximal to Article 17 Annex I habitat and the applicant should be requested to clarify the distance from the Wet Heath habitat as it may also be impacted by the proposed development.

The Ecological Officer also advises the proposed removal of wet heath habitat (1.6ha) and blanket bog (0.2ha) to accommodate Turbines 4 and 14 would contravene Policy Objective 15-2 of the Cork County Development Plan, 2022. To achieve biodiversity net gain as required by Policy Objective 15-6 and to ensure the protection of wet heath habitat and blanket bog, the Ecological Officer also advises that the T4 and T14 sites, along with associated infrastructure, should be replaced with wet heath enhancement measures as set out in the Biodiversity Management and Enhancement Plan, and protection of Annex I habitats.

Bats
Attention is drawn to a known maternity roost of Lesser Horseshoe Bats (Annex II listed species) which is located proximal to the proposed grid connection route and it is advised that An Coimisiún Pleanála

may wish to request an assessment of potential impacts the construction stage of the proposed grid connection route may have on this important maternity roosting site.

Avian Species
It is noted that no walkover surveys were conducted in the vicinities of Turbines 11, 12, 13, or 14 and in order to inform a robust assessment and ensure no impacts, the applicants should be asked to clarify why no walkover surveys were conducted here and to undertake such surveys, if deemed required by An Coimisiún Pleanála.

It is also advised that An Coimisiún Pleanála may wish to request an assessment of potential impacts the construction stage of the proposed grid connection route may have on a known chough nest site which is located proximal to the proposed grid connection route.

The Ecology Officer advises that with the intensification of windfarm development within the area, in addition to forestry in the surrounding environment transitioning to a closed canopy, the site in question may, over time, become a vital resource to the Hen Harrier given its already known site usage, which may be lost. It is also advised given the potential for recently felled conifer woodland (WS5) for nesting opportunities for the Hen Harrier, the applicants have not provided any information on what measures would be required in the event of Hen Harrier nesting occurring within the site. The development of a windfarm so close to a hen harrier nest would significantly impact this Annex I species.

The Ecology Officer disagrees with the assertion in the Environmental Impact Assessment Report that there is no risk of collision for hen harrier and white-tailed eagle as two known mature adult hen harrier fatalities caused by collision with turbines have occurred in the county within the past five years. Further details should be provided by the applicants in relation to the adequacy of the collision model used to predict the significance of impacts to rare and highly sensitive species, including the hen harrier.

An error in Appendix 7-6 is noted whereby two collision risk assessments for chough have been submitted with no collision risk assessment for hen harrier is noted. This should be corrected.

The Ecology Officer notes that no details have been provided with regard to dedicated operational measures for the sited turbines which would minimize the potential for collision of turbine blades with avian species. The use of passive visual clues such as blade patterning to mitigate bird strikes, especially for raptors, which would afford incoming birds time to take evasive action, is encouraged by the Ecology Officer. Case studies from Norway, the Netherlands and Africa are detailed including the use of aposematic colourations/ patterns on turbine blades to reduce avian fatalities with a 2024 study detailing reduction in avian fatalities by a median 83% over a 32 month post patterning period. It is requested that An Coimisiún Pleanála give consideration to biologically inspired aposematic patterns in respect to this proposal having regard to the concerns of the NPWS around the White-tailed Sea Eagle and the recorded presence of a number of protected raptors at the study site.

Overall, the Ecology Officer has significant concerns regarding the siting of the proposal within habitats of County/ National Importance and the inadequacy of the information submitted with the proposal. The Ecology Officer recommends that no development take place on intact peatland habitats, degraded peatland habitats or any habitats of high natural value.

While conditions have been provided, as requested by An Coimisiún Pleanála, the Ecology Officer has advised of significant concerns that should not be death by way condition.

The Ecology Officer recommends 6 conditions in the event of a grant of permission by An Coimisiún Pleanála.

6.5 Environment Officer (Water and Air)

Chapters 9 and 10 (Hydrology/ Hydrogeology & Air Quality) have been reviewed by the Environment Officer. Both the construction period and decommissioning period are identified as primary risks to water quality (hydrocarbon contamination, cement/ alkaline pollution/ suspended solids) with surface water being the main sensitive receptor. Pathways to water bodies potentially at risk from the proposal are identified as are downstream sensitive receptors. A Water Framework Directive Compliance Assessment is included in Appendix 9-3 of the Environmental Impact Assessment Report. The submitted Construction Environmental Management Plan and Surface Water Management Plan outline standard mitigation measures proposed to be implemented, including a 50m buffer setback from watercourses, good construction practices, silt fences/ sediment barriers, no direct discharge etc. With implementation of the mitigation measures detailed in the Environmental Impact Assessment Report, there would be no adverse impact on the Water Framework Directive status of the underlying groundwater body or downstream surface waterbodies as a result of the proposal.

Adverse impacts arising from cumulative effects on hydrology and water quality from windfarms are unlikely to arise due to the implementation of construction mitigation practices and the avoidance of instream works.

Having regard to the information contained in Chapter 9 of the Environmental Impact Assessment Report and supporting Water Framework Directive Compliance Assessment undertaken, and subject to the implementation of the proposed mitigation measures, the Environment Officer advises that the predicted effects on hydrology and hydrogeology are acceptable. The potential impacts have been clearly identified and assessed, and the proposed mitigation measures are considered satisfactory. The Environment Officer further advises that the conclusions are reasonable and supported by the evidence presented. Overall, the water quality assessment is deemed acceptable.

The main risks to air quality identified in Chapter 10 are dust emissions from the construction phase. The risk from shadow flicker from the operational phase is also identified. Air quality mitigation controls and best practice measures are proposed to minimise the risk from dust emissions.

Based on the Shadow Flicker Study Area of 1.33km (10 x rotor diameter 1.33km), 79 no. sensitive receptors located within 1.63km of the proposed turbine locations have been identified. From modelling, 39 of these are predicted to have no shadow flicker, 30 are potentially at risk of the daily exceedance of 30mins/day or 30hours/year and 8 are potentially at risk of the annual exceedance of 30hours/year.

Having regard to the information contained in Chapter 10 (Air Quality) of the Environmental Impact Assessment Report, the Environment Officer considers the assessment has been carried out in accordance with relevant guidance and best practice. The potential impacts have been clearly identified and assessed, and the proposed mitigation measures are considered satisfactory. The Environment Officer advises that the conclusions are reasonable and supported by the evidence presented and overall, the air quality assessment is deemed acceptable.

The Environment Officer recommends 10 conditions in the event of a grant of permission by An Coimisiún Pleanála.

6.6 Environment Officer (Noise)

Chapter 12 Noise and Vibration has been reviewed by the Environment Officer. The Environment Officer has advised that An Coimisiún Pleanála should seek their own acoustic expertise to peer review the methodologies and modelling followed in the noise impact assessment.

The Environment Officer advises that An Coimisiún Pleanála may wish to request further information on noise in relation to the following three points:

1) The respective number and distances of all noise sensitive receptors within 500m, 1000m,1500m and 2000m of the proposed turbines should be presented and quantified.
2) The referenced noise sensitive receptors that each selected background noise monitoring location is considered to be representative off should be identified and quantified and also shown on a suitably scaled map.
3) In terms of the derived background noise levels per Tables 12.17 and Table 12.18 of the submission and reproduced below, it is noted specifically in respect of NML4 (H041) that the derived night-time noise levels for wind speeds 7m/s,8m/s and 9m/s are higher than the daytime noise levels for the corresponding wind speeds. The applicant may wish to comment on this having regard to any site observations or notes from the analysis of the background datasets.

The Environment Officer recommends 4 conditions in the event of a grant of permission by An Coimisiún Pleanála.

6.7 Environment Officer (Waste)

The Environment Officer (Waste) has reviewed the submitted Peat and Spoil Management Plan and the Construction and Environmental Management Plan. The Peat and Spoil Management Plan includes details of site clearance materials and expected volume of material generated by site construction works. Details of proposed storage areas and reuse of the material on site are also set out. Most of the materials are intended for reuse on site. The submitted Construction and Environmental Management Plan provides details of expected waste types in addition to methods of waste minimisation.

No objection to these details has been raised by the Environmental Officer who advises that a Construction and Resource Waste Management Plan for the project should be prepared prior to the project commencing in the event that permission is granted by An Coimisiún Pleanála.

7 Assessment

Environmental Impact Assessment Report

7.1 Chapter 1 Introduction

Chapter 1 sets out the nature of the proposed development, a description of the site location, a description of the Applicants, the need for the proposed project, Climate Change, Energy Security, European energy context, European Renewable Energy Policy and Targets, National Renewable Energy Targets, Energy Consumption, Economic benefits of the proposed development and the Scope and Structure of the Environmental Impact Assessment Report and Project Team members.

7.2 Chapter 2 Background to the Proposed Project

Chapter 2 sets out the policies and targets at international and national level in regard to renewable energy and climate change and the need for the proposed development in terms of policy and contributing towards climate and renewable energy targets for onshore wind energy generation.

Identified International Climate Policy Context includes:

- United Nations Framework Convention on Climate Change.
- Kyoto Protocol.
- COP21 Paris Agreement.
- European Green Deal – European Climate Law (2021).
- Renewable Energy Directive RED 1, RED 11 and RED 111.
- European Green Deal.
- REPowerEU.

Identified National Climate Change Policy Context include:

- Programme for Government – Securing Ireland's Future (January 2025).
- Climate Action and Low Carbon Development (Amendment) Act 2021.
- Climate Action Plan 2025.
- Climate Action Plan 2024.
- Climate Action Plan 2023.

Identified National Planning Policy include:

- The Planning and Development Act, 2024.
- National Planning Framework: Project Ireland 2040.
- National Planning Framework First Revision (2025).
- National Development Plan 2021-2030.

Identified Regional Policy includes:

- Regional Spatial & Economic Strategy for the Southern Region, 2020-2029.

Identified Local Planning Policy include:

- Cork County Development Plan 2022-2028.
- Cork County Council Climate Action Plan 2024-2029.

Identified relevant Onshore Wind Energy Policy Publications include:

- Wind Energy Development Guidelines 2006.
- Draft Wind Energy Development Guidelines 2019.
- Department Circular PL5/2017.

The chapter also sets out the relevant planning history of the site within the past 10 years. These include:

- 17/431: 10-year permission for the Proposed Project consisting of a 110kV electricity substation & 110kV underground electricity cabling connecting the proposed substation to the existing Dunmanway ESB and 33kV underground electricity cabling connecting the proposed substation to the permitted Carrigarierk Wind Farm. Permission was granted on 16/04/2018 and upheld by An Coimisiún Pleanála on 21/06/2019
- 21/902: A ten year planning permission consisting of a 20 kilovolt (kV) electrical powerline grid connection, approximately 10,117 metres in overall length connecting the approved electrical substation at Knockeenboy Wind Farm (Planning Register Reference No. 11/00059 & An Bord Pleanala Ref. PL88.240070) to the existing Dunmanway substation at Ballyhalwick; together with all ancillary works and apparatus. Permission granted 21/06/2022
- 23/654: Permission granted to uprate (refurbish existing Bandon to Dunmanway 110kv Over Headline. Grant date 11/06/24.
- 18/575: Permission granted for construction of extension to a house at Ballyhalwick, Dunmanway. Grant date 20/12/18.
- 25/126: Permission granted to construct a house at Coolsnaghtig, Dunmanway. Grant date 04/06/25.
- 24/0048: Permission granted to extend and alter house and install septic tank and percolation area at Coolsnaghtig, Dunmanway. Grant date 22/04/24.
- 21/ 186: Permission granted to retain cattle house and tanks and to construct aa new cattle house with two slurry tanks at Keenrath, Dunmanway. Grant Date: 11/06/21.
- 20/523: Permission granted to relocate entrance to dwelling granted under 13/544, closure of existing entrance to dwelling as granted under 13/544 and all associated siteworks at Cousane, Kealkill. Grant date 23/12/20.
- 21/857: Permission granted to renovate and alter existing farmhouse, install new foul water drainage system, landscaping works and alteration to entrance at Maughanaclea, Kealkill. Grant date 02/08/22.

Wind energy projects within 25km of the proposed windfarm are also detailed. A total of 41 applications relating to wind energy were identified within 25km of the proposed windfarm. These have been outlined in *Table 2-4: Wind Energy Developments* of Chapter 2. The closest wind energy projects include:

- Gortloughra Windfarm (proposed 8 turbine windfarm, currently on appeal, 2km),
- Shehy More Windfarm (11 turbines, 2.6km),
- Dereenacreenig West Windfarm (proposed 3 turbine windfarm, currently on appeal, 3.6km),
- Curraglass Windfarm (proposed 3 wind turbine windfarm, currently on appeal, 4km),
- Milane Hill Windfarm (8.7km),
- Carrigarierk Windfarm Extension (9.4km).

Scoping and consultations are considered in this chapter in addition to Community Engagement and pre-planning consultations with An Coimisiún Pleanála. It is submitted that pre-planning consultations with An Coimisiún Pleanála were closed out on 10th February 2026.

Cumulative Impact Assessment is considered in each relevant chapter of the Environmental Impact Assessment Report and the defined study area for assessing potential cumulative impacts is set out in *Table 2-7: Cumulative Study Areas and Justification* of Chapter 2.

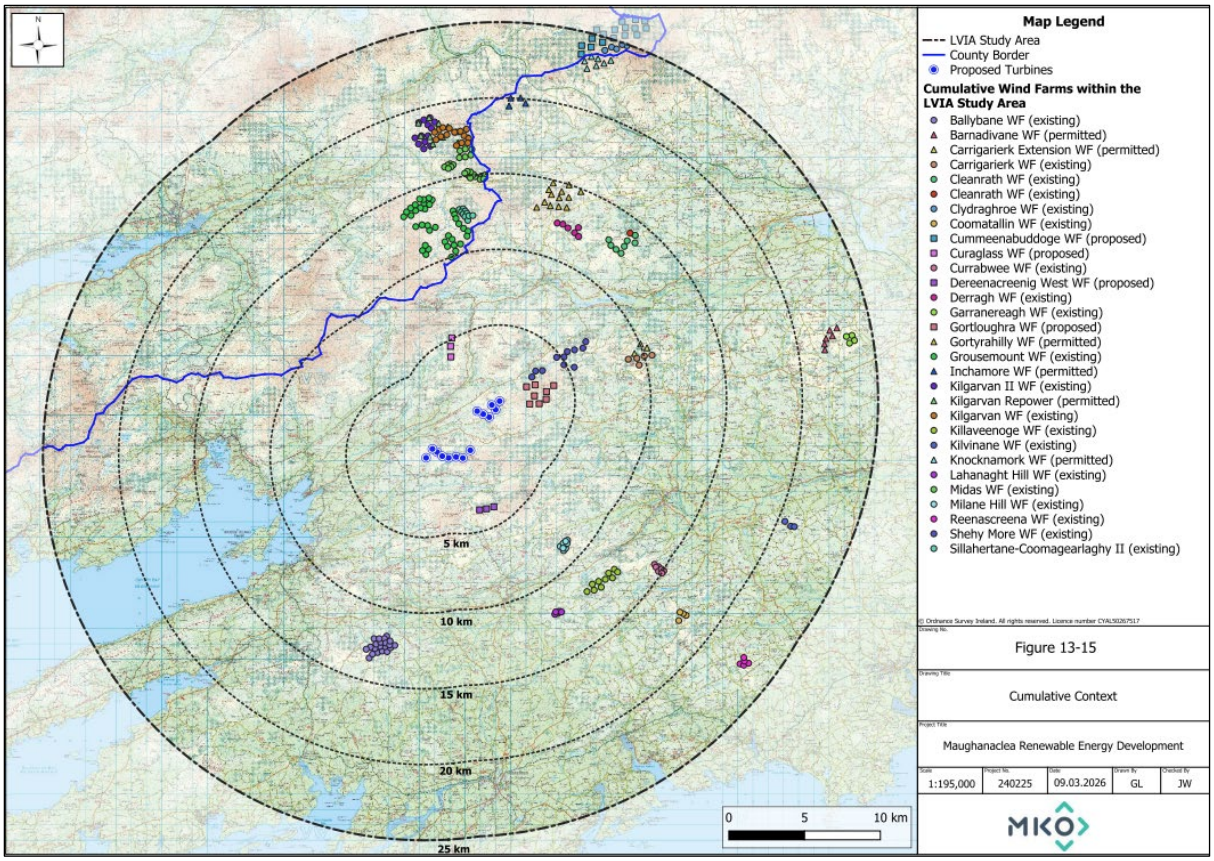

Figure 4: Cumulative Context of Windfarms within 25km of the proposed windfarm

The chapter concludes by stating that the proposed development would not have any cumulative additional impacts. Additional detail in relation to the potential significant cumulative effects arising and the specific suite of relevant mitigation measures proposed are set out within each of the relevant chapters of the Environmental Impact Assessment Report.

7.3 Chapter 3 Site Selection and Reasonable Alternatives

Chapter 3 of the Environmental Impact Assessment Report contains a description of the reasonable alternatives which are relevant to the proposed windfarm and its characteristics, in terms of site location, renewable energy technologies, scale and site layout, connection to the national grid and transport route options. The design considerations in relation to the proposed windfarm and proposed grid connection are also considered in addition to the main reasons for selecting the chosen option, including a comparison of the environmental effects. Do Nothing Alternatives, Alternative Site Location, Alternative Renewable Energy Technologies, Alternative Project Design Options including Turbine Numbers and Model, Turbine Layout and Design, Roads Layout, Borrow Pit Options, Enhancement Area Proposals, Design of Ancillary Structures, Alternative Proposed Grid Connection Design Options, Alternative Turbine Component Delivery Option and Site Access and Alternative Mitigation Measures are considered.

The Environmental Impact Assessment Report notes that in the event of a 'Do Nothing' alternative, the renewal energy resource would not be availed of nor would the opportunity arise to contribute to meeting national and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions.

Table 3-1 of Chapter 3 outlines the comparison of environmental effects when compared against the chosen option of developing a renewable energy project.

7.4 Chapter 4 Description of Proposed Development

Chapter 4 describes the proposed development which is subject to this consenting process. The proposed site boundary/ Environmental Impact Assessment Report site boundary includes the two elements of the proposal (1) the proposed wind farm and (2) the proposed grid connection.

The proposed development is as described in the public notices. The chapter, which includes drawings, details the overall site layout of the proposal, including the locations of the 14 no.wind turbines, the onsite 110kV substation, meteorological mast, peat and spoil management areas, borrow pits, the temporary construction compounds, internal access roads, hardstand areas, biodiversity management and enhancement areas, site entrances, including the proposed turbine delivery temporary accommodation works as well as the underground electrical cabling route to Dunmanway 110kV Substation. Grid Reference coordinates of the proposed turbine locations are also detailed as are the site investigations undertaken across the proposed windfarm site.
A stated 640 no. peat depth probes were carried out on the site by MKO, Fehily Timoney & Company Ltd. (FTC), Hydro-Environmental Services (HES) and the Applicant. Peat depths recorded across the site ranged from 0.0m to 4.5m, with an average depth of 0.65m. A stated 95% of peat depth probes recorded depths of less than 2.0m, with 78% of the peat depth probes recording a depth of less than 1.0m.

One short section of cable on the proposed grid connection route passes through peat lands. Recorded peat depth probing at this location indicated the presence of shallow peaty topsoil, 0.15m - 0.20m deep. Two other sections of cable on the proposed grid connection route pass alongside peat lands. Peat depth probes at these locations did not record the presence of any peat.

Geotechnical ground investigations were also carried out on the site by Irish Drilling Limited (IDL) under the supervision of FTC between January and March of 2025. These investigations included 16 no. trial pits, 3 no boreholes, shear vane testing, monitoring of groundwater levels and laboratory testing of core and trial pit samples.

Hard standing details are provided as are the generating capacity of the windfarm which is estimated to be a stated 67.2MW. The potential megawatt hours of electricity per year is calculated at 217,800MWh which is estimated to be sufficient to supply 51,800 households with electricity per year (based on assumption of households using 4.2MWh of electricity).

Site roads, including upgrading of existing access roads/ tracks and construction of new access roads, are detailed. A stated 0.3km section of Local Road L8777 would require minor upgrade works to facilitate the 33kV internal windfarm cabling.

In terms of site drainage/ watercourses, the site contains a number of natural watercourses which drain into the Owngar River, Mealagh River and Gortloughra River. The proposed site also contains a number of site drains. Five new watercourse crossing locations over natural watercourses are proposed to facilitate construction of the windfarm roads. Clear span crossings are proposed in these locations. Three culverts on the forestry road between the proposed 110kV onsite substation and proposed turbine location T10 are also proposed to facilitate the construction of site roads. Site drains are also proposed to be rerouted.

The proposed 3 no. construction compounds would be bunded (refuelling and containment area for the storage of lubricants, oils and site generators). Wastewater from staff toilets would be directed to a sealed storage tank, with all wastewater being tankered off site by a permitted waste collector. Two no. security cabins are also proposed. The temporary construction compounds would be removed as part of the post-construction reinstatement works.

Layouts and elevation details of the proposed 110kV onsite substation (a stated 9,543m2 in area) are detailed which include 2 no. control buildings. Both control building would have a stated height of 6-7m. In terms of operational requirements, there would be a small water requirement which would be served by either rainwater harvesting or a groundwater well adjacent to the proposed 110kV onsite substation. Wastewater would be managed by means of a sealed storage tank which would be tankered off site to a licenced wastewater treatment plant.

High value habitats were identified on the site and include Annex I areas of dry siliceous heath, wet heath, and upland blanket bog. It is submitted that the proposal has been designed to avoid high-quality, intact heath and bog habitats within the site.

The Kerry slug is present within an area of recently felled woodland (WS5) within the southern turbine cluster of the proposed windfarm site. A Kerry Slug Derogation Licence issued on 26th Feb. 2026 and is included in Appendix 6-6.

A Biodiversity Management and Enhancement Plan is set out in Appendix 6-4 of the Environmental Impact Assessment Report and comprise of three measures within the proposed site:

- Kerry Slug enhancement areas (3.9 ha., Drawing no.4-17)
- Native woodland planting (0.54 ha.)
- Peatland Restoration (5.3 ha).

A stated 44 ha. of conifer forestry would be required to be felled to accommodate the proposal in addition to a 23m section of hedgerow (WL1) and 0.6 ha of scrub (WS1). The EIAT notes that the 44 ha. of conifer forestry to be felled would be replaced as a condition of the felling licence with the Applicants committing to replanting 43.5 ha of conifer forest outside the hydrological catchment within which the proposed windfarm would be located.

The 4 no. proposed onsite borrow pits would provide most of materials for the construction of the proposed windfarm with an estimated 170,000m3 of stone material to be extracted from the borrow pits for the construction of the proposed windfarm. Topsoil and subsoil would be stripped back and temporarily stockpiled. Material would be extracted by means of rock breaking and some blasting. The borrow pits would be backfilled with excavated peat and spoil and then reseeded or left to vegetate naturally when no longer required.

A detailed methodology for the underground electrical cabling route is set out in Chapter 4, which includes 11 no. identified watercourse crossings along the proposed grid connection route (Drawing No. 4-30).

A Peat and Spoil Management Plan, detailing quantities of excavated peat and spoil and management. of these volumes, is outlined in both Chapter 4 and in Appendix 4-2 of the Environmental Impact Assessment Report.

In terms of site activities and environmental management, a Construction and Environmental Management Plan (CEMP) has been prepared and is included in Appendix 4-3 of the Environmental Impact Assessment Report.

Site access, which would be off the R585, has been subject to autotrack assessment as set out in Chapter 15 and a Traffic Management Plan has been included in Appendix 15-2 of the Environmental Impact Assessment Report.

The turbine delivery route would follow the route from Ringaskiddy (N28) to the Cork South Ring Road (N40), continuing on the N22 and onto the R585 Regional Road before reaching the site at Maughanaclea where it would turn left up the existing commercial forestry track to reach the southern turbine cluster and turn right up the new proposed site entrance to reach the northern cluster of turbines.

While the route is detailed on Figure 4-24 of this chapter, further details are outlined in Chapter 15 Material Assets. No significant turbine delivery route accommodation works are proposed to facilitate the delivery of components to the site with temporary accommodation works on the south-eastern corner of the R585 / R590 junction at Crookstown with some oversailing of the blade tip and overhang of the blade body on bends of the R585.

Site drainage management and design details have been outlined with further details set out in Chapter 9 Hydrology and Hydrogeology. Natural drainage routes are not proposed to be altered with no direct discharges planned to any natural watercourses or land drain and buffer zones employed around existing natural drainage features. Artificial drains may be required to be diverted around the proposed works areas to minimise the amount of water in the vicinity of works areas and where this is not possible, these would be blocked to ensure water from the works areas would have no direct route to other watercourses. A Drainage Design Plan for the proposal is included in Appendix 4-4 of the Environmental Impact Assessment Report. A Harvest Management Plan is included as Appendix 4-5 in regard to proposed tree felling drainage with protection and mitigation measures set out in Chapter 9 Hydrology and Hydrogeology. An Environmental Clerk of Works would be appointed to oversee extraction and drainage protection works.

Construction period is estimated to be between 18-24 months to full commissioning of the turbines with hours of operation detailed from 0700-1900 hours Monday-Saturday with exceptional out of hours works to be notified to Cork County Council in advance.

In regard to Community Gain Proposals, a Community Report is included as Appendix 2-1 of the Environmental Impact Assessment Report, which sets out proposals for a Community Benefit Fund. This includes a contribution of €2 for each megawatt hour (MWh) of electricity produced by the proposed windfarm into a community fund for the first 15 years of operation of the proposal if the proposal is developed under the current Renewable Energy Support Scheme. This would yield approx. €4300,000/year for the local community (estimated based on an average energy yield) over the first 15 years of operation of the windfarm. In the event that the proposed windfarm is not developed under the Renewable Energy Support Scheme, the project would commit to contributing €1 per megawatt hour (MWh) of electricity produced into a community fund for the operational life of the proposed wind farm (35 years), equating to an estimated annual fund of €205,000 and funding of €7,175,000 to the local community.

The windfarm would have a stated operational lifespan of 35 years, would be subject to routine maintenance programmes and would be subject to a programme of monitoring for the operational phase of the proposed windfarm as set out in the Construction and Environmental Management Plan.

A Decommissioning Plan has been prepared and is set out in Appendix 4-6 of the Environmental Impact Assessment Report. Upon decommissioning of the proposed windfarm site, the wind turbines and cabling on site would be disassembled and removed from the site, with the turbine foundations, cable

ducting and site roadways left in situ. The proposed grid connection and 110kV onsite substation would remain in place under the control of ESB and EirGrid.

7.5 Chapter 5 Population and Human Health

Chapter 5 identifies, describes and assesses the potential effects of the proposal on population and human health. This chapter also refers to Chapters 8, 9, 10, 11, 12, 14 & 15 which assess the effects of the proposal on population and human health in regard to health issues, visual amenity and environmental hazards. In regard to potential effects on property values, it is submitted that there is insufficient evidence from scientific literature and studies conducted to determine that there is potential for a significant effect on property values as a result of the proposed development.

Shadow Flicker

The chapter states that the shadow flicker methodology and assessment within this chapter are based on compliance with the Guidelines (2006) but notes that the proposed turbines can be brought in line with the requirements of the Draft Guidelines (2019) through the stricter implementation of the mitigation measures outlined in Section 5.4.3.2.7 of this chapter.

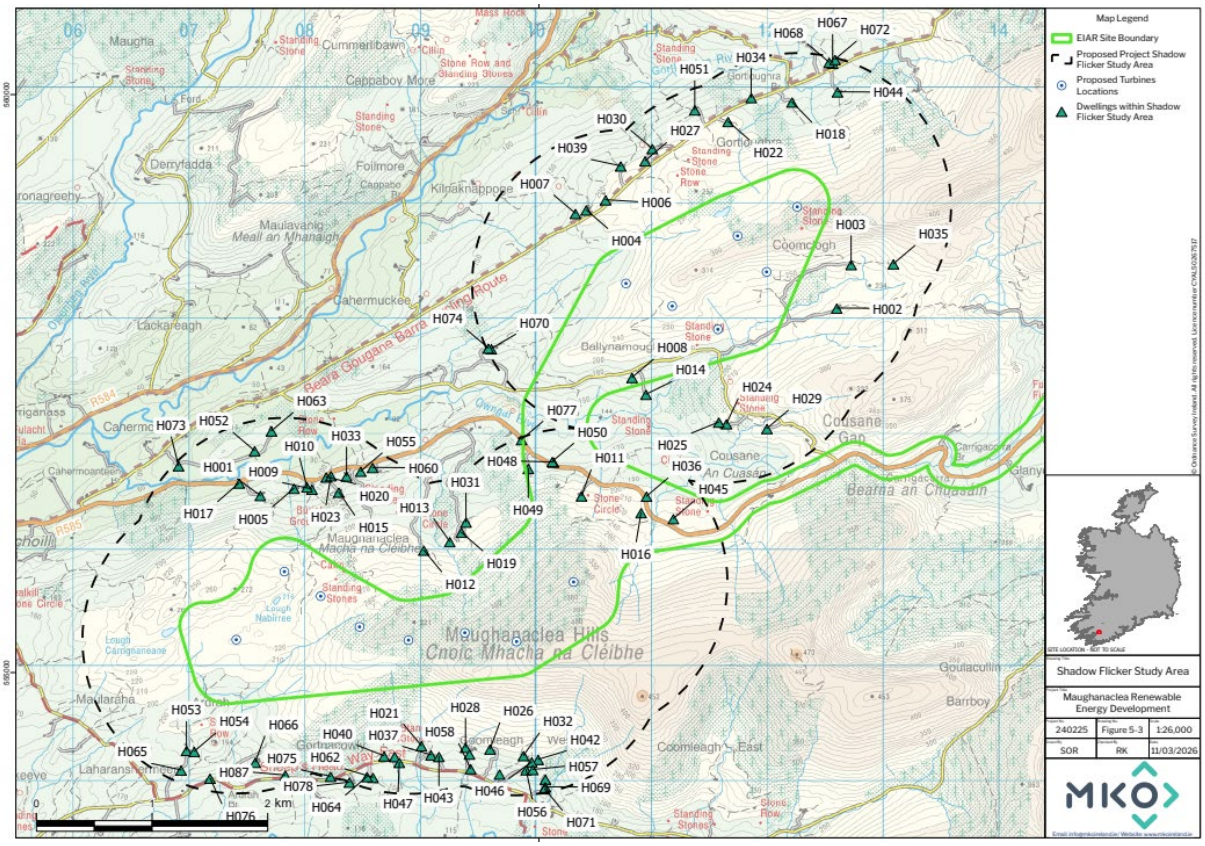

Figure 5: Shadow Flicker Study Area with dwellings delineated within this area

The Shadow Flicker Study Area selected for the shadow flicker assessment is 1,330m from the proposed turbines which is based on ten times the rotor diameter from each turbine (133m rotor diameter x 10 = 1,330m). It is submitted that all inhabitable dwellings/ sensitive receptors within the shadow flicker study area have been considered with a total of 79 no. properties located within 1,330m of the proposed turbine locations, of which 21 no. of these properties belong to landowners who are participating in the proposal. One of the 79 sensitive receptors is a derelict dwelling. It is submitted that no sensitive receptors would be located less than 500m of the proposed turbine locations in

compliance with the 2006 Wind Energy Guidelines. It is submitted that the closest sensitive receptor, belonging to an involved landowner, is located approximately 682m from the nearest turbine (T03) and the closest third-party sensitive receptor is located approximately 682.6m from the nearest proposed turbine (T01).

Note: Table 5-8 which details the '*Maximum Potential Daily & Annual Shadow Flicker'*, identifies 78 houses/ sensitive receptors as opposed to the 79 houses/ sensitive receptors quoted throughout this section of the chapter. While this may be a consequence of omitting the derelict house from the overall number of sensitive receptors within the shadow flicker study area, it can cause confusion.

Of the stated 79 sensitive receptors, 41 no. properties are theoretically predicted to experience shadow flicker, of which 30 of these sensitive receptors would experience shadow flicker that would exceed the 2006 Guideline thresholds for daily and/or annual shadow flicker and would require daily shadow flicker mitigation. Nine of these sensitive receptors are participating landowners and one is a derelict dwelling.
A total of 8 no. sensitive receptors would experience an exceedance of the annual threshold of over 30 hours for shadow flicker set out in the 2006 Guidelines, of which 2 are participating landowners and one is in a derelict condition.

It is submitted that mitigation measures would be employed to comply with the 2006 Guidelines and a stricter implementation of shadow flicker controls can be employed which would allow the proposed windfarm to be capable of compliance with future guidelines limits in relation to shadow flicker (2019 Draft Wind Guidelines).

It is submitted that cumulative effects of shadow flicker would arise from the proposed Gortloughra Windfarm (currently on appeal) which would be located approx. 2km from the proposed development. A total of 3 no. dwellings out of the 79 properties (H035, H067 & H072) would fall within the cumulative shadow flicker study area, of which one dwelling (H035) would potentially experience cumulative shadow flicker impacts from both the proposed Gortloughra Windfarm and the current proposal (Maughanaclea Windfarm turbine no. T01 and Gortloughra Windfarm turbine nos. GT01 & GT06). It is submitted that, subject to the proposed windfarm applying the 2019 Guidelines of zero shadow flicker through mitigation strategies, there would be no cumulative shadow flicker impact.

Discrepancies in this section of the Environmental Impact Assessment Report regarding exact figures are noted:

- Pages 4, 9, 11, 13, 15, 49, 56 & 85 advise that there are 79 properties/ sensitive receptors located within the shadow flicker study area (1,330m of the proposed turbines).
- Pages 50 advises that there are 102 sensitive receptors located within the shadow flicker study area.
- Pages 50 & 85 advises that 41 no. sensitive receptors are theoretically predicated to experience some shadow flicker.
- Pages 11, 85, 87 advise that 31 no. sensitive receptors are theoretically predicated to experience shadow flicker.
- Page 4 advises that there "are 79 no. properties located within 250m of the proposed grid connection."
- Page 15 advises that there "are 83 no. properties located within 250m of the proposed grid connection underground cable route."

Tourism
Chapter 5 assesses the socio-economic profile, available services and tourism within the 3 no. Electoral Districts which form the population study area (Douce, Kealkill and Mealagh).

A Tourism Impact Assessment (Appendix 5-3) has been carried out to assess the significance of the proposal on tourism in the area. It is submitted that a desktop review undertaken as part of the Tourism Impact Assessment did not identify any visitor attraction in the immediate vicinity of the proposal, based on official accommodation and visitor attraction data, indicating the area is not of high tourism significance. Identified tourism assets in the area not captured through official sources include St. Fin Barre's Oratory & Gougane Barra Forest Park, the Sheep's Head Way and Scenic Routes S29 (R585 Kealkill via the Cousane Gap) and S28 (R548 north of Kealkill through the Pass of Keimaneigh to Gougane Barra). Archaeological sites have been assessed but were not considered to be of tourism significance. The Tourism Impact Assessment considers the tourism character and significance of the location of the proposal to be of low tourism significance. The Tourism Impact Assessment also considers the proposal would not have an impact on the tourism value of Sheep's Head Way/ St.Finbarr's Way but would have an impact on local sections of the Sheeps Head Way. It is submitted that the impact would not be expected to be significant due to low visitor numbers using the trail and the lack of evidence that wind farms are perceived as negative by tourists.

The impact of the proposal on the tourism value of Scenic Route S29 (R585 Kealkill and Cousane Gap) is considered not to be significant due to the length of the route, low level of tourism in the area and the lack of evidence that wind farms are perceived as negative by tourists.

Population

No impact on population in terms of density, household size or age structure is anticipated from both the construction and operation phases of the proposed development. Short term positive impacts are predicted for employment during the construction phase with rates payments and the proposed community benefit scheme considered to have long term slight positive indirect effects. Land use and activities would experience a direct short term negative effect arising from both the felling of 44ha of conifer forestry and the grid connection; these effects are not considered to be significant on land use. No significant effects on landuse patterns and activities are anticipated during the operational period.

While noting there is potential for long-term slight impacts on property values located within 1km of the proposed turbines during the early operational phase of the proposal, it is submitted that effects on property values due to the construction and operational phases of the proposal would not be significant. The potential for impacts on residential amenity arising from air, traffic, noise and vibration emissions as well as health/ safety and major accidents/ natural disasters during the construction and operational phases is not considered to be significant on implementation of mitigation and monitoring measures.

Effects on tourism are not anticipated to be significant. While Kealkill Stone Circle is recognised as a locally important archaeological feature and it is anticipated that there would be a change to the landscape setting (Chapter 14), it is submitted that wind farm developments do not deter visitors to tourist attractions or scenic landscapes where turbines are visually evident.

Effects on residential amenity and health and safety during the operational phase of the proposal are anticipated to be not significant as no turbine would be located within 676m (4 times the tip height setback as per 2006 Wind Energy Guidelines) of any sensitive receptor and on implementation of mitigation and monitoring measures set out in this chapter (including wind turbine control measures) and Chapters 9, 10, 12, 13, 18 and 19.

Potential effects arising from the decommissioning phase are not anticipated to be significant.

Cumulative and in-combination effects from other projects, including windfarms, have been assessed. In regard to property values, it is submitted that there is potential for a short-term negative not significant effect on property values within 1km of the proposed turbines. It is submitted that as there are no other cumulative turbines located within 2km of the proposed turbines, the proposal would not overlap with any other cumulative turbines and there is no potential for cumulative effects on property values to arise. It is also submitted that no dwellings would be impacted by shadow flicker arising from the proposal in combination with other existing, permitted or proposed wind farms

7.6 Chapters 6 and 7 Biodiversity and Ornithology

Chapters 6 (Biodiversity) and 7 (Ornithology) of the Environmental Impact Assessment Report set out the survey methods (both desktop and field) undertaken for the proposed windfarm, grid connection and turbine delivery route. These chapters include an assessment of the potential for the proposed project to impact negatively on sites designated or proposed to be designated for nature conservation, on protected species and/or on habitats of high natural value.

Potential to give rise to impacts on designated nature conservation sites
It is submitted that potential negative impacts on European designated sites due to their connectivity have been addressed in the submitted Natura Impact Statement. In regard to Natural Heritage Areas (NHAs), while three occur within 15km, the Environmental Impact Assessment Report states that it can be concluded that the proposed wind farm project would not have any impacts on these sites due to lack of hydrological and ecological connectivity. Of the 14 pNHAs which occur within 20km of the proposal, only the Bandon Valley South of Dunmanway pNHA (site code: 1035) has a hydrological linkage and mitigation measures have been proposed to ensure that no potential for residual significant effects on this site is anticipated.

Potential to give rise to impacts on terrestrial habitats and protected plant species
Article 17 Annex 1 habitats have been outlined and mapped within the vicinity of the proposed windfarm in Chapter 6. These are annotated in the Environmental Impact Assessment Report and include Wet heath [4010], Dry heath [4030], and Blanket bog (active)* [7130]. Stated habitats include:

- *Conifer Plantation* (WD4) & *Recently Clear-Felled Woodland* (WS5): A stated 42.8ha of conifer plantation/ recently felled woodland would be lost to accommodate the development. Classified as having local importance and not key ecological receptors.
- *Improved Agricultural Grassland* (GA1): A stated 0.2ha would be lost to accommodate the development. Classified as having local importance (lower value) and not a key ecological receptor.
- *Wet Grassland* (GS4): A stated 1.5ha would be lost to accommodate the development. Classified as having local importance (lower value) and not a key ecological receptor.
- *Dry Humid Acid Grassland* (GS3): A stated 3.3ha would be lost to accommodate the development. Classified as having local importance (lower value) and not a key ecological receptor.
- *Dry Meadows and Grassy Verges* (GS2): Classified as having local importance (lower value) and not a key ecological receptor.
- *Wet Heath* (HH3): A stated 1.6ha of wet heath would be lost to accommodate the proposed windfarm. Turbine Nos. 4 and 14 and associated infrastructure including hardstand and access roads would be located on this habitat. This habitat type has links to the Annex I habitat 'Northern Atlantic Wet Heaths with Erica tetralix' (4010). Though recorded as degraded, this habitat is assigned a status of **Local importance (Higher value)** and considered to be a key ecological receptor. As construction works would take place within 50m of the Article 17 mapped habitats, mitigation measures are proposed including a Biodiversity Management and

Enhancement Plan which proposes to fell 5.3ha of young conifers in the northern section of the proposed site and restore wet heath habitat which formerly existed in this area. Dust mitigation measures set out in Chapter 10 of the Environment Impact Assessment Report in addition to the avoidance of Article 17 mapped and unmapped areas of blanket bog, wet heath and dry heath in good condition are proposed.

- *Upland Blanket Bog* (PB2): A stated 0.2ha would be lost to accommodate the proposed windfarm. A residual significant effect on blanket bog habitat is identified as a result of this loss. Classified as having **County importance** and a key ecological receptor. The floating Turbine 14 Access Road runs through an area of Upland Blanket Bog (PB2) for 0.2ha.
- *Dry Siliceous Heath* (HH1): This habitat, located in the southern cluster of the turbines, has links to the Annex I habitat 'European dry heaths' (4030). No infrastructure is proposed in this area. A second area of habitat is located partially within the T13 infrastructure area. A stated 0.2ha of this habitat would be lost to accommodate the proposed windfarm which is categorised as degraded and is not considered a key ecological receptor.
- *Spoil and Bare Ground* (ED2) and *Recolonising Bare Ground* (ED3).
- *Buildings and Artificial Surfaces* (BL3): Categorised as local importance (lower value) and not considered to be a key ecological receptor.
- *Scrub* (WS1): A stated 0.4ha would be lost to accommodate the proposed windfarm. The habitat has been classified of Local importance (Lower Value) but is identified as a key ecological receptor, given its function as a wildlife corridor. The loss of this habitat would be offset by the planting of 0.6ha of native woodland (felling of a surrounding conifer section), as set out in the Biodiversity Management and Enhancement Plan. This has been designed to enhance foraging areas for the identified bat commuting corridors.
- *Dense Bracken* (HD1): A stated 0.2ha would be lost to accommodate the proposed windfarm. The habitat has been classified of Local importance (lower value) and is not identified as a key ecological receptor.
- *Hedgerow* (WL1): Identified as **Local importance (Higher value**) and been identified as a key ecological receptor. A stated 23m of hedgerow would be removed. This would be offset by the planting of 0.6ha of native woodland, as set out in the Biodiversity Management and Enhancement Plan.
- *Drainage Ditch* (FW4): Identified as being of Local importance (lower value) but considered key ecological receptors due to potential for conductivity with higher value watercourses.
- *Riparian Woodland* (WN5): This habitat will not be impacted by the proposal.
- *Eroding Upland River* (FW1)/ *Depositing Lowland River* (FW2): Five new water crossings are proposed and three existing water crossings are proposed to be upgraded as part of the current proposal. This has been identified of **Local importance (Higher value**) and a key ecological receptor. With Freshwater Pearl Mussel potentially present in watercourses downstream of the site (River Bandon SAC), a precautionary classification of International Importance is advised. In the absence of mitigation, there is potential for pollution to enter watercourses which could result in significant indirect effects on the identified aquatic habitats and species at a local geographic scale during the construction phase of the proposed windfarm as well as potential for an indirect, negative, significant, temporary, likely impact to surface waters within the proposed site, thereby impacting on receptors of Local importance (Higher value). Similar impacts would arise during the construction phase of the grid connection which would result in impacts on receptors of Local importance (Higher value), and potentially of International Importance due to the downstream connectivity with the River Bandon SAC/ Bandon Valley South of Dunmanway pNHA. On implementation of mitigation measures, including those outlined in Chapter 9, no significant residual effect on aquatic habitats or species as a result of the proposal are anticipated.
- *Dystrophic Lakes* (FL1): Two are identified which have links to the Annex I habitat 'Natural Dystrophic lakes and ponds (3160).

- *Immature Woodland* (WS2).
- *Treeline* (WL2), *Hedgerow* (WL1), *Scrub* (WS1) and *Dry Meadows and Grassy Verges* (GS2) recorded along the proposed grid connection. Temporary trimming proposed along the turbine delivery route

Key issues identified in the Environmental Impact Assessment Report are the classification of habitats which would be impacted by the proposed development including Dry Siliceous Heath (associated with I habitat 'European dry heaths (4030)), Wet Heath (linked to Annex I habitat 'Northern Atlantic Wet Heath with *Erica tetralix* (4010)), and Upland Blanket Bog as being in fragment and/or degraded states, while high quality examples of these habitats within the site would be protected.

An Invasive Species Management Plan has been included in the Environmental Impact Assessment Report which sets out proposals to deal with Rhododendron identified on the site. Japanese knotweed has been identified but this is located outside the proposed works area.

No botanical species listed under the Flora (protection) Order, 2022, or listed in the Irish Red Data Books were recorded on the proposed site.

Potential for the development to give rise to negative impacts on Terrestrial Species
The examination of potential impacts on terrestrial species is set out in Chapter 6. Mammal surveys were conducted in 2024 and 2025 with Kerry Slug surveys undertaken in December 2025.

Bats

- Habitats within and surrounding the proposed development are likely to be utilised by a bat population of **Local importance (Higher value**). *Myotis* ssp., brown long-eared bat, lesser horseshoe bat, Leisler's bat, common pipistrelle, soprano pipistrelle, and Nathusius' pipistrelle were recorded during surveys. It is not predicted that any potential roosting sites would be impacted by the development. Mitigation measures outlined in the Biodiversity Management and Enhancement Plan include improved habitat as a result of the planting of 0.54ha native woodland, lighting and noise restrictions, felling buffers around the turbines, blade angle adjustment and operational monitoring for three years. On implementation of the mitigation measures, it is predicted that there would be no potential for significant residual effects on bat species.

Mammals excluding bats

- While otter spraint and Irish Hare were observed on the site, there was no evidence of the site being used by badgers. Badger and Otter are identified as **Local importance (Higher value**) and key ecological receptors. On the basis that the habitats within the windfarm are potentially used by badger populations, a pre-construction badger survey will be carried out with appropriate best practice guidelines adhered to in the event that a sett is discovered. As the new and upgraded watercourse crossings have the potential for impacting on otters as a consequence of site disturbance, a pre-construction survey will be carried out to establish whether survey conditions have changed, and a derogation licence will be sought from the NPWS if disturbance is likely to occur. The site has the potential of supporting habitat for Pine Marten and Red Squirrel which are also identified as key ecological receptors. No significant effects on these species are predicted with pre-development surveys to be carried out and a species protection plan prepared in the event that these mammals are recorded on site.

Marsh Fritillary

- No evidence of Marsh Fritillary was recorded on site and the site is not considered supporting habitat for the butterfly.

Kerry Slug

- The presence of Kerry Slug has been recorded within an area of recently felled woodland (WS5) in the southern cluster of turbines. They are identified as **County Importance** (Annex II species of the Habitats Directive) and considered a key ecological receptor. There is potential for a temporary significant effect on the local Kerry Slug population as a result of disturbance/ mortality. Mitigation measures in the form of pre-construction surveys of work areas in wet heath / blanket bog habitat and the transfer of any Kerry slug found to suitable habitat in the surroundings are proposed. It is submitted that the impact on Kerry Slug would not be significant.

Amphibians and reptiles

- Frogs and frog spawn were recorded within the site and are evaluated as **Local importance (Higher value**) but not identified as Key Ecological Receptors. No impacts to amphibians or reptiles are anticipated. No newts or lizards were recorded within the site.

Potential to give rise to negative impacts on Aquatic Habitats & Species

- Aquatic baseline surveys were carried out in 2024 with environmental eDNA sampling for both Freshwater Pearl Mussel and White-clawed Crayfish undertaken in select watercourses within the proposed wind farm and proposed grid connection study area. No positive results for freshwater pearl mussel or white-clawed crayfish eDNA were found at the wind farm survey sites. Positive Freshwater Pearl Mussel samples were, however, taken in the vicinity of the proposed grid connection route. Freshwater Pearl Mussel potentially present in watercourses downstream of the proposed site may be associated with the River Bandon SAC populations and are identified to be of International Importance. While the majority of upland watercourses had limited fisheries, some provide ecologically important habitat for Salmonids, European Eel and Otter. Fish and other aquatic species are identified as key ecological receptors. In the absence of mitigation, there is potential for the windfarm and grid connection to result in significant indirect effects on the identified aquatic habitats and species (receptors of local importance (higher value) and of international importance) due to the downstream connectivity with the River Bandon SAC/ Bandon Valley South of Dunmanway pNHA by way of the proposed grid connection. The potential impacts would arise in the form of pollution arising during the construction phase. Mitigation measures to protect water quality have been set out in Chapter 9.

Potential to give rise to negative impacts on Avian Fauna

- Chapter 7 sets out detail on the bird surveys completed between 2022 and 2025. Survey results of highly sensitive species, considered to be of local importance (higher value) or greater include:
    - *Chough*: Confirmed breeding with six observations related to breeding behaviour within the proposed windfarm site (one observation within 300m of a proposed turbine location). Observed 35 times during breeding walkover surveys on 42% survey dates of breeding walkover survey. Chough is considered to be a breeding population of **County Importance** and a non-breeding population of County Importance (7.5.1.1).
    - *Hen Harrier:* No evidence of breeding at the proposed windfarm site during surveys. One recorded in 2023 within 850m from the nearest proposed turbine but outside the proposed windfarm site. 19 observations of hen harrier recorded during vantage point surveys, of which 10 were within 500m of the proposed turbine locations. Observed on 3 of 62 winter walkover surveys. The observations suggest the proposed windfarm site was being used in the winter months by up to three birds for hunting and as a consequence, the 3 no. Hen Harrier are considered to be a population of ***National Importance*** (7.5.1.5).
    - *Peregrine Falcon*: Confirmed breeding within and in proximity to the proposed windfarm. No evidence of winter roosting within windfarm site. 28 observations of

Peregrine Falcon noted during vantage point surveys (14 of which were within 500m of the proposed turbine locations). ***County Importance***.

- *Kestrel*: Confirmed breeding. No evidence of winter roosting within the site. 327 kestrel observations recorded during surveys and walkovers. The population recorded at the proposed windfarm site is considered to be of ***Local importance*** **(Higher value**).
- *Red Grouse*: Confirmed breeding with a family unit observed c.700m from the nearest proposed turbine but outside the proposed windfarm site. No evidence of winter roosting within windfarm site. As Red grouse were confirmed to be breeding at the proposed windfarm site on one occasion, and had the potential on another occasion, suggesting two territories, this species is considered to be a population of ***County Importance.***
- *Snipe*: Possible breeding. No evidence of winter roosting within windfarm site. This species is considered to be a population of ***Local importance*** **(Higer value**).
- *Buzzard*: Confirmed Breeding. Breeding activity observed in all survey years from 2022 to 2025, and one territory identified in 2022 and 2024. No evidence of winter roosting within windfarm site. 76 observations of buzzard during vantage point surveys with 21 observations within 500m of the proposed turbines. Considered to be a population of ***Local importance*** **(Higher value**).
- *Sparrowhawk:* Confirmed Breeding. Breeding territories were located in 2022 (within 320m of a proposed turbine) and 2024 (within the proposed windfarm site. A second territory was located outside the Proposed Wind Farm site in 2024. No evidence of winter roosting within proposed windfarm site. Considered to be a population of ***Local importance*** **(Higher value).**
- *White-tailed Eagle*: There were two observations of this species (approx. 3.2km from the windfarm site in 2022 and approx. 750m from the site in 2023). The Environmental Impact Assessment Report notes that 'as the *white-tailed eagle range in Ireland is expanding, it is reasonable to assume that this species will become more widespread and frequently observed in the vicinity of the Proposed Wind Farm site. On a precautionary basis, the population in the area is likely to become one of County Importance over the lifetime of the Proposed Project.*' (7.5.1.7)
- The Chough, Hen Harrier and White-Tailed Sea Eagle are classified as **High Sensitivity** Key Ornithological Receptors (7.5.3).

Likely effects of the proposed windfarm on Key Ornithological Receptors are assessed in Section 7.5.5 which details potential effects on direct habitat loss, disturbance, displacement & barrier effect and collision risk.

In terms of direct habitat loss, disturbance and displacement/ barriers, it is submitted that no significant effects of direct habitat loss are anticipated at the county, national or international level.

Collision Risk

Collision Risk is assessed in Chapter 7 and Appendix 7-6. For Chough, Peregrine, Kestrel, Snipe, Buzzard and Sparrowhawk, a very low/not significant risk of collision has been assessed while a collision risk of no effect has been assessed for Hen Harrier, White-Tailed Sea Eagle and Red Grouse. The assessment of no effect on Hen Harrier, White-Tailed Sea Eagle and Red Grouse is based on the lack of observations of the species flying at the potential collision height (PCH) during the vantage point survey work.

Pre and post construction mitigation measures are proposed including the implementation of the Construction Environmental Management Plan, pre-construction bird surveys and best practice measures and the implementation of a bird monitoring programme including collision searches.

It is submitted that the likely effect significance associated with the proposed grid connection and turbine delivery route for Key Ornithological Receptors would be low/ likely short-term slight negative effect.

7.7 Chapter 8 Land, Soils and Geology

Chapter 8 sets out the assessment methodology, baseline monitoring and site investigations undertaken in order to assess the effects of the proposal on geology, land and soils.

Analysis of Teagasc soil maps for the local area indicates that the majority of the proposed windfarm site is overlain by shallow, rocky, peaty/non-peaty mineral complexes with small patches of deep well drained mineral, peaty poorly drained mineral, blanket peat and shallow well drained mineral. Analysis of GSI subsoil maps shows that the majority of the proposed windfarm site is mapped as bedrock with pockets of blanket peat. It is submitted that based on the GSI mapping, the majority of the proposed windfarm site infrastructure, including 11 no. of the proposed 14 no. turbines, would be located in areas mapped as shallow bedrock with 3 of the turbines mapped on or immediately adjacent to blanket peat (T1, T2 and T12).

Peat depth across the proposed site is estimated to range from 0-4.5m with an average depth of 0.65m. The peat depths recorded at the proposed 14 no. turbine locations varied from 0.1 to 2.1m with an average depth of 0.8m. Depth to bedrock is shallow and ranged between 0.2m and 3.5m with an average of 1.5m.

Minimal peat was recorded along the proposed grid connection with depths ranging from 0m to 0.2m.

It is submitted that the peat deposits at the proposed windfarm site can be classified as “Low” importance as the peat is not designated in this area and is significantly degraded in most places by forestry, agriculture and drainage.

There are no recorded geological heritage sites within or adjacent to the site. There are no known areas of soil contamination or historic mines within the site.

In terms of geohazards, it is submitted that the probability of a landslide occurring at the proposed windfarm site is mapped as being Low to Moderately high with some small areas having high susceptibility. A Geotechnical and Peat Stability Assessment of the proposed windfarm site was undertaken by Fehily Timoney and Company and a Geotechnical and Peat Stability Assessment Report has been included in Appendix 8-1. The results of the peat stability risk assessment for potential peat failure is detailed in the Geotechnical Risk Register contained in Appendix B of Appendix 8-1. Details of the specific mitigation/control measures are also set out in Appendix 8-1 (Appendix B).

It is submitted that the peat stability risk assessment indicates that the proposed windfarm site has an acceptable margin of safety, would be suitable for the proposal and would be considered to be of a low risk for peat failure provided appropriate control measures, including implementing and maintaining an appropriate drainage system, are utilised. The proposed grid connection was not assessed for peat stability risk due to the lack of peat recorded during peat probing investigations along the public road corridor where the proposed works would occur.

Construction Phase

It is anticipated that no significant effects on land take and soils/ subsoils/ bedrock would arise during the construction phase. Significant effects arising from hydrocarbon contamination would be unlikely to arise on implementation of mitigation measures, including the measures outlined in the

Construction Environmental Management Plan. No significant effects on soils, subsoils or bedrock would occur from the erosion of exposed subsoils and peat on implementation of mitigation measures, including the measures outlined in the Peat and Spoil Management Plan (Appendix 4-2). It is submitted that no significant effects on soils, subsoils or bedrock would occur from peat instability and failure on implementation of mitigation measures, including those outlined in the Geotechnical and Peat Stability Assessment Report.

Measures outlined in the Biodiversity Management and Enhancement Plan and potential effects from tree felling would not result in significant effects on soils and subsoils subject to implementation of the outlined mitigation measures.

Operational Phase
Few potential direct impacts are envisaged during the operational phase of the proposal. These effects, which could include effects from site road maintenance, site vehicle/ plant use and the use of oil in transformers, are not anticipated to be significant.

Decommissioning
A Decommissioning Plan has been prepared and the decommissioning phase is not anticipated to generate significant effects with the application of mitigation measures.

Cumulative Effects
No potential for significant cumulative effects in-combination with other local developments on the land, soils and geology environment are anticipated.

Risk of Major Accidents and Disasters
The potential risk of peat movement has been determined to be imperceptible on implementation of mitigation control measures.

Human Health Effects
Potential effects from soil/ ground contamination and peat failure are anticipated to be negligible-low following implementation of proposed control/ mitigation measures.

7.8 Chapter 9 Hydrology and Hydrogeology

This chapter assesses the potential impacts of the proposed development on hydrology and hydrogeology. The methodology, baseline monitoring (undertaken in 2024 and 2025) and site investigations undertaken are detailed.

The proposed windfarm would be located in the WFD Dunmanus-Bantry-Kenmare Surface Water Catchment Hydrometric Area which contains 2 sub-catchments:

- The Coomhola_SC_010 where the proposed windfarm site drains into the Owvane River catchment. Eleven turbines would be located in this catchment (T1 – T9, T12 and T13) with the Owvane River draining into Bantry Bay approx.10km downstream of the site. Both the Owvane (Cork)_010 and Owngar (Cork)_010 have “High” status in the Water Framework Directive Compliance Report (Appendix 9-3).
- The Mealagh_SC_010 where proposed windfarm would drain into the Mealagh River catchment with 3 no. proposed turbines located in this catchment (T10, T11 and T14). The Mealagh River drains into Bantry Bay approx.10km downstream of the Site.

Within the Owvane River catchment, the northern turbine cluster would be located within 2 river sub-basins: the Owvane (Cork)_010 and the Owngar (Cork)_010. The proposed southern turbine cluster

would be located only in the Owngar (Cork)_010. Two turbines (T1 and T2) are located in Owvane (Cork)_010 and nine turbines (T3 – T9, T12 and T13) in the Owngar (Cork).

The Owngar River valley separates the northern and southern turbine cluster of the proposed windfarm site and flows into the Owvane River approximately 2km downstream of the proposed windfarm site.

The proposed grid connection cable route would be located mainly in the Bandon River catchment where it passes through the Bandon_ sub-catchments. The 2.9km length of Proposed Grid Connection cable at the proposed windfarm, including the proposed 110kV onsite substation, would be located in the Coomhola_SC_010 which drains locally to the Owngar River (Owngar (Cork)_010).

Site drainage comprises of small headwater watercourses (streams) and man-made drains. It is submitted that existing site drainage includes high runoff and limited groundwater recharge based on estimated rainfall calculations.

It is submitted that the proposed windfarm would be located in Flood Zone C and a site specific Flood Risk Assessment has been undertaken (Appendix 9-1). Surface Water quality downstream of the proposed windfarm is classified as High with a Q4-5 EPA Q Rating for the Owngar, Owvane and Mealagh watercourses. With the majority of the proposed grid connection route located in the Bandon River catchment, downstream EPA-Q Ratings range from Q3-4 (Moderate) to Q4-5 (High). A total of 5 no. surface water sampling locations (2 monitoring rounds) were completed in February and April 2025 within surface watercourses draining and directly downstream of the site.
In terms of local hydrogeology, 16 no. trial pits were carried out at the proposed windfarm site during January and February 2025 and rotary core drilling was undertaken at the location of the proposed burrow pits. Depth to bedrock is shallow and it is submitted the potential for groundwater flowpaths extending beyond the proposed site would be very low.

In regard to groundwater vulnerability, the GSI groundwater vulnerability rating at the proposed windfarm site is classified as “Extreme (X)” to “Extreme E” by the GSI with the grid connection rated as high on the eastern section of the route (it is noted that the cable route is largely located within existing road corridors). It is submitted that surface water bodies, including drains and streams, would be more vulnerable than groundwater at the proposed windfarm site due to the low permeability nature of the bedrock aquifer underlying the site and the low potential for groundwater dispersion and movement within the aquifer.

It is submitted that private well locations on GSI well database indicate no mapped private wells within 5km of the proposed windfarm. Assuming a minimum distance of 580m from dwelling under the precautionary principle, it is submitted there would be a very low risk of impact on private wells.

The Owngar River (Owngar (Cork)_010), the Mealagh River (Mealagh_020) and the Bandon River (Bandon_020) are identified as Surface Water Drinking Water Protection Areas. The Owngar River/Kealkill PWS abstraction is located 0.7km to the northwest of the proposed windfarm southern turbine cluster. The Mealagh River abstraction is located approximately 8.5km downstream of the proposed windfarm southern turbine cluster. The proposed grid connection passes through the Bandon_020 sub-basin where the Bandon River abstraction is located.

The Bandon River SAC and public water supply drinking abstractions on the Owngar River, Mealagh River and Bandon River are, therefore, considered to be very sensitive to negative effects. A minimum 50m buffer from streams would be maintained during the construction phase along with the

implementation of surface water mitigation and controls to ensure protection of downstream receiving waters.

Construction Phase
It is submitted that the main potential effects on the water environment would arise during the construction phase, including the proposed felling of a stated 44ha. of conifer plantation, proposed earthworks and excavation works. It is submitted that with the proposed mitigation measures, mitigation by avoidance and design (location of infrastructure away from the 50m watercourse buffer zones), the installation of silt traps, control measures (including settlement ponds) and surface water quality monitoring, no significant effects on surface water quality would arise. The use of a Siltbuster and associated dosing system is examined for potential impacts on downstream surface water quality and subject to the detailed mitigation measures, it is submitted that no significant effects on surface water quality would occur.

In regard to potential impacts on groundwater levels, the proposed excavation works are not anticipated to have a significant impact due to the local topographical, geological and hydrogeological regime. No groundwater level impacts are predicted from the construction of the proposed grid connection cable infrastructure due to the shallow nature of the excavations (0-1.5m).

Potential impacts on surface water quality from excavation dewatering have been considered and it is submitted that no significant effects on surface water quality would occur from the proposed windfarm and grid connection.

Groundwater and surface water contamination from the potential release of hydrocarbons during construction/storage, wet concrete and wastewater disposal have been considered and on implementation of the outlined mitigation measured and controls, it is submitted that no significant effects on surface water or groundwater quality would occur.

Potential effects arising from the proposed watercourse crossings for the windfarm and grid connection route have been assessed and on implementation of mitigation measures proposed, it is submitted that no significant effects on stream morphology/ stream water quality would occur at crossing locations and no significant effects on surface water flows would occur.

As Designated Sites are located downstream of the proposed grid connection, only the potential hydrological effects on Designated Sites have been assessed. It is submitted that no significant impacts on designated sites would occur on implementation of measures to mitigate the risk to surface water quality including the avoidance of instream works, best practice on the management of hydrocarbons and cement-based compounds and the management of works.

The potential impacts on the Water Framework Directive status of downstream waterbodies have been assessed. Surface water mitigation and drainage controls have been outlined which, it is submitted, would ensure the protection of surface water quality and flows in all downstream receiving watercourses.

The potential for hydrological/water quality effects on river waterbody drinking water supply abstractions has been assessed having regard to the sensitivity of the abstractions to surface water quality fluctuations. On implementation of the drainage management design and pollution prevention measures proposed, including daily inspections, field hydrochemistry monitoring and the measures outlined in the Construction Environmental Management Plan, it is anticipated that no significant effects would occur on Public Water Supply Abstractions.

It is submitted that the proposal would not impact on any potential downgradient private wells.

As the proposed grid connection would be located in the Bandon River catchment which is a Margaritifera Sensitive catchment (Freshwater Pearl Mussel are a qualifying interest of the Bandon River SAC), it is submitted that significant direct, or indirect impacts on the downstream Bandon River SAC or freshwater pearl mussel populations would not occur.

It is not anticipated that the Biodiversity Management and Enhancement Plan measure would have negative significant effects on surface water quality or hydrology.

Operation Phase
The proposal would involve the removal and replacement of vegetation cover and natural surface area with low permeability hardstanding surfaces. It is submitted that this could potentially increase surface water runoff during the operational phase of the proposed windfarm; it is, however, estimated that there would be a small increase in average runoff given the small area of the overall windfarm site being developed (the proposed windfarm footprint is stated to be 14.67ha or 1.25% of the overall site). It is submitted that the water balance assessment demonstrates that in the absence of mitigation, the potential to alter the water balance of the proposed site or downstream hydrology/morphology would be imperceptible and with the planned design and operational phase mitigation measures, no significant effects on the surface water quality would occur.

No potential for significant effects on surface water quality arising from runoff resulting in suspended solids entrainment is anticipated on implementation of proposed mitigation measures.

No potential for significant effects on the Kealkill PWS abstraction, Zone 1 Bantry Cahernacrin abstraction or the Bandon RWS abstraction on the Bandon River are anticipated on implementation of proposed mitigation measures.

Decommissioning
It is stated that the potential impacts arising from decommissioning of the proposal would be similar to those associated with construction but of a reduced magnitude with the reversal/ reduction of some of the potential effects caused during construction and operation of the proposal. Site access tracks would be retained and reused by forestry and the farming community. The grid connection and 110kV substation would be retained and transferred to ESB Networks as a permanent part of the national grid. No significant effects on the hydrological and hydrogeological environment are envisaged during the decommissioning stage.

The main risk identified of major accidents and disasters is peat stability. A Geotechnical and Peat Stability Report is outlined in Appendix 8-1 which concludes that the risk of a peat failure at the Site is low. The risk from flooding is stated to be imperceptible.

Potential health effects arising from surface and groundwater contamination are considered not to be significant on the implementation of the outlined mitigation measures. The risk from flooding to property is stated to be imperceptible.

Cumulative Effects
The main identified cumulative effect is stated to be hydrological (surface water quality). The potential for cumulative effects is stated to be higher during the construction phase of the proposal with the potential for cumulative effects during the operational phase to be significantly reduced as there would be no construction works during this phase. It is stated that the potential for cumulative effects would be significantly diminished as the proposal would be spread across several river sub-catchments. No

significant cumulative effects on the hydrological and hydrogeological environment are envisaged during the construction phase.
Cumulative Effects with Other Wind Farm Developments have been assessed and it is considered that the potential cumulative hydrological impacts would be imperceptible for the proposed windfarm and negligible for the proposed grid connection.
Cumulative Effects with Agriculture, commercial forestry and one-off housing development have been considered. It is anticipated that no significant cumulative effects associated with agriculture and forestry would arise and no cumulative effects would occur with one-off housing development as a result of the proposal.

7.9 Chapter 10 Air Quality

Chapter 10 assesses the potential effects on air quality arising from the proposed development. It is submitted that baseline air quality sampling was deemed to be unnecessary for air quality assessment due to the non-industrial nature of the proposal and character of the surrounding environment.

Potential for significant effects is based on the assessment of the maximum potential footprint for all of the infrastructural elements of the proposal. The proposal has been identified as being located within air quality Zone D (EPA Air Quality Zones for Ireland) which represents rural areas located away from large population centres.

Construction Phase
Exhaust Emissions would arise from construction machinery and plant and construction traffic going to and from the site. With the implementation of identified mitigation measures, it is anticipated that potential effects would be restricted in duration and would not be considered to be significant.

It is submitted that the proposal would give rise to dust emissions arising from the proposed windfarm, grid connection and turbine delivery route. The extraction of stone from the onsite burrow pits, the extraction of peat and deposition at the peat and spoil management areas would also give rise to dust emissions. In terms of sensitivity of receptors, it is stated that:

- 2 high sensitivity receptors are located within 50m of the windfarm footprint,
- 3 no. high sensitivity receptors located within 100m of the windfarm footprint,
- 8 no. high-sensitivity receptors located within 250m of the windfarm footprint.

These have been mapped on Drawing No.10-3 'IAQM Dust Deposition Bands and Sensitive Receptors – Proposed Wind Farm'. The potential effects from dust soiling on people/ property and human health impacts are anticipated to be low within 50m of the proposed windfarm. In terms of ecological impacts, there are 3 no. sensitive ecological receptors (habitats) within 20m of the Proposed Wind Farm footprint: Wet Heath (Annex I habitat), Upland Blanket Bog (Anex I habitat) and Kerry Slug and the overall sensitivity of the areas surrounding the development footprint of the Proposed Wind Farm has been assessed as 'Medium'.

In terms of sensitivity of receptors and the proposed grid connection, there are:
- 7 no. high sensitivity properties located within 20m from the grid connection footprint,
- 37 no. high sensitivity properties located within 50m of the grid connection footprint,
- 62 no. high sensitivity properties located within 100m of the grid connection footprint (1 no. of which are also located within 100m of the windfarm footprint),
- 120 no. high sensitivity properties located within 250m of the grid connection footprint, (1 no. of which is a participating landowner) 4 no. of which are also located within 250m of the windfarm footprint.

The chapter identifies the sensitivity of the area surrounding the footprint of the proposed grid connection to dust soiling effects as Low (Note - Table 10-110 details a sensitivity receptor effect of Medium for 1-10 receptors less than 20m from the grid connection).

Sections of the proposed grid connection would run parallel to the boundary of the Bandon River SAC (along the L4615 and R587). The proposed grid connection would traverse the Bandon River SAC at a bridge crossing over the Bandon River along the R586. In addition, the Bandon Valley South of Dunmanway pNHA is located to the south of the same bridge along the R586, overlapping with the Bandon River SAC, and parallel to the Proposed Grid Connection. The underground cable route would involve 11 no. EPA watercourse crossings, 9 of which have connectivity into the Bandon River SAC and have a High sensitivity to dust. The remaining 2 no. watercourse crossings cross watercourses that flow into the Ouvane River which flows directly to Bantry Bay and have a Medium sensitivity to dust. A pre-mitigation risk of dust emissions during the construction of the proposed grid connection is identified as Medium.

It is noted that there is an error in the text relating to reference source on page 33 of this chapter.

On implementation of mitigation and monitoring measures, it is submitted that there would be no significant direct or indirect effects on air quality from dust emissions arising from construction activities during the construction phase of the proposal.

In regard to construction traffic routes, the R585 and local roads where the proposed and planned existing upgraded site entrances are located, were scoped in for assessment. It is submitted that the overall risk of dust emission impacts on the identified 2.8km stretch of the R585 and L8777 (note – page 35 refers to the L-8776), with no mitigation applied for dust generating activities, during the construction phase of the proposed windfarm site and grid connection is submitted to be Low. With implementation of planned mitigation and monitoring measures, it is anticipated that there would be no significant direct or indirect effects on air quality from dust emissions arising from transportation activities during the construction phase of the proposal.

Operational Phase
Exhaust emissions from the operational phase of the proposed windfarm are anticipated to be imperceptible and not significant and no potential effects from exhaust emissions during the operational phase of the proposed grid connection have been identified.
While dust emissions may arise from maintenance traffic, it is anticipated that no significant effects on air quality from dust would arise during the operational phase of the proposal.

Potential impacts on human health are considered to be negligible and not to be significant during the operational phase of the proposal on the implementation of mitigation measures and good management practices. A slight positive impact on human health is identified arising from the renewable energy to be produced by the proposed windfarm.

Decommissioning Phase
Potential impacts from the decommissioning phase would be similar to those arising during the construction phase but would be reduced in effect and would have similar mitigation measures, including those set out in the Decommissioning Plan (Appendix 4-6).

Cumulative Effects
No negative cumulative effect with other developments on air quality are anticipated on implementation of mitigation measures.

7.10 Chapter 11 Climate

Chapter 11 identifies, describes and assesses potential significant direct and indirect effects on climate arising from the construction, operation and decommissioning of the proposal.

Construction Phase
The proposed windfarm and associated infrastructure would produce greenhouse gas emissions which would be restricted to the duration of the construction phase. It is submitted that while potential long-term slight negative effects would occur due to the removal of carbon fixing vegetation and habitat such as peat, this would be mitigated by the design and layout of the proposal. Greenhouse gas emissions would arise during the construction of the grid connection, transport to and from the site and waste disposal. It is submitted that these impacts would be reduced by the implementation of mitigation measures. It is further submitted that greenhouse gas emissions associated with the construction of the proposal would be offset by the operation of the proposed windfarm during its operational life as the proposed windfarm would displace carbon dioxide from fossil fuel-based electricity generation. No significant effects are anticipated during the construction phase.

Operational Phase
It is submitted that the proposed windfarm would displace carbon dioxide from fossil fuel-based electricity generation. With an estimated output of 67.2MW, it is submitted that the turbine output would displace a stated 44,498 tonnes of carbon dioxide per annum from carbon-based electricity generation which would have a long-term significant positive impact on climate.
The release of carbon emissions from maintenance and monitoring traffic associated with the operational phase of the proposed windfarm, grid connection, transport to and from the site and waste disposal are anticipated not to be significant.
It is submitted that measures outlined in the Biodiversity Management and Enhancement Plan and the afforestation that would occur as part of the proposal would result in an increased capacity of carbon storage within these habitats. It is stated that these measures would have a Long-term Moderate Positive Effect on Climate as a result of reduced greenhouse gas emissions and no significant effects are anticipated.

Decommissioning Phase
Potential impacts from the decommissioning phase would be similar to those arising during the construction phase but would be reduced in effect and would have similar mitigation measures, including those set out in the Decommissioning Plan (Appendix 4-6).

Cumulative Effects
No negative cumulative effect with other developments are anticipated on implementation of mitigation measures. It is submitted that the proposal would offset CO2 associated with the construction and operational phase that would be lost to the atmosphere in the stated months of operation.

7.11 Chapter 12 Noise and Vibration

Chapter 12 of the submitted Environmental Impact Assessment report and associated appendices describes the assessment undertaken of the potential noise and vibration effects on local residential amenity. Noise and vibration impact assessments have been prepared for the construction, operational and decommissioning phases of the proposed project at noise sensitive locations (NSL). To inform this assessment it is submitted that baseline noise levels have been surveyed at six representative noise sensitive locations surrounding the proposed wind farm site. It is further submitted that noise predictions for the nearest noise sensitive locations have been prepared for all

key elements of the proposed project that have the potential for noise and vibration impacts and effects.

The chapter is supported by material in the following appendices:

- Appendix 12.1: Glossary of Acoustic terms.
- Appendix 12.1: Noise Study area.
- Appendix 12.3: Noise modelling parameters
- Appendix 12.4: Predicted noise levels
- Appendix 12.5: Predicted noise contour
- Appendix12.6: Calibration Certification
- Appendix 12.7: Protocol for management of Complaints.

An overview and outline of the assessment methodology including guidance documents and assessment criteria for the proposed project is detailed per Section 12.3 of the submitted Environmental Impact Assessment report.

The assessment methodology is detailed in section 12.4 of the submitted documentation. It is submitted as per section 12.4.1. that the study area for the noise and vibration impact assessment was defined by the area where there is potential for noise and vibration impacts at noise sensitive locations associated with the proposed project during the construction, operational and decommissioning phases. The construction and decommissioning study area is detailed as per Section 12.4.1.1. It is submitted that noise could occur at any location within the proposed wind farm site and along public roads where there are increases in traffic associated with the proposed project. Noise sensitive locations in proximity to construction activities and those situated along haul routes have the most potential to experience noise and vibration from the proposed project. Taking account of the works associated with the construction and decommissioning phases, the study area is based on the nearest noise sensitive locations to the working areas, these distances are in the range between 63m for the internal roads, and over 325 m for the substation.

Section 12.4.1.2 details the operational phase study area. It is submitted that due to the potential for cumulative effects with other existing wind farm developments, the study area for the operational phase was determined as the area predicted to exceed 30 dB L_{A90} at the maximum predicted turbine noise emission level from the proposed project in isolation. (Ref. Figure 12.2). It is also submitted that consideration was given to potential cumulative impacts from other wind turbines in the wider area and all wind farms referenced have been considered in the cumulative assessment, namely Curraglass wind farm, Dereenacreenig West wind farm, Gortloughra wind farm and Shehy More wind farm.

Section 12.4.2 details the background noise survey undertaken to establish typical background noise levels at representative noise sensitive locations surrounding the proposed wind farm. This was conducted through installing unattended sound level meters at 6 no. representative locations in the surrounding area. The locations were identified by preparing a preliminary noise model contour at an early stage of the assessment. The selection of the noise monitoring locations was also informed by a site visit and supplemented by reviewing aerial images of the study area and other online sources of information.

The co-ordinates for selected locations for the noise monitoring locations are outlined in Table 12-6 and identified on a map in Figure 12.3 of the submission. Site visits by survey personnel were carried out during morning and afternoon periods; during these visits primary noise sources contributing to the noise environment were noted as occasional local traffic noise, birdsongs, local foliage mowing with the wind and distant agricultural activity. In addition during the installation, wind turbine noise was not audible at any location. In respect of night time periods, when noise due to traffic on local

roads, agricultural activities and other sources tend to reduce, there was no indication of any significant local night-time sources of noise at any location.

In general, it is submitted that the significant noise sources in the area were noted to be local and distant traffic movements, agriculture and farming typical noise, activity in and around residences, wind generated noise from local foliage and other typical anthropogenic sources typically found in such rural settings. No significant sources of vibration were noted at any of the survey locations.

Plate 12.1 to 12.6 illustrate the installed noise monitoring kits at each monitoring location. The survey period was typically six weeks or until such time that enough data points were captured at each survey location. (Ref. Table 12.7). It is submitted that a variety of wind speed and weather conditions were encountered over the survey periods in question.

Section 12.4.3 details the analysis of the survey data. It is submitted that the proposed turbine is a Nordex N133 at 102.5m hub height. It is further submitted that while the noise profiles of the Nordex N133 wind turbine have been used for the purposes of the assessment, the exact make and model of the turbine installed on the proposed wind farm site will be dictated by a competitive procurement process, but will adhere to the specifications and parameters set out in the submission. It is also noted and submitted that a warranty will be provided by the manufacturers of the selected turbine to ensure that the noise output will not require a tonal noise correction under best practice guidance. Cumulative turbine details are provided as per Tables 12.11-12.16 for cumulative wind farms included in the assessment namely Dereenacreenig West wind farm, Shedy more wind farm, Gortloughra wind farm and Curraglass wind farm.

Section 12.5 details the existing environment and documents the typical background noise levels measured in the vicinity of the noise sensitive locations in closest proximity to the proposed wind farm site. Figures 12.5 to Figures 12.16 show the derived daytime and night-time background noise levels for noise monitoring locations references NML1, NML2 , NML3, NML4, NML5 and NML6.

Table 12.17 and Table 12.18 below presents the various derived $L_{A90,10\ min}$ noise levels for each of the noise monitoring locations for daytime quiet periods and night time periods, for various wind speeds. It is submitted that these levels have been derived using regression analysis carried out on the data sets in line with best practice guidance contained in the IOA GPG and its SGN No.2 data collection.

Table 12-17 Derived Background Noise Levels of $L_{A90,10min}$ for Various Wind Speeds - Daytime

Locations	Period	Background Noise Levels dB L_{A90} at standardised 10m height wind speed m/s for 102.5 m Hub Height							
		3	4	5	6	7	8	9	10
NML1 (H014)	Daytime	32.4	33.0	33.7	34.7	36.0	37.6	39.5	41.7
NML2 (H003)	Daytime	24.6	26.2	28.2	30.4	32.5	34.3	35.6	36.1
NML3 (H015)	Daytime	33.2	34.3	35.0	35.4	35.8	36.3	37.2	38.7
NML4 (H041)	Daytime	28.6	29.5	30.7	32.2	34.3	37.0	40.6	45.0
NML5 (H031)	Daytime	29.6	30.2	31.0	32.0	33.3	35.0	37.0	39.4
NML6 (H018)	Daytime	30.6	31.0	31.4	32.0	33.0	34.4	36.5	39.3

Table 12-18 Derived Background Noise Levels of $L_{A90,10min}$ for Various Wind Speeds – Night-time

Locations	Period	Background Noise Levels dB L_{A90} at standardised 10m height wind speed m/s for 102.5 m Hub Height							
		3	4	5	6	7	8	9	10
NML1 (H014)	Night-time	30.5	31.1	31.7	32.4	33.0	33.6	34.1	34.5
NML2 (H003)	Night-time	23.4	24.4	25.7	27.2	28.8	30.3	31.6	32.6
NML3 (H015)	Night-time	27.0	27.9	28.6	29.4	30.4	31.7	33.3	35.4
NML4 (H041)	Night-time	24.1	26.1	28.9	32.2	35.7	39.1	42.0	44.2
NML5 (H031)	Night-time	26.6	27.2	27.9	28.8	29.8	31.0.	32.4	33.9
NML6 (H018)	Night-time	27.7	28.3	29.2	30.1	31.1	32.2	33.2	34.1

Details of the Wind Turbine noise limits are subsequently detailed and presented as per Section 12.5.3 of the assessment report. It is submitted that the limits proposed are in line with the applicable guidelines (DoEHLG 2006) and noise conditions applied to similar sites previously granted planning permission by An Coimisiun Pleanala. Table 12.19 below details the proposed noise criteria curves.

Location	Period	Turbine Noise Limits LA90, 10min Levels (dB) at Various Standardised 10m Height Wind Speeds)							
		3	4	5	6	7	8	9	10
NML1 (H014)	Day	45	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML2 (H003)	Day	40	40	40	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML3 (H015)	Day	45	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML4 (H041)	Day	40	40	45	45	45	45	45.6	45.6
	Night	43	43	43	43	43	44.1	47	47
NML5 (H013)	Day	40	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML6 (H018)	Day	45	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43

In relation to the proposed substation, it is noted that this will operate on a 24 hour basis. It is submitted as per Section 12.5.4 that the proposed absolute criterion of 35 dB L_{Aeq}, T, for noise from the substation is robust and should prevent adverse effects at noise sensitive locations.

An assessment of the likely significant effects is detailed as per Section 12.6 of the noise impact assessment. Section 12.6.2 and Section 12.6.4 assesses the construction and decommissioning phases. In relation to the construction phase, it is submitted that the assessment of construction noise and vibration has been conducted in accordance with best practice guidance contained *in BS5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites -Noise* and *BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on Construction and open sites -Vibration*. It is further submitted that the residual noise associated with the construction and decommissioned phases have been predicted to be below the proposed threshold values and the associated noise and vibration levels are not likely to cause significant effect at any noise sensitive location. Mitigation measures in relation to construction phase noise, construction phase vibration and decommission phases are detailed per section 12.7.1 to 12.7.3 respectively.

In respect of the operational phase, it is submitted that under the assessment methodology described in Section 12.4.5, the predicted turbine noise levels have been calculated at all noise sensitive locations within the study area of the proposed project. It is also submitted that these calculations are based on theoretical precautionary conditions favourable to noise propagation. i.e. downwind propagation from source to receiver and/or downward refraction under temperature inversions. It is stated that at all noise sensitive locations the worst omni-directional cumulative turbine noise levels are below the noise criterion curves. Appendix 12.4 presents the predicted omni-directional turbine results at all noise sensitive locations in tabulated form. Table 12.28 presents the results of the turbine noise predictions and assessment review at 15 no. locations with the highest levels of wind turbine noise predicted. At all other locations the maximum turbine noise levels are predicted to be less than 40dB $L_{A90.}$
Section 12.7.4.2 deals with amplitude modulation and tonality and details the approach to be followed in the event of complaints being received in relation to same.

Cumulative effects are detailed as per Section 12.9. It is stated that existing, permitted and proposed wind farm development with the potential for cumulative impacts have been considered as part of the turbine noise impact assessment. It is further stated as per Section 12.9.3 that it is not anticipated that they will be any other activities that would give rise to significant cumulative noise effects during the construction or decommissioning phases.

7.12 Chapter 13 Landscape and Visual

Chapter 13 focuses on Landscape and Visual Impact Assessment (LVIA) and assesses the likely significant effects of the proposed development on the surrounding landscape and visual amenity. The chapter is accompanied by a number of appendices including photomontage booklet, Appendix 13-1 LVIA methodology, Appendix 13-2 Landscape Character Assessment (LCA) Assessment Table, Appendix 13-3 Photomontage Visual Impact Assessment (18 viewpoints), Appendix 13-4 LVIA Baseline map detailing landscape and visual receptors, Zones of Theoretical Visibility (ZTV) and viewpoints and Appendix 13-5 Photowire Visual Booklet with 18 viewpoints.

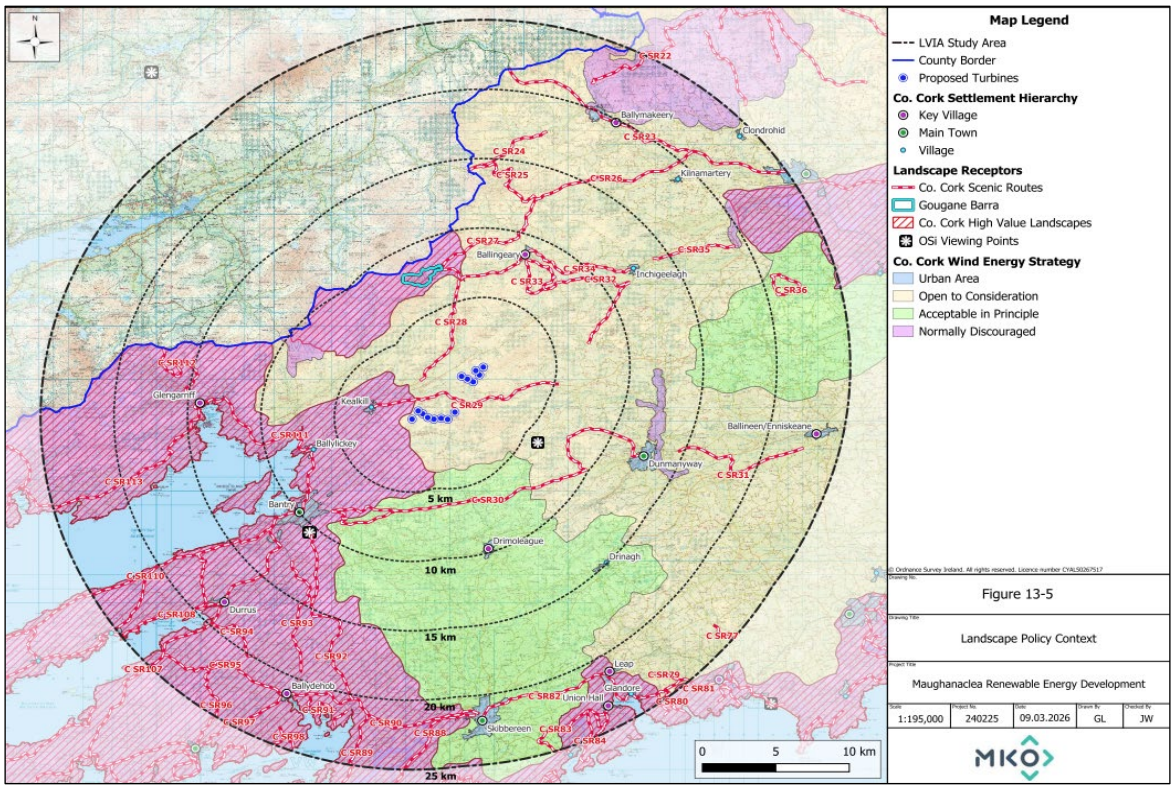

Figure 6: Landscape Policy Context (Chapter 13)

A study area of 15km (referred to as the LCA Area) has been determined appropriate for the assessment of effects upon designated Landscape Character Areas as it is submitted that no significant effects on landscape character are likely to arise beyond distances of 15km from the proposed turbines.

Zone of Theoretical Visibility (ZTV) mapping has been utilised to show the areas which would have theoretical visibility of the proposed turbines and those areas which will have no theoretical visibility in the LVIA Study Area. It is submitted that the ZTV is mitigated by intervening topography and that the surrounding landforms of the Shehy Range, Maughanclea Hills and Mullaghmesh would act as visual barriers and would restrict ZTV beyond 5km to the north, east and south. It is stated that visibility is only likely to occur in isolated, elevated vantage points where open, long ranging landscape views in the direction of the proposed turbines are found.

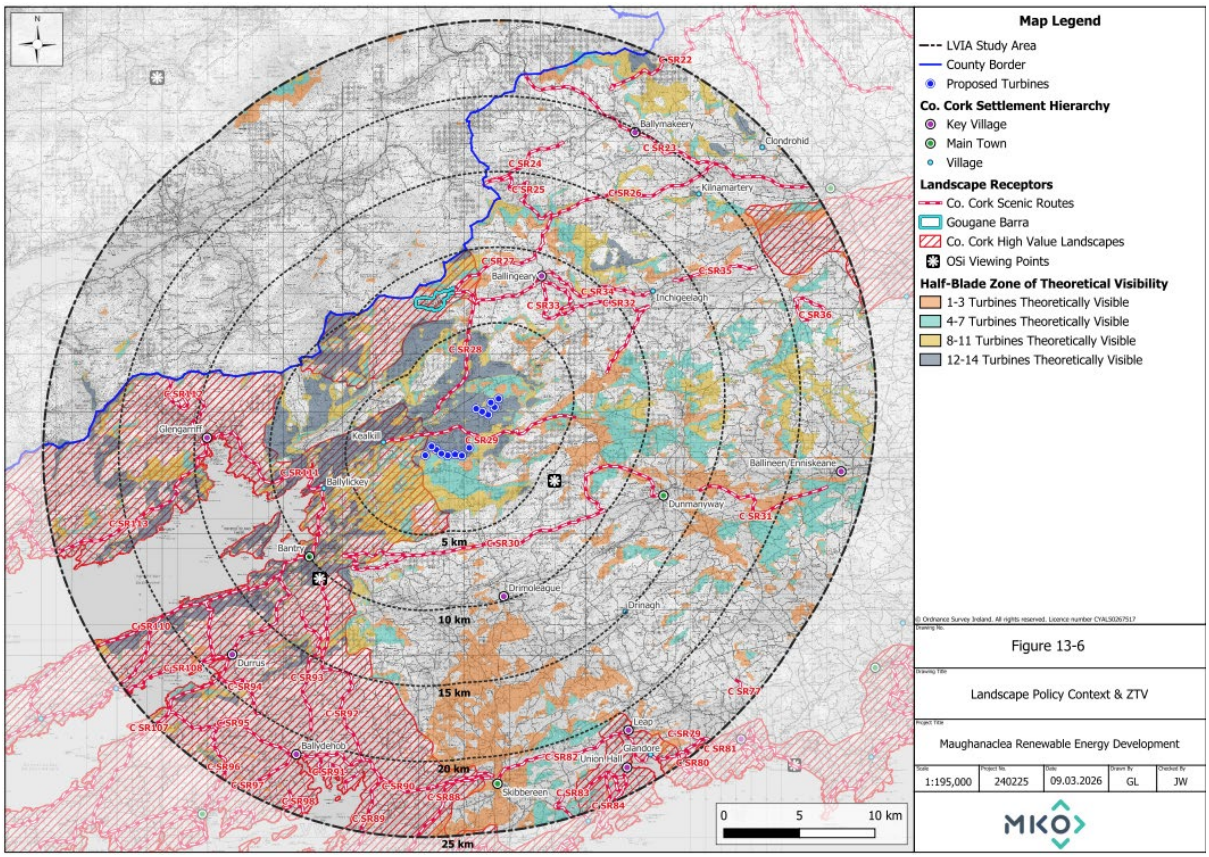

Figure 7: Landscape Policy Context and ZTV

Route screening analysis (RSA) has been carried out on routes within 3-5km of the proposed turbines to establish visibility of the proposed turbines. A stated 57% of surveyed roads recorded little/ no screening, 25% roads recorded intermittent/ partial screening and 18% recorded dense/ full screening (RSA mapped on Figure 13-4). The RSA analysis records the proposed turbines as being visible on Scenic Route SR29 (R585), SR28 (R584), the Beara Gougane Barra Cycling Route and Sheep's Head Way route and adjacent routes with Sheep's Head Way route, SR29 (R585) and the Beara Gougane Barra Cycling Route identified as having the most open views/ primarily Little/No visual screening towards the turbines with stretches of SR28 having a range of visual screening. No visual or landscape effects are anticipated within County Kerry due to topographical screening.

The proposed windfarm is identified as being located within Landscape Character Type 15a – Ridged and Peaked Upland with LCT 15 having a 'High' Landscape Value, 'High' Landscape Sensitivity and Level of 'Local' Importance. It is submitted that Landscape Character Type 15a is not designated as a High Value Landscape, as set out in the Cork County Development Plan, 2022.

It is stated that the proposed turbines would be located within an area designed as 'Open to Consideration' under the wind energy classifications, as set out in the Cork County Development Plan, 2022.

Figures 13-5 and 13-6 set out the mapped landscape policy context of the proposal with regard to landscape receptors including scenic routes, high value landscapes and half blade Zone of Theoretical Visibility. The 110kV substation would be located within an area of commercial forestry, identified in Plate 13-7 'Drone Image of Views westward over the Proposed Substation'. The route of the proposed grid connection would follow local and regional road routes.

The landscape value and landscape sensitivity of the proposed windfarm site has been attributed 'medium' values in Section 13.4.3. In the context of the Wind Energy Guidelines (2006) and Draft Wind Energy Guidelines (2019), the landscape character type adopted by the LVIA for the proposed windfarm is 'Mountain Moorland' with the landscape setting and characteristics considered to be capable of absorbing both the proposal and other cumulative developments.

Figure 13-10 sets out the context of the proposal within the Landscape Character Areas designated in the Cork County Development Plan, 2022 which are within 15km of the proposed turbines while Figure 13-11 maps the Landscape Character Areas and Zone of Theoretical Visibility.

In terms of visual receptors, Tables 13-8 and 13-11 details the 32 Scenic Routes and recreational routes respectively within the LVIA Study Area which have been scoped in/out for assessment/ theoretical visibility. Settlements and OSI viewing points are also examined in Sections 13.5.1.2 and 13.5.1.3 while Table 13-12 assesses recreational, cultural heritage and tourist destinations in the LVIA Study Area which have been scoped in/ out for assessment. Scoped in recreational, cultural heritage and tourist destinations include Carriganass Castle, Kealkill Stone Circle, Breeny More Stone Circle, Gougane Barra, Vaughan's Pass and the Wild Atlantic Way. Scoped in transport routes include the R584 and the R585. A final list of visual receptors scoped in for assessment is set out in Table 13-14 which also details the relevant viewpoint/ photowire reference numbers.

Section 13.5.3 discusses residential receptors and visual amenity. This section notes that visibility appraisals determined that most visibility of the proposed turbines would occur within 5km of the proposed turbines. As some residential receptors located in close proximity to the proposed windfarm would likely have views of the proposed turbines and are likely to have some of the greatest visual effects arising as a result of the proposal, 12 no. viewpoints located in proximity to residential receptors and settlement centre within 5km of the proposed turbines have been selected for inclusion in the photomontage booklet.

In regard to cumulative landscape and visual effects, the chapter details other windfarms within the LVIA area which is set out in Table 13-15. Closest existing windfarms under 10km from the nearest proposed turbine include Shehy More 11 turbine Windfarm (2.7km from T1 turbine), Milane Hill 9 turbine Windfarm (8.7km from T08) and Carrigarierk 8 turbine Windfarm and extension (8.9km from T01). Proposed windfarms (currently on appeal) within 5km of the proposed nearest turbine include Gortloughra 8 turbine Windfarm (2km from T01), Dereenacrennig West 3 turbine windfarm (3.6km from T08) and Curraglass 3 turbine windfarm (4km from T04). Figure 13-15 maps the cumulative theoretical visibility of all existing, permitted, and proposed wind farms, as well as visibility of the proposed turbines.

The likely cumulative landscape effects are assessed in the landscape character assessment tables in Appendix 13-2: LCA Assessment Tables and the likely cumulative visual effects are assessed in the photomontage assessment tables set out in Appendix 13-3: Photomontage Visual Impact Assessment Tables.

Landscape effects during construction of the proposed windfarm are not considered significant. The construction works associated with the grid connection would be short-term and localised and these effects are not considered significant in terms of landscape effects. Mitigation measured would be employed to reduce impacts on the environment and landscape.

In regard to visual effects from the windfarm during construction, these effects are considered to be slight, short-term and negative but are not considered to be significant. This would be similar to the visual effects anticipated for the borrow pits and 110kV onsite substation.

Minor accommodations are anticipated during construction at some locations along the proposed turbine delivery route and proposed grid connection route and these works are considered to be temporary, slight and negative but are not considered significant visual effects.

In the operational phase, it is submitted that the landscape character of the proposed windfarm site would undergo major changes in the landscape which would be of a substantial magnitude of change within the site. Mitigation measures are proposed to avoid or reduce direct effects on landscape receptors on the windfarm site.

In terms of LCA Assessment, the largest magnitude of change, which is classified as moderate, would occur within LCT 15a - *Ridged and Peaked Upland (Mullaghanish to Millstreet*) as the proposed turbines would materially alter the landscape of this LCT. Section 13.7.3.1.3 states that the proposed turbines would likely to be most visible within 5km of the proposed turbines as well as from elevated vantage points within this LCT. Beyond 5km, it is stated that there would be more limited visibility of the proposed turbines in parts of this LCT due to the visual screening from intervening vegetation in the landscape which would limit views of the proposed turbines.

This section states that the proposal would be sited in an LCT of local importance and the large scale, sparse population and land use characteristics such as commercial forestry make this LCT a highly suitable landscape for accommodating wind energy development. It is further noted that all of the proposed turbines are located within an area classified as 'Open to Consideration'.

The Section notes that the proposed turbines would not be located within a designated High Value Landscape as designated by the Cork County Development Plan, 2022. Close proximity of the proposed windfarm to High Value Landscapes including 'Glaciated and Forested Cradle Valley (Gougane Barra) (LCT 16a)' and 'Rugged Ridge Peninsulas (Castletownbere-Bantry-Schull) (LCT 4)' has been assessed. It is submitted that there would be no significant impact on the key sensitivities of these landscapes due to the limited visibility of the proposed turbines from the High Value Landscapes or the set-back from areas which give the High Value Landscapes key special qualities, characteristics, value and sensitivity. For the adjoining 'Rugged Ridge Peninsulas (Castletownbere-Bantry-Schull) (LCT 4)', it is predicted that the greatest effects would occur within a small area at the easternmost extent of the LCT where it borders LCT 15a (the Landscape Character Type within which the proposed windfarm site would be located). Photomontage viewpoints have been captured within LCT 4 which illustrate the nature of visibility of the proposal with viewpoints identified as having a Slight' or 'Negligible' magnitude of change. It is submitted that the proposed windfarm would not significantly affect the character and special qualities of this High Value Landscape and an overall residual landscape effect is assigned as 'Longterm', 'Negative' and 'Moderate'.

In regard to *cumulative landscape effects*, the chapter notes that the proposal would contribute to cumulative effects on the landscape of this area of West Cork. It is acknowledged that the proposal would potentially contribute to cumulative effects on the landscape in combination with nearby proposed windfarms (Curraglass, Gortloughra and Dereenacreenig West), particularly on LCT 15a – Ridged and Peaked Upland. Both Gortloughra (proposed) and Shehy More windfarms (existing) would be within 2km and 2.7km respectively of the proposed nearest turbines (T01), Curraglass windfarm (proposed) would be within 4km of the nearest proposed turbine (T04) and Dereenacreenig West (proposed) would be located south of the proposed southern turbine cluster. It is submitted that while the proposal would be adding to the cumulative turbines within the LCT 15a, the expansive landscape of LCT 15a would be capable of accommodating the proposed windfarm.
Cumulative Effects of the proposal in combination with other wind energy projects on the adjoining High Value Landscape of LCT 4 'Rugged Ridge Peninsulas (Castletownbere-Bantry-Schull)' would

influence the character of LCT 4 when looking inland. However, it is submitted that the proposed windfarm would be set back in one small area of the landscape and would not impact on the key sensitivities and key landscape qualities associated with the rugged ridge peninsulas and coastline of the High Value Landscape of LCT 4. Wind energy projects within the wider landscape context would contribute to the broader cumulative context.

Photomontages were used to assess the *visual effects* from 18 no. viewpoint locations. These are detailed Volume 2: Photomontage Booklet of the Environmental Impact Assessment Report. The 18 no. viewpoint locations are mapped (Appendix 13-4 LVIA Baseline Map) and are set out in Figure 13-14. It is submitted that the residual visual effect was not considered to be profound or very significant at any of the 18 viewpoint locations with residual effects found to be significant in 4 viewpoints, moderate in 7 viewpoints, slight in 6 viewpoints and not significant in 1 viewpoint.

Assessment of the visual impact on Scenic Route SR29, which runs along the R585, is focused on the valley between the two clusters from Cousane Gap in the east to Kealkill in the west (approx. 12km in total from VP10 to VP15). When travelling westwards along the scenic route, Viewpoints 11-12 which pass through Maughanaclea Valley are identified as having residual 'Significant' effects due to the high sensitivity of visual receptors and the open nature of views along this stretch of the route. A magnitude of 'Moderate' change is allocated to both viewpoints. When travelling eastwards on the scenic route, VP 15 is identified as having visibility of both proposed turbine clusters for eastbound receptors and has been assigned a residual visual effect of 'Moderate' (VP 8, while on the R584, is important for eastbound receptors).

Assessment of the visual impact on Scenic Route SR28, which runs along the R584, has identified that the residual visual effects this scenic route would range from 'Imperceptible' (where no visibility occurs) to 'Moderate' and that these effects are not considered significant.

Scenic Route SR27 (between Gougane Barra and the Mouth of the Glen) has been assessed and residual visual effects on this scenic route have been identified which range from 'Imperceptible' (where no visibility occurs) to 'Not Significant' and these effects are not considered significant.

The predominately coastal Scenic Routes SR111 (which predominately follows the N71 from Bantry Bay to Glengarriff) and SR 113 have been identified as having residual visual effects which range from 'Imperceptible' (where no visibility occurs) to 'Slight' and these effects are not considered significant.

Vaughan's Pass/ the Wild Atlantic View has been assigned a Slight' magnitude of change with an overall 'Moderate' residual visual effect and these effects are not considered significant.

The visual effects on cultural heritage receptors including Kealkill Stone Circle/ Breeny More Stone Circle and Carriganass Castle as well as the settlements of Kealkill and Bantry and recreational routes is submitted not to be significant.

Maughanaclea Valley Residential Receptors: Residential receptors are identified in order to determine visual effects. These have been mapped on Figure 13-20 with 33 residential receptors located within 1km of the proposed turbines. The closest third party would be being located approx. 682m from the nearest turbine (T01) which is just over the 676m set back as set out in the 2019 Draft Wid Energy Guidelines (4 times x 676m tip height). Significant residual visual impacts have been determined from 4 photomontage viewpoints representing residential receptors in closest proximity to the proposed turbines and 13 photomontage viewpoints were taken within 5km of the proposed turbines to represent the residential receptors in close proximity to the Proposed Wind Farm site. Residential clusters surround the north and south of the two turbine clusters as well as in between both turbine

clusters. VP11 and VP12 are representative of residential clusters along the R585. It is stated that In both viewpoints, the proposed turbines would have a 'Significant' visual impact for a small number of residential receptors in this area, and the proposed turbines are set-back beyond the 4x tip height set back distance as per the Draft Guidelines 2019. The greatest visual effects on residential receptors would occur for receptors in closest proximity to the proposed turbines, including those on the L-95853, immediately north of the southern turbine cluster. VP16 captures this view which is identified as having a residual visual effect of 'Significant' and would constitute a 'Substantial' change at this viewpoint. It is stated that setback from these receptors is in line with the 2006 and 2019 (Draft) Guidelines. It is also stated that views for the majority of residential receptors within the Maughanaclea Valley would be similar to those shown in viewpoints VP11 and VP12.

Residential Receptors between the southern and northern turbine cluster: VP11 and VP12 is stated to be representative of residential receptors in this area. Sensitivity of these viewpoints is identified as 'High' and the magnitude of change is identified as 'Moderate' with 'Significant' visual impact for the very small number of residential receptors in this area. Setbacks from the proposed turbines would in line with the 2006 and 2019 (Draft) Guidelines. The greatest visual effects on residential receptors would occur for receptors in closest proximity to the proposed turbines, including those on the L-95853, immediately north of the southern turbine cluster, which are represented by VP16. A residual visual effect of 'Significant' was identified as arising for this viewpoint and the proposed turbines would constitute a 'Substantial' change at this viewpoint for a limited number of residential receptors.

Residential Receptors to the south: Residential receptors are primarily situated along the L-4718 and L-4717 local roads. VP3 would be 1.2km south from the nearest proposed turbine (T08) and a 'Moderate' magnitude of change is identified to occur for this viewpoint, with an overall residual visual effect of 'Moderate'. VP1 and VP5 are taken 2.9km and 2.6km respectively from the nearest proposed turbine and an overall residual visual effect of 'Moderate' is identified to arise for VP1, while a residual visual effect of 'Slight' is identified to arise for VP5.

Residential Receptors to the North / North-East: These would be located along the R584 and the L-8776 as well as connecting smaller local roads. Residential receptors to the north within the townland of Gortloughra are identified as having the greatest visual effects due to closes proximity to the proposed turbines (850m). VP6 is taken on the L-8776 and residual visual effects of 'Significant' have been identified for this viewpoint with the proposed turbines constituting a 'Substantial' change. It is submitted that the proposed turbines of the northern turbine cluster would appear as large-scale features in close proximity to the viewpoint and that the visual effects would occur for a limited number of residential receptors. VP14 captures residential receptors on the L-8779, L-8778 and R584. VP14 would have a setback of 1.9km from the proposal and is identified as having 'Moderate' residual visual effects.

Residential Receptors to the West: These are represented by VP15 and a residual visual effect of 'Moderate' is identified to arise on these residential receptors.

No visual effects on the R585 Regional Road nor the adjacent residential receptors are anticipated to arise from the proposed 110kV Onsite Substation.

Assessment of the Cumulative Visual Effect from other Wind Energy Projects includes 19 existing , 6 permitted and 4 proposed windfarms in the LVIA 25km Study Area. It is stated that the areas of theoretical visibility of both the proposed and cumulative turbines are primarily confined within 5 km of the proposed windfarm, extending in a westward direction towards Bantry Bay and the ridged, peaked upland landscape of High Value Landscape LCT4. The proposed Curraglass, Dereenacreenig West and Gortloughra Wind Farms, together with the existing Shehy More Wind Farm, are located

within 5 km of the proposed turbines and the cumulative interactions are set out in VP6, VP4 and VP11.

In regard to the two clusters of turbines currently proposed, it is submitted that the proposed turbines would not be visible in all directions and would not be perceived to fully surround receptors in these areas. Visual effects from the furthest turbine cluster would be mitigated by distance and topography.

The landscape and visual effects during the decommissioning phase are anticipated to be 'Short-Term', 'Slight', 'Negative' visual effects.

The Chapter concludes that the proposed windfarm would be located within a landscape that can accommodate a wind energy development of this scale, and that it is submitted that the assessments, including the LVIA, establish that the proposed windfarm site is a landscape capable of effectively accommodating the Proposed Project.

7.13 Chapter 14 Cultural Heritage

Chapter 14 set out the potential impacts of the proposal on archaeological, architectural, and cultural heritage resources. The turbine delivery route has been screened out of this assessment as no interventions are required outside of the existing road network.

The proposed windfarm study area for assessment is defined as follows:
- 10km for all national monuments and nationally significant sites,
- 5km for sites/ features subject to statutory protection including those listed on RMP, RPS, NIAH structures,
- 2km for unrecorded sites or structures of cultural heritage.

The proposed grid connection study area is defined as 50m from the route.

Desktop Assessment, field inspections and impact assessment methodology are outlined in this chapter.

In terms of archaeological and cultural heritage context, the following have been identified for the proposed windfarm:
- 11 recorded archaeological sites within the proposed windfarm site,
- 210 archaeological sites within the 5km study area,
- 6 recorded structures of architectural merit within 5km which include 2 protected structures,
- 51 previously unrecorded cultural heritage sites within 2km study area,

In addition, four archaeological sites, five built heritage sites and five previously unidentified sites of cultural heritage significance are located within 50m of the proposed grid connection,

Figures 14-2 to 14-20 map the cultural heritage receptors within the study area.
Aerial photography has been inspected with evidence of a curved stone wall (CH21), north-south lazy beds (CH55), drainage ditches between T05 and T06 and the former Butter Road visible in addition to AH37 and AH 38 recorded monuments.

The cultural heritage sites identified within the study area of the proposed windfarm are itemised in Table 14-10 and include CH07, CH08, CH13, CH18 and CH55 which are located within the footprint of proposed works.

A total of 5 cultural heritage sites have been identified within 50m of the Proposed Grid Connection.

Field inspections were carried out in February 2025 with the sites of proposed T01, T07 and T08 not accessible for inspection due to forestry cover and waterlogged ground.

Construction Phase
No predicted direct, negative effects from the proposed development are predicted to arise on National Monuments, monuments subject to Preservation Orders or designed landscapes during the construction period with no significant negative effects on recorded archaeological sites.

It is submitted that the proposal would have a moderate but no significant impact on a recorded archaeological AH58 (Recorded Monument CO092-089 and CO092-094) due to the loss of a stated 12m length of a dry-stone wall/ field boundary. It is also submitted that the proposal would also result in a direct, negative significant effect on CH55, an unrecorded cultural heritage site comprising of a field containing north–south orientated lazy beds situated within a sub-oval enclosure which may relate to nearby recorded monuments AH59 and AH60 and may represent part of a larger field system. It is proposed that T03 and associated hardstanding would be sited on the site of CH55.

The proposed windfarm would have direct, negative effects on four further previously unrecorded cultural heritage sites; CH07, CH08, CH13 and CH18 and these effects have been assessed as not significant.

No direct effects to watercourses are predicted with the proposed windfarm and grid connection as no instream works are proposed.

On implementation of mitigation measures, the effects on CH55 would be direct, negative (permanent) and slight.

Operational Phase
No significant negative operational effects have been predicted to sites of national significance, archaeological heritage sites, built heritage sites, designed landscapes or cultural heritage site. However, indirect *moderate* negative effects (medium term) have been identified for a number of archaeological heritage sites due to changes to their existing setting from the proposed turbines. It is submitted that the turbines would only impact the setting of the monuments when viewed from one direction and it is not predicted that the proposed turbines would impact intervisibility. Moderate negative effects (medium term) have also been identified to built heritage sites BH06 and BH11. Indirect and residual effects would remain as the setting of archaeological, architectural and cultural heritage sites cannot be mitigated during the operational phase. No significant negative effects on the archaeological, architectural and cultural heritage resource are anticipated during the operational phase.

Potential cumulative effects in combination with proposed and permitted windfarms on the visual alignment of National Monuments and sites have been considered in combination with proposed or permitted wind farms within 20km with six National Monuments located within 10km of the proposed windfarm site. Indirect effects as a result of the Proposed Project are predicted at some of these sites, ranging from slight to moderate. It is submitted that the main visual alignment of four of these sites do not align towards the proposed turbines, apart from AH174 (stone circle, standing stone 2.8km southwest of T14) whose main axis aligns with the proposed windfarm.

The Chapter concludes by stating that the proposal would have one pre-mitigation significant negative effect on unrecorded cultural heritage site (CH55) which would be reduced to a slight negative effect on application of mitigation measures.

Residual effects would impact the setting of archaeological, architectural and cultural heritage sites and it is submitted that these would not be significant or permanent and would be removed following the decommissioning of the turbines.

7.14 Chapter 15 Material Assets

Chapter 15 addresses the likely significant effects of the proposed development on transportation infrastructure, Telecommunications and Aviation and Other Material Assets, which are economic assets of human origin.

Traffic
The chapter sets out a description of the proposed turbine delivery route, construction traffic haul routes, the proposed grid connection, traffic volumes (existing and proposed volumes) and the proposed and upgraded site access junctions (Figure 15.1b). An Abnormal Load Route Assessment has been undertaken for the proposed delivery route in addition to autotrack assessment for the turbine blade transporters. A Stage 1 Road Safety Audit for Access Junctions A to D has also been undertaken (Appendix 15-4).

Figure 15.1a maps the site location, turbine delivery route and grid connection route. A Traffic Management Plan is set out in Appendix 15-2 of the Environmental Impact Assessment Report.

Construction Phase
It is anticipated that construction traffic fir the proposed windfarm site would have a temporary, slight, negative effect on existing traffic on the delivery routes and at the proposed access junctions off the R585 and L8777 and the L3155. Effects from traffic volumes associated with the proposed grid connection, which include temporary short-term diversions, are anticipated to be transient, temporary and slight.

Operational Phase
Largely associated with maintenance, the impacts on the surrounding road network would be imperceptible, negative and long term.

Decommissioning
The proposed turbines are expected to have a lifespan of approximately 35 years and may either be replaced or fully decommissioned.

Impacts that would potentially occur during the decommissioning phase would be similar to the construction phase; however, it is anticipated that these would be less than during the construction phase as significant ground works would not be required to decommission the windfarm. Both the 110kV onsite substation and proposed grid connection would remain in situ as the would remain under the operation of ESB Networks.

Mitigation measures would be employed during the construction phase to minimise the effects of the additional traffic generated by the proposal. Measures outlined include traffic management measures, management of the delivery of abnormal sized loads. It is submitted that no mitigation measures are required during the operational phase and the decommissioning plan (Appendix 4-6) would include mitigation measures for agreement with the consenting authority.

Residual effects arsing during the construction phase would have a slight to moderate, short-term negative effect on existing road users, which would be minimised on implementation of the mitigation

measures set out in the Traffic Management Plan. These are not considered to be significant. The residual impacts anticipated to arise during the operational phase would be imperceptible, long term and negative and would not be significant. The residual effect arising from the decommissioning phase would be imperceptible/ slight, negative and temporary and no significant impacts are anticipated.

In terms of cumulative effects, these would arise in the event that the construction of the proposed development would coincide with proposed/ permitted but not constructed windfarms. It is submitted that the traffic related cumulative impacts would be negative, short-term and slight and would be mitigated by ensuring no overlap of construction phases would occur.

Telecommunications and Aviation
This section of the chapter assesses the likely significant effects of the Proposed Project on telecommunications and aviation assets, give the potential to interfere with broadcast and communication signals. The effect on telecommunications from the Proposed Project during the operational phase is considered not significant as no impacts are anticipated to occur during the construction phase and no impacts were identified to telecommunications from the proposed windfarm and grid connection during the operation phase. Mitigation measures are, however, set out in Appendix 15-4 in the event that effects arise.

No effects on aviation are identified and no mitigation measures are required during the operational and decommissioning phases. Requests for obstacle lighting from the Irish Aviation Authority and Department of Defence would be adhered to.

No cumulative effects relating to the proposal and surrounding projects in relation to telecommunications or aviation are anticipated.

Other Material Assets
This section assesses utilities or built services in the area and waste management. It is submitted that the proposal has been designed to avoid identified services and utilities where insofar as possible and a waste management plan has been prepared (Appendix 4-3). In regard to water, the proposed windfarm site is located in 2 subcatchments with 10 turbines located in the Coomhola_SC_010 subcatchment and upstream of Kealkill Public Water Supply (PWS) abstraction and 4 turbines located in the Mealagh_SC_010 subcatchment and upstream of the Zone 1 Bantry Cahernacrin abstraction. The proposed grid connection would be located upstream of Bandon Regional Water Supply (RWS) abstraction on the Bandon River. Kealkill PWS abstraction is located 0.7km to the northwest of the proposed windfarm and the Mealagh River abstraction is located approximately 8.5km downstream of the proposed windfarm site.

Construction Phase
The effect on existing built services from the Proposed Project during the construction phase is considered not significant on implementation of mitigation measures including drainage mitigation and pollution prevention measures (CEMP Appendic 4-3) and mitigation measures relating to underground built services.

Waste Management
The effect on waste management from the proposal during construction, operational and decommissioning phases is considered not significant. No cumulative effects associated with the construction, operational and decommissioning phases of the proposal are anticipated.

7.15 Chapter 16 Major Accidents and Natural Disasters

Chapter 16 assesses the likely significant effects on the environment arising from the vulnerability of the proposal to risks of major accidents and/or natural disasters, as well as the potential of the proposal to cause potential major accidents and/or natural disasters.

Assessment Impact Methodology is set out as are the identified potential risks including flooding, peat stability, meteorological, transport, technological and civil emergencies.

It is submitted that all potentially relevant risks have been detailed in a risk register with nine no. risks identified specific to construction, 6 no. risks during operation and 4 no. risks during the decommissioning phase.

Potential risks identified during the construction, operation and decommissioning of the proposal have been scored and those potential risks classified as 'low' risk scenario (risk score of 3 or less) which are subject to mitigation measures are not anticipated to have a significant effect on the environment.

Risk scores of 4 or higher have been attributed to potential risks from contamination, peat stability and fire/ explosion during the construction, operation and decommissioning of the proposal. Severe weather is also considered. It is submitted that the identified risks would not be significant on implementation of identified mitigation controls and best practice measures, including measures outlined in the Construction Environmental Management Plan.

It is submitted that the proposal, on implementation of mitigation measures, would have no potential for significant cumulative effects associated with the potential for the project to be impacted by major accidents and/ or natural disasters or the potential of the proposal to cause major accidents and/ or natural disasters.

7.16 Chapter 17 Interactions of the Foregoing

Chapter 17 assesses potential interactions between the various aspects of the environment already assessed in the preceding chapters of the Environment Impact Assessment Report and a matrix of these interactions is set out in Table 17-1.

Impact interactions relating to Population and Human Health
Impact interactions include Land, Soils and Geology, Hydrology and Hydrogeology, Air Quality, Climate, Noise and Vibration, Landscape and Visual and Material Assets. The identified interactions have been assessed as not significant on implementation of mitigation controls and best practice measures. It is submitted that the interaction of residential receptors with Landscape/ Visual would be significant "for a small number of residences in very close proximity" during the operational phase with significant changes to the physical landscape and site from the turbines. It is submitted that the setback distance (4x tip height setback) would protect visual amenity and mitigate effects on residential receptors and potential effects are not significant.

Impact interactions relating to Biodiversity
Identified interactions with Ornithology, Land, Soils & Geology, Hydrology and Hydrogeology, Air Quality, Climate, Noise & Vibration are submitted to be not significant.
Impact interactions relating to Ornithology
Identified interactions with Land, Soils & Geology, Hydrology and Hydrogeology, Air Quality, Climate and Noise & Vibration are submitted to be not significant.

Impact interactions relating to Land, Soils and Geology

Impact interactions relating to Hydrology and Hydrogeology, Air Quality, Climate and Cultural Heritage are submitted to be not significant.

Impact interactions relating to Air Quality
Impact interactions relating to Material Assets are submitted to be not significant.

Impact interactions relating to Climate
Impact interactions relating to Material Assets are submitted to be not significant.

Impact interactions relating to Landscape and Visual
Impact interactions relating to Cultural Heritage are submitted to be not significant.

Vulnerability to Natural Disasters and Mitigation and Residual Effects
With implementation of mitigation controls and best practices measures, the residual effect(s) associated with the proposal are submitted to be not significant.

7.17 Chapter 18 Schedule of Mitigation

Chapter 18 sets out the mitigation measures which would be implemented as part of the proposed development. These are presented in tabular form (Table 18-1).

8 Assessment

This section includes an assessment on the nature of the proposal and the content of the Environmental Impact Assessment Report. The issues raised in the internal reports are also set out in this section.

1. Archaeological Considerations

The County Archaeological Officer has assessed the submitted Environmental Impact Assessment Report and associated documentation. A number of significant impacts (direct) have been identified in addition to major inconsistencies in the visual assessment and lack of cross referencing between the Landscape and Visual Impact Assessment and Archaeology chapters, both of which arrived at different levels of impact for some National Monuments. Key concerns raised include the removal of part of a drystone field boundary wall which is a Recorded Monument (Recorded Monument CO092-089 and CO092-094) and the removal of a previously unrecorded cultural heritage site, comprising of north–south orientated lazy beds situated within a sub-oval enclosure, to accommodate T03. As with most wind energy projects, sub-surface archaeology is a key issue to be addressed and in the case of the current proposal, the Archaeological Officer is not satisfied that sub-surface archaeology has been adequately addressed. Preservation in situ is both national and development plan policy and the Environmental Impact Assessment Report has assumed preservation by record/ excavation/ removal of such features. A programme of archaeological testing is, therefore, required to inform the siting of the proposed windfarm infrastructure and to ensure subsurface archaeological can be avoided. The submitted Environmental Impact Assessment Report is lacking in detail in regard to the potential visual impact on the setting of archaeological monuments, particularly the Landscape and Visual Impact Assessment (LVIA) and evidence-based assessments in regard to how the significance of effects on setting of monuments were arrived at have not been submitted. Overall, the submitted Environmental Impact Assessment Report has not adequately assessed the potential impacts of the proposed windfarm on archaeological heritage and further information is required to fully assess the proposed impacts with redesign of the proposed windfarm infrastructure recommended.

2. Ecological Considerations

Key ecological concerns identified in the Environmental Impact Assessment Report are the classification of habitats which would be impacted by the proposed development including Dry Siliceous Heath (associated with I habitat 'European dry heaths' (4030)), Wet Heath (linked to Annex I habitat 'Northern Atlantic Wet Heath with *Erica tetralix'* (4010)), and Upland Blanket Bog. The proposal to remove 1.6ha of wet heath habitat and 0.2ha of upland blanket bog (to accommodate T4 and T14) is of concern given that the Cork County Development Plan, 2022 identifies Wet Heath (HH3) as a Habitat Conservation Importance in County Cork and its removal, and that of Upland Blanket Bog, would be contrary to Objective BE 15-2. Redesign of the proposed development to remove T4 and T14 is recommended. Concerns have also been raised in regard to the proximity of T02 to Article 17 Annex I habitat in addition to proposed impacts on a maternity bat roost in proximity to the proposed grid connection. Potential impacts on Hen Harrier have not been satisfactorily addressed in the Environmental Impact Assessment Report, particularly in regard to the intensification of windfarms within the area. Areas of recently felled conifer woodland (WS5) may provide suitable nesting opportunities for hen harrier but no information has been provided on measures that would be required in the event of hen harrier nesting occurring within the site. This information is important as the development of a windfarm so close to a hen harrier nest would significantly impact this Annex I species. Collison risks for hen harrier and white-tailed sea eagles, which are stated to have no risk, have not been adequately addressed as there have been two known mature adult hen harrier fatalities caused by collision with turbines in the county within the past five years. Further information is required in regard to the adequacy of the collision model used to predict the significance of impacts

to rare and highly sensitive species, including hen harrier. The absence of any dedicated operational measures to minimize the potential for collision of turbine blades with avian species is noted. The Ecology Officer advises that consideration should be given to the use of biologically inspired aposematic patterns in respect to this proposal in light of concerns from the NPWS around White-tailed Sea Eagle and the recorded presence of a number of protected raptors at the study site.

3. Hydrology and Hydrogeology Considerations

The Environment Officer has assessed the proposal and is satisfied that the predicted effects on hydrology and hydrogeology would be acceptable. Due to the nature of wind farm and grid connection developments, being near surface construction activities, effects on groundwater are generally negligible and surface water is generally the main sensitive receptor assessed during impact assessments. An Aquatic Baseline Report identifies water bodies potentially at risk from the proposal and downstream sensitive receptors potentially at risk from the proposed development have been identified. A Water Framework Directive (WFD) Compliance Assessment (Appendix 9-3) has been completed for all waterbodies (surface water and groundwater bodies) with the potential to be impacted by the Proposed Project. Mitigation, including best practice industry guides and a Construction Environmental Management Plan, have been detailed.

4. Air and Climate Considerations

The Environment Officer has assessed the information contained in Chapter 10 of the submitted Environmental Impact Assessment Report and considers the assessment has been carried out in accordance with relevant guidance and best practice. The potential effects from dust and emissions from construction traffic and plant/ equipment during the construction phase have been considered. Air quality mitigation measures detailed in the Environmental Impact Assessment Report are considered satisfactory.

5. Shadow Flicker Considerations

Potential effects from shadow flicker on sensitive receptors have been considered under Chapter 5 'Population and Human Health' and other chapters throughout the Environmental Impact Assessment Report. The study area selected for the shadow flicker assessment is 1,330km from the proposed turbines which is based on ten times the rotor diameter from each turbine (133m rotor diameter x 10 = 1,330m).

The shadow flicker methodology and assessment within this chapter are based on compliance with the Wind Energy Guidelines (2006). While the Environmental Impact Assessment Report notes that the proposed turbines can be brought in line with the requirements of the Draft Guidelines (2019) through the stricter implementation of the mitigation measures outlined in Section 5.4.3.2.7 of this chapter, this should be a minimum requirement having regard to the density of housing in the vicinity of the turbines.

Approx. 79 dwellings (one of which is a derelict dwelling) are located within the shadow flicker assessment area with the closest third-party sensitive receptor located approximately 682.6m from the nearest proposed turbine (T01). While noting the shadow flicker area outlined in Figure 5-3 in Chapter 5, a detailed map showing the location of sensitive receptors within 500m, 750m and 1000m of the proposed turbines should be submitted for legibility purposes, as is standard with most windfarm applications.

There are concerns regarding the application of the 2006 Guidelines in the assessment (8 no. sensitive receptors would exceed the annual threshold of over 30 hours for shadow flicker) and the 2019 Draft Wind Energy Guidelines, which require that no existing dwelling or other affected property should experience shadow flicker as a result of the wind energy development, should be adhered to. Review

of the site design should also be examined with a view to establishing whether shadow flicker can be eliminated and a redesign would be encouraged to ensure that no dwelling experiences cumulative shadow flicker from both the proposed development and the Gortloughra windfarm which is currently on appeal (dwelling HO35 would potentially experience cumulative shadow flicker from both proposed windfarms). The omission of T01 should be considered.

A number of discrepancies have been identified which should be addressed.

6. Noise Considerations

The Environment Officer has assessed the information contained in Chapter 12 relating to the potential noise and vibration effect arising from the proposed development. To fully assess the potential effects from noise, the Environment Officer requires the submission of details regarding the respective number and distances of all noise sensitive receptors within 500m, 1000m, 1500m and 2000m of the proposed turbines. Further details are also required regarding the identification of the referenced noise sensitive receptors that each selected background noise monitoring location is considered to be representative of. This information should also be mapped. In terms of the derived background noise levels set out in Tables 12.17 and Table 12.18, it is noted specifically in respect of NML4 (H041) that the derived night-time noise levels for wind speeds 7m/s,8m/s and 9m/s are higher than the daytime noise levels for the corresponding wind speeds. The applicant should be asked to comment on this having regard to any site observations or notes from the analysis of the background datasets.

7. Visual Impact and Population Considerations

In assessing the proposed windfarm, regard has been had to Objective ET 13-7 in the Cork County Development Plan, 2022.

Objective ET 13-7 of the Cork County Development Plan, 2022 states that wind energy development is open to consideration where proposals can avoid impacts on the following:

- Residential amenity particularly in respect of noise, shadow flicker and visual impact.
- Urban areas and Metropolitan/Town Green Belts.
- Natura 2000 Sites (SPA's and SAC's), Natural Heritage Areas (NHA's), proposed Natural Heritage Areas and other sites and locations of significant ecological value.
- Architectural and archaeological heritage.
- Visual quality of the landscape and the degree to which impacts are highly visible over wider areas. In planning such development, consideration should also be given to the cumulative impacts of such proposals.

The windfarm, as currently proposed, raises a number of significant concerns regarding visual impact considerations. Most of the potential visual impact effects would arise within 5km/ in close proximity to the proposed windfarm. This is largely due to the location and prominence of the proposed development, comprising of 14 turbines in 2 no. clusters, on either side of key Scenic Route 29 (R585) with the northern cluster of turbines located just south of the R584 and Scenic Route 28 (R585). The 'Zone of Theoretical Visibility' indicates there would be high theoretical visibility within 5km of the proposed turbines. Key scenic routes and roads are located with the 5km zone in addition to the Cousane Gap and a significant number of residential properties. The Planning Authority recognises that Scenic Routes R585 to Kealkill via the Cousane Gap and the R548 north of Kealkill through the Pass of Keimaneigh to Gougane Barra are important 'gateways' to West Cork and are synonymous with the scenic values of this landscape and the identity of Kealkill, Bantry, Cousane Gap and the Shey Mountains.

Notwithstanding the location of the proposed windfarm in an area where windfarms are open to consideration, the proposal would be located very close to the adjoining designated High Value

Landscape where windfarms are normally discouraged. The close proximity of the turbines to designated High Value Landscape is seen in the location of T13 and T14 which would be approx. 469m and 484m respectively from the boundary with the 'Normally Discouraged' High Value Landscape. The Environmental Impact Assessment Report does not address the overlap of landscape forms close to the wind strategy boundaries which is indicative of the visual sensitivity of this area. It is noted that the Environmental Impact Assessment Report identifies the windfarm as being located in a Landscape Character Type 'Ridged and Peak Upland' and having a 'Landscape Value' and a 'Landscape Sensitivity' of High. Given the site's location so close to the High Value Landscape and the open scenic views, the landscape value of the area is significantly higher than assessed in the Environmental Impact Assessment Report.

The Environmental Impact Assessment Report states that visibility is only likely to occur in isolated elevated vantage points. However, given the topography of the landscape, the proposed windfarm would be visible from large areas within the site's vicinity. The Planning Authority would not support the view contained within the Environmental Impact Assessment Report that the proposed turbines would be sited to "ensure the turbines are at the periphery of views" within Maughanaclea Valley. The Planning Authority is of the opinion that views from the adjoining Scenic Routes, the S29 and S28, would be significant and would not represent long distance views. The magnitude of the visual impact on Scenic Route 29 (R585) would be higher and more pronounced than that illustrated in VP10 when travelling westbound. The visual impact along the R585 would be significant and unlikely to be reasonably screened, given the scale and number of turbines proposed.

While the Environmental Impact Assessment Report asserts that the landscape can accommodate the proposed windfarm, it is not accepted that the surrounding landscape would have the capacity to absorb a 14-turbine windfarm and provide visual containment of the proposal. The proposed turbines would be prominently visible and the Landscape and Visual Impact Assessment has not demonstrated that the landscape can absorb the scale of development proposed.

The scale and quantum of turbines proposed is considered to be excessive for this visually sensitive location, particularly given its proximity to the Cousane Gap, which offers open panoramic views to Bantry Bay when travelling westwards. Views from the Cousane Gap are open across the adjacent landscape.

The Environmental Impact Assessment Report recognises that there is a cumulation of windfarms, both existing and under appeal, in the vicinity of the proposed site. Proximity to the proposed Gortoughra windfarm (currently on appeal) is significant with T01 stated to be within 1.5km from the site boundary of Gortoughra windfarm at its closest point. Intervisibility between the proposed windfarm and Gortloughra windfarm cannot be mitigated, and the Planning Authority is of the view that the landscape cannot absorb the scale of windfarm currently proposed, in tandem with the proposed Gortloughra windfarm, for this visually sensitive location.

The Planning Authority would not agree with the assessment and conclusions of the cumulative and in-combination effects from other projects, including windfarms, which is set out in Chapter 5. It is submitted that there is potential for a short-term negative not significant effect on property values within 1km of the proposed turbines of the proposed windfarm site. The Environmental Impact Assessment Report considers the proposal would not overlap with any other cumulative turbines and there is no potential for cumulative effects on property values to arise as there are no other cumulative turbines located within 2km of the proposed turbines. However, the Planning Authority notes the proposed Gortloughra windfarm (currently under appeal) would be located 2km from the proposed Maughanaclea windfarm and in combination, there is potential for significant effects on property values.

Cumulative impacts in respect to visual effects, property values and residential amenity would be difficult to mitigate, given the scale and location of the proposed turbines.

Based on the information submitted in the Environmental Impact Assessment Report, it is the opinion of the Planning Authority that the significance of adverse impacts arising from the proposed windfarm cannot be ruled out and the proposal, in its current form, would not be contrary to Objective ET 13-7 in addition the policy objectives relating to scenic landscape qualities as set oy in GI 14-9, GI 14-12 and GI 14-13 of the Cork County Development Plan, 2022

On the basis of the above assessment, it is the opinion of the Planning Authority that the proposal should be refused and a refusal reason has been set out below, should An An Coimisiún Pleanála be minded to refuse permission for the proposed windfarm.

Recommended Refusal Reason

The proposed windfarm development would be located within a Landscape Character Type of Ridged and Peaked Upland, within an area of open unspoilt landscape and within an area where commercial wind energy developments are 'Open to Consideration', as designated in the Cork County Development Plan 2022, subject to compliance with normal planning and environmental criteria, as set out in the specific Objective ET 13-7. The proposed wind farm site would also be sited in an area of High Landscape Sensitivity and Local Landscape Importance and would be visible from scenic routes S29 and S28. On the basis of the information submitted and having regard to the siting, excessive height and number of turbines proposed, it is considered that the proposed development would seriously detract from the views and prospects from parts of the S29 Scenic Route, would seriously detract from the visual quality of the landscape and visual amenities of the area and would be visually obtrusive when viewed from therein. The proposed development would, thus, materially contravene Objectives ET 13-7, GI 14-9, GI 14-12 and GI 14-13 of the Cork County Development Plan, 2022 which seek to protect the landscape and visual and scenic amenities of the area, including the views attainable from Scenic Routes, the character of such views and prospects and those with very special views. Accordingly, the proposed development would be contrary to the proper planning and sustainable development of the area.

9 Conclusion

It is the considered view of Cork County Council that based on the information submitted and the detailed assessment provided above that the proposed development should be refused by An Coimisiún Pleanála.

If An Coimisiún Pleanála, (being the 'competent authority') consider granting planning permission for the proposal, a schedule of suggested conditions, is attached (Appendix A). However, the conditions that are recommended assume that any issues forming the basis of further information requests have already been dealt with.

If An Coimisiún Pleanála, (being the 'competent authority') consider that further information is required, a schedule of items is attached (Appendix B).

A copy of each of the internal department reports of the Planning Authority is attached as Appendix C.

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Geraldine O'Mahony

Senior Planner

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Grace O'Callaghan

S/ Director Planning and Environment Directorate

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Michael Lynch

Assistant Chief Executive

Appendix A: Issues for Consideration should An Coimisiun Pleanala, (as the competent authority) consider granting planning permission.

No.	Condition	Reason	Section
1	In accordance with HE16-2 of the Cork County Development Plan 2022, Recorded Monument CO092-089 and CO092-094 identified as AH58 in Chapter 14 of the Environmental Impact Assessment Report, which comprises a c. 200m length of a drystone wall shall be preserved in situ by redesign. An engineering solution shall be designed to avoid such impacts to the Recorded Monument and submitted to the Planning Authority for agreement prior to the commencement of development.	To ensure the continued preservation of places, caves, sites, features or other objects of archaeological interest.	Archaeology
2	Turbine 3 shall be omitted / re-designed as a direct, negative significant effect on CH55 relating to nearby recorded monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095) and possibly representing part of a larger field system have been identified. The re-design or plan for omission shall be submitted to the Planning Authority for agreement prior to the commencement of development.	To ensure the continued preservation of places, caves, sites, features or other objects of archaeological interest.	Archaeology
3	The developer shall engage a suitably qualified archaeologist (licensed under the National Monuments Acts) to carry out pre-development archaeological testing in areas of proposed ground disturbance (save those areas in forestry) and to submit an archaeological impact assessment report for the written agreement of the planning authority, following consultation with the National Monuments Service, in advance of any site preparation works or groundworks, including site investigation works/topsoil stripping/site clearance/dredging/underwater works and/or construction works. The report shall include an archaeological impact statement and mitigation strategy. Where significant archaeological material is shown to be present, avoidance by re-design allowing preservation in-situ will be required. Preservation by record [archaeological excavation] will only be permitted in	To ensure the continued preservation [either in-situ or by record] of places, caves, sites, features or other objects of archaeological interest.	Archaeology

	exceptional circumstances. Any further archaeological mitigation requirements specified by the planning authority, following consultation with the National Monuments Service, shall be complied with by the developer. No site preparation and/or construction works shall be carried out on site until the archaeologist's report has been submitted to and approval to proceed is agreed in writing with the planning authority. The planning authority and the National Monuments Service shall be furnished with a final archaeological report describing the results of any subsequent archaeological investigative works and/or monitoring following the completion of all archaeological work on site and the completion of any necessary post-excavation work. All resulting and associated archaeological costs shall be borne by the developer.		
4	A detailed Visual Impact Assessment by a suitably qualified archaeologist of Recorded Monuments within 5km and National Monuments within 10km shall be undertaken. The assessment should evaluate the potential impact on the monuments and their setting by the proposed development/turbines utilising and presenting the results of the ZTV overlaid on the Recorded/National Monuments. Appendix 14-2 of the Environmental Impact Assessment Report shall include the results of the ZTV for each asset including where monuments have 'no visibility'. Where it is demonstrated (by ZTV analysis) that the proposed development will have moderate/significant impacts on any of these archaeological monuments, a photomontage/visualisation/wireframe from the archaeological monument shall be provided (as well as presenting existing and proposed views). Where the proposed development is shown to have moderate/significant negative visual impact, realignment or omission of specific turbine(s) may be necessary as mitigation. The methodology for same and a detailed mitigation strategy shall be submitted to the Planning Authority and the NMS for agreement prior to finalising the report. A report on the Visual Assessment shall be	To ensure the continued preservation of places, caves, sites, features or other objects of archaeological interest.	Archaeology

	submitted to the Local Authority for consideration.		
5	The Construction Environmental Management Plan (CEMP) shall include the location of any and all archaeological or cultural heritage constraints relevant to the proposed development as set out in Chapter 14 of the Environmental Impact Assessment Report following consultation with NMS. The CEMP shall clearly describe all identified likely archaeological impacts, both direct and indirect, and all mitigation measures to be employed to protect the archaeological or cultural heritage environment during all phases of site preparation and construction activity. The CEMP shall be submitted to the County Archaeologist / Local Authority for written agreement prior to the commencement of any site preparation works and groundworks, including site investigation works/topsoil stripping/site clearance and/or construction works**.**	To ensure the continued preservation of places, caves, sites, features or other objects of archaeological interest.	Archaeology
6	The developer shall engage a suitably qualified archaeologist to monitor (licensed under the National Monuments Acts) all site clearance works, topsoil stripping, groundworks and/or the implementation of any agreed preservation in-situ measures associated with the development. The use of appropriate machinery to ensure the preservation and recording of any surviving archaeological remains shall be necessary. Should archaeological remains be identified during the course of archaeological monitoring, all works shall cease in the area of archaeological interest pending a decision of the planning authority, in consultation with the National Monuments Service, regarding appropriate mitigation [preservation in-situ/excavation]. The developer shall facilitate the archaeologist in recording any remains identified. Any further archaeological mitigation requirements specified by the planning authority, following consultation with the National Monuments Service, shall be complied with by the developer. Following the completion of all archaeological work on site and any necessary post-excavation specialist analysis, the planning authority and the National Monuments Service shall be furnished with a final archaeological report	To ensure the continued preservation [in-situ] of places, caves, sites, features or other objects of archaeological interest.	Archaeology

	describing the results of the monitoring and any subsequent required archaeological investigative work/excavation required. All resulting and associated archaeological costs shall be borne by the developer.		
7	Prior to the commencement of works, the applicant shall submit, for agreement from NPWS and the Planning Authority and in consultation with BirdWatch Ireland, plans for the inclusion of turbine blades which shall be designed with aposematic patterns.	To reduce bird collision risk with wind turbines.	Ecology
8	Turbines 4 and 14, and their associated connection tracks, hardstanding areas etc., shall be omitted from the proposed scheme.	In the interests of minimising negative impacts on habitats and species of high biodiversity value within the site.	Ecology
9	Prior to the commencement of development, an Ecological Protection Plan shall be submitted to, and agreed in writing with, the planning authority. The Plan shall include the following: a. Development of a habitat's protection plan for the overall site. b. Specific proposals to deal with the Chough, Hen Harrier, White-tailed Sea Eagle, and Bats during the construction and operational phases. Ongoing monitoring of the conservation status of protected habitats and species within the site. The developer shall review usage by protected species, with a focus on birds and bats, of the wind farm site and document any casualties through the monitoring programme. An annual report on the ecological monitoring shall be submitted to the planning authority including for seven years post commissioning of the project.	To protect the ecological value of the site.	Ecology
10	Prior to the commencement of development, the applicants shall submit a Conservation and Habitat Management Plan for the site. This should be based on revised design of the proposal. The plan shall provide details and programmes for the implementation of all habitat management/ enhancement proposals required to mitigate/ compensate for the loss of or damage to habitats of biodiversity value (including degraded wet heath), including habitats of value to protected faunal species.	To minimise impacts on habitats and species of biodiversity value within the site.	Ecology

	The plan shall include a map identifying the areas to be managed and shall also provide detailed information in relation to the measures to be implemented to achieve this. The plan shall also include a timeline for implementation of described measures and shall provide for ecological monitoring of management/enhancement works to examine the effectiveness of the proposal. The plan shall be prepared by a suitably qualified ecologist.		
11	Prior to construction works being carried out between March and August, a survey for breeding birds shall be carried out by a suitably qualified ornithologist. The survey shall cover the area within a boundary of 500m of the works to be carried out during the above period. No construction works shall be carried out during the above period within 500m of a presenting breeding site and / or nest without the agreement from NPWS (if required) and the consent in writing of the planning authority.	In the interest of wildlife protection.	Ecology
12	A survey for breeding sites and resting places of protected terrestrial species, in particular Bats (all roost types), Otter, Badger, Red Squirrel and Pine Marten, will be carried out prior to construction works commencing. If these features are found, then appropriate mitigation measures shall be submitted to and agreed in writing with the planning authority, prior to commencement of development. Any mitigation measures in relation to otter or bat populations shall be carried out only under licence from the National Parks and Wildlife Service and details of any such licence shall be copied to the planning authority.	In the interest of wildlife protection.	Ecology
13	The palisade green fencing proposed around the onsite substation shall incorporate mammal gaps of 250mm in height or other such measures to allow mammals to pass through the fencing, unless otherwise agreed in advance and in writing with the planning authority.	To protect biodiversity.	**E**cology
14	All roads shall be reinstated across their full width with Cl 806 wet-mix or Overlay macadam to match existing and double	In the interest of road safety.	Roads

	surface dressed roads outside the speed limits areas.		
15	No cable shall be attached to or placed on top of any bridge structure.	In the interest of orderly development.	Roads
16	All culverts and surface water drains crossed by the cable route shall be replaced across the full width of the road. A report detailing each such crossing, including before and after photographs is to be submitted to the Roads Authority each week while this element of the work is in progress.	In the interest of road safety.	Roads
17	All roadside drains shall be maintained or relocated. A report detailing each such drain, including before and after photographs is to be submitted to the Roads Authority each week while this element of the work is in progress	In the interest of road safety.	Roads
18	All diversion routes necessary for the works shall be maintained by the contractor for the duration of the diversion. Maintenance shall include hedge cutting, pothole filling and full road reinstatement where necessary at the direction of the Road Authority.	In the interest of road safety.	Roads
19	All joint bay covers shall be located off the carriageway.	In the interest of road safety.	Roads
20	The following road sections shall be reinstated in full by the developer to the satisfaction of the Roads Engineer: a. L4609-Keenrath, Derrynacaheragh, Inchireagh, Shiplough Road b. L4615-Coolsnaghtig, Mallabracka, Derrylahan, Keelaraheen Road c. R587 Derreens, Demesne, Dunmanway North d. R586 Dunmanway North, and Ballyhalwick. Prior to the commencement of development, full details of the proposed reinstatement works, and timing of these works shall be submitted to and agreed in writing with the Planning Authority.	In the interest of road safety.	Roads
21	During the construction phase operations on site shall be carried out in such a manner that no polluting material, rubble, waste material or contaminated surface water enters any adjacent watercourses or public roadway around the site. No burning of waste material shall take place on site.	In the interest of environmental protection.	Environment

22	All watercourses in or adjacent to the works area shall be monitored on a daily basis by the Drainage Engineer, or designate, to ensure they are not being impacted by silt/sediment laden storm water run-off from works area. A record of this monitoring shall be maintained on site.	To protect surface water quality.	Environment
23	All over ground tanks containing hydrocarbons shall be contained in a waterproof bunded area, the capacity of the bund is to be the greater of the following: 110% of the largest tank size or 25% of total volume stored in the bunded area. All valves on the tank shall be contained within the bunded area. The bunded area shall be fitted with a locking valve that shall be opened only to discharge storm water. The developer shall ensure that this valve is locked at all times.	In the interest of environmental protection	Environment
24	Hydrocarbon spill kits shall be in place on all site vehicles/plant. Suitable interceptor drip trays shall be used when refuelling vehicles/plant & when vehicles/plant are parked. No servicing of vehicles/plant shall be carried out on site.	To prevent water pollution	Environment
25	All drainage and sediment /silt traps shall be in place before any other works are undertaken on the site. All work shall be carried out in favourable weather conditions to minimise the generation of silt & fines.	To prevent water pollution.	Environment
26	Silt fencing shall be constructed to protect watercourses on site from run-off of silt laden water prior to commencement of development. These silt fences shall be maintained as required during the construction phase, & on an ongoing basis, until the site is fully vegetated & the risk of silt run-off is minimised.	To protect water quality.	Environment
27	Clear span crossing of watercourese only is permitted. No watercourses shall be culverted.	To protect water quality & aquatic habitats.	Environment
28	The construction of the development shall be managed in accordance with a Construction Environmental Management Plan which shall be submitted to and agreed in writing with the Planning Authority prior to the commencement of the proposed development. In relation to air and noise, this	In order to protect the Environment and Local amenities during construction.	Environment

	plan shall provide details of the construction practice for the development including. (a) Proposals for the suppression of on-site noise (b) Proposals for the suppression of dust on site (c) Proposals for the suppression of vibration (d) Proposals to minimise any odours. This plan shall include a comprehensive monitoring plan to include inter alia noise, vibration, and dust with regular reporting to the planning authority.		
29	An environmental monitoring and reporting programme shall be agreed with the Planning Authority for all identified water and air pollution mitigation controls to verify efficacy and ensure appropriate corrective action can be implemented where loss of control is evidenced or at risk.	In the interest of environmental protection.	Environment
30	A shadow flicker monitoring and management programme shall be agreed with the Planning Authority for all identified sensitive receptors to ensure recommended daily/annual exposure limits are not exceeded. This programme shall provide satisfactory mitigation measures including automated temporary shutdown of relevant turbines.	To protect human health.	Environment
31	The operation of the proposed development, either by itself or in-combination with any other permitted wind energy development, shall not result in noise levels when measured externally at nearby noise sensitive locations which exceed: (A) Between the hours 0700 and 2300: Where background noise levels ($L_{A90,10\ min} \geq 30$ dB) (i) The greater of 5dB(A) above background noise levels or 45 dB, $L_{A90\ 10\ mins}$ Where background noise levels ($L_{A90,10\ min} < 30$ dB) (ii) 40 dB $L_{A90,10\ mins}$ (B) 43 dB $L_{A90\ 10\ mins}$ at all other times.	In the interest of residential amenities.	Environment
32	A noise compliance monitoring programme shall be submitted for the written agreement with the planning authority prior to the commissioning of the proposed development. The noise compliance monitoring programme shall include a detailed methodology for all noise	In the interest of residential amenities.	Environment

	measurements, the frequency of monitoring and recording of results which shall be made publicly available. All results should be submitted to the Planning Authority within 1 month of the completion of any survey. The developer shall carry out any additional noise mitigation measures as may be deemed necessary following a review of such survey.		
33	A designated member of the company's staff shall interface with the Planning Authority or member of the public in the event of complaints or queries in relation to environmental emissions. Details of the name and contact details and the relationship to the operator of this person shall be made available to the Planning Authority.	In the interest of residential amenities.	Environment
34	The construction of the development shall be managed in accordance with a Construction Noise Management Plan which shall be submitted to and agreed in writing with the Planning Authority prior to the commencement of development. This plan shall provide details of the construction practice for the development including: (a) Proposals for the suppression of on-site noise. (b) Proposals for the suppression of vibration. This plan shall include a comprehensive monitoring plan to include inter alia noise and vibration with regular reporting to the Planning authority.	In order to protect the environment and local amenities during construction.	Environment
35	Prior to the commencement of the development, the developer (or any agent acting on its behalf) shall prepare a "Construction and Resource Waste Management Plan" for the project. The Waste Management Plan preparation should be guided by the EPA Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for C&D Projects. The plan should provide details of proposals to adhere to best practice and protocols on C&D waste. The Waste Management Plan and all records for waste management / waste recycling shall be available for inspection at the site office at all times during the construction phase.	In order to protect the environment and local amenities.	

<u>Appendix B</u>: Issues for Consideration should An Coimisiun Pleanala, (as the competent authority) consider seeking Further Information.

1. Archaeology

1. The proposed new internal wind farm road passes through field boundary AH58 (Recorded Monument CO092-089 and CO092-094), which comprises a c. 200m length of a drystone wall, largely covered by earth and grass. Construction of the proposed new road will result in removal of a c. 12m section of the field boundary, which will have a direct negative (permanent) effect on the monument. This is of concern and is contrary to HE16-2 of the Cork County Development plan. This is considered as Slight Negative in Appendix 14-2 Construction Phase Residual Effects. I do not agree that removal of a 12m section of a Recorded monument (even if it recoded/surveyed prior to removal) is slight and the following is recommended by this office.
   An engineering solution should be designed to avoid such impacts to the Recorded Monument such as bridging over the monument. Further Information should be sought for a re-design.

2. The construction of the Proposed Wind Farm will result in one direct, negative significant effect on a previously unrecorded cultural heritage site. This is CH55, a field containing north–south orientated lazy beds situated within a sub-oval enclosure. The enclosure and lazy beds, the archaeologist notes, may relate to nearby recorded monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095) and possibly represent part of a larger field system. The proposed Turbine T03 and its associated hardstand are located directly on the site of CH55 and has noted that ground disturbance associated with the construction of the Proposed Project will have a direct, negative (permanent) effect on these remains.
   If CH55 enclosure and lazy bed system is related to Recorded Monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095), this should be explored prior to a decision being made and Further Information should be sought for a re-design thus avoiding impacting on the identified features. Turbine 3 should be re-located as it is identified as a Significant effect in the Environmental Impact Assessment Report (Chapter 14, Section 14.4.3).

3. It is considered that, apart from the sections of commercial forestry, the assessment of sub-surface archaeology has not been addressed and the mitigation measures to alleviate such impacts are based on an assumption of preservation by record/excavation/removal of such features (post consent if applicable) as a re-design of Turbines (to avoid impacting on archaeology, if identified) would be difficult to achieve post-consent without another planning application or loss of the turbine altogether to achieve preservation in situ. This does not allow preservation in situ of significant sub-surface archaeology which is State Policy and a stated policy objective HE16-13 of the Cork County Development Plan, 2022. In the context of a RED III application, this should have been addressed by archaeological testing in accessible areas of the site. A programme of archaeological testing should thus be undertaken as Further Information in lands outside the extent of commercial forestry so that any significant archaeology can be preserved in situ and avoided by re-design. This can realistically only be achieved prior to a decision being made by ACP for reasons stated above.

4. There are no cross references between Chapter 14 and Chapter 13 with regard to how the significance of effects on setting of monuments was arrived at. The Environmental Impact Assessment Report should be revised to provide for sufficient cross referencing between Chapter 14 and Chapter 13 with sufficient justification provided as to how the significance of effects on setting of monuments was arrived at.

5. Appendix 13-1 LVIA should be revised to specifically include Archaeological/National Monuments in the Viewpoint Selection process.

6. Appendix 13-4 Baseline Mapping shows the ZTV and some receptors but not specifically archaeology. Chapter 14 should be revised to provide for an overlay of the Recorded/National Monuments on the ZTV.

7. Appendix 13-3 LVIA Photomontages only references one Recorded Monument Kealkill Stone Circle (VP4). This PM is not referenced in the Environmental Impact Assessment Report Chapter 14 and therefore it is not clear on what basis the assessment arrived at the significance of effects.

8. Overall, the visual impacts on Archaeology and National Monuments as a result of 14 turbines alone and more so cumulatively in the context of nearby windfarms are a concern and the density of Recorded Monuments and National Monuments in State care within 5 and 10km is notably high. It must be clear to the Competent Authority how the Archaeological Assessment arrived at the Significance of Impacts in Appendix 14-2 and the conclusions should be accompanied by photomontages where relevant and based on the ZTV results. Chapter 14 (Appendix 14-2 Assessment of Impacts) should ideally provide commentary on how many turbines are visible from each asset (Recorded/National Monument) and if there is no visibility, then this should be clearly stated. The ability to see turbines from archaeological monuments does not necessarily imply visual impact but the number of turbines visible from the asset as well as distance affects the Significance of Impacts. This information is not presented in Chapter 14. Photomontages from specific monuments should be presented where moderate to significant effects have been identified. The LVIA Chapter 13 and Chapter 14 should be cross referenced, where relevant. The cumulative assessment on archaeology is not adequate and again evidence based conclusions should be presented based on the ZTV, photomontages/visualisations.

9. Kealkill Stone Circle of Very High Sensitivity: Appendix 14-2 Assessment of Impacts assesses Kealkill Stone Circle, a National Monument (AH157), as Moderate (negative) yet the photomontage shows the views as being blocked mainly by topography. No cross references are made in Chapter 14 to Chapter 13. Table 13-2 of the LVIA suggests full theoretical visibility of turbines from Kealkill and that actual views may occur and therefore it is 'scoped in'. Having analysed PM04 from the stone circle the LVIA Table 13-7 VP04 suggest a slight visual effect. This is in total contrast to Chapter 14 that considers the residual effect as Moderate. The Applicants should clarify this discrepancy and submit revised assessments, where required.

10. Carriganass Castle Recorded Monument: Appendix 14-2 AH144, Recorded Monument CO106-001; CO106-001001 Carriganass Castle is considered to be a Moderate Negative impact (Chapter 14) and also residually. Chapter 13, however, considers the impact to be Slight (Chapter 13 Section 13.7.3.4.9). This discrepancy requires clarification.
    Table 13-12 of the LVIA presents information on views/visibility from key assets (mainly National Monuments with public access) and this was not referenced in Chapter 14. The results are key to the findings of Chapter 14.
    Protecting the Setting of Recorded Monuments is clearly set out in Objective HE16-2 of the Cork County Development Plan, 2022. Given that it is not possible to mitigate the operational effects (impacts on setting) of turbines on Archaeology, it is essential that the conclusions drawn are evidence based.

2. Ecology

1. The proposed development should be revised to ensure that no such proposed windfarm infrastructure would be located on intact peatland habitats, degraded peatland habitats or any habitats of high natural value.
   It is noted that the Environmental Impact Assessment Report has outlined that 1.6ha of wet heath habitat, albeit degraded, would be lost to the proposed development, along with 0.2ha of upland blanket bog to accommodate T4 and T14. While it is not mapped Article 17 Annex I habitat, the Cork County Development Plan, 2022 (and its variation) lists Wet Heath (HH3) as a Habitat Conservation Importance in County Cork and its removal would be contrary to Objective BE 15-2 of the Plan. As no distinction between intact or degraded has been made, the proposed removal of habitat to accommodate Turbines 4 and 14 would contravene Objective 15-2 of the Cork County Development Plan, 2022. The removal of blanket bog habitat, at any scale, is unacceptable and should not be permitted to occur. The Planning Authority is of the opinion that to achieve biodiversity net gain as required by Objective 15-6 of the Cork County Development Plan, 2022, and to ensure the protection of wet heath habitat and blanket bog, the sites originally proposed for T4 and T14, along with associated infrastructure, should be the focus of wet heath enhancement measures as set out in the Biodiversity Management and Enhancement Plan, and protection of Annex I habitats.

2. T2 appears to be proximal to Article 17 Annex I habitat (Figure 1). The applicant should be requested to clarify the distance of the proposed windfarm infrastructure from the Article 17 Annex I habitat and Wet Heath [4010] habitat to assess whether it would be impacted by the proposed development.

3. It is noted that the applicants propose a peatland enhancement area encompassing an area of recently afforested conifer plantation and degraded wet heath habitat. The proposed new road leading to the proposed T6 will run through this area. Per SEPA guidelines[1], the relevant buffer zones for all ground water dependent terrestrial ecosystems proposed infrastructure (provided expected dewatering rates do not exceed $10m^3$/day) are: 10m radius of all activities; 100m radius of all subsurface activities less than 1m in depth; and 250m of all subsurface activities deeper than 1m. As the new road and turbine may hinder enhancement measures, an alternative location for the peatland enhancement area should be sought.

4. It should be noted that a known chough nest site is located proximal to the proposed grid connection route. An Coimisiún Pleanála may wish to request an assessment of potential impacts the construction stage of the proposed grid connection route may have on this site.

5. It should be noted that there is an error in Appendix 7-6. There are two collision risk assessments for chough and none for hen harrier. This should be corrected and revised.

6. While the windfarm site poses low risk impacts to lesser horseshoe bats, the only Annex II listed bat in Ireland, the applicants and An Coimisiún Pleanála should note that a known maternity roost is located proximal to the proposed grid connection route. An Coimisiún Pleanála may wish to request an assessment of potential impacts the construction stage of the proposed grid connection route may have on this important maternity roosting site.

7. On viewing the walkover survey locations as outlined in Figures 7-1-2 and 7-1-3 of the Environmental Impact Assessment Report (Figure 2 and Figure 3), it is noted that no walkover

[1] Guidance on Assessing the Impacts of Developments on Groundwater Dependent Terrestrial Ecosystems (SEPA, August 2024)

surveys were conducted in the vicinities of Turbines 11, 12, 13, or 14. In order to inform a robust assessment and ensure no impacts, the applicants should be asked to clarify why no walkover surveys were conducted here and to undertake such surveys if deemed required by An Coimisiún Pleanála.

8. Having regard to hen harrier post-breeding and winter roosts, the submitted documents state that given the extent of suitable hunting habitat that would remain in the proposed windfarm site and surroundings, and the distance of proposed works and infrastructure from the SPA, suitable habitat will remain available to overwintering hen harrier to continue to utilise the area for hunting and roosting. As set out in Chapter 7 of the Environmental Impact Assessment Report, '*Pearce-Higgins et al. (2009) found significant avoidance of turbines by hen harrier within 250m, and reduced flight activity (52%) by hen harrier within 500m of turbines at operating wind farms. Goodship and Furness (2022, also reviewed in NatureScot, 2022) also found that disturbance may occur between 500-750m'*. It could be argued that with the intensification of windfarm development within the area, in addition to forestry in the surrounding environment transitioning to a closed canopy, the site in question may overtime become a vital resource to this species given its already known site usage, which may be lost. This should be considered as part of the Environmental Impact Assessment Report.

9. As described in Chapter 6 of the Environmental Impact Assessment Report, there are areas of recently felled conifer woodland (WS5) which may provide suitable nesting opportunities for hen harrier, prior to the commencement of works on the proposed windfarm site, especially. The applicants have not provided any information on what measures would be required in the event of nesting occurring within the site. The development of a windfarm so close to a hen harrier nest would significantly impact this Annex I species. This information is required to be clarified.

10. It is noted that the Ornithology Chapter asserts that there is no risk of collision for hen harrier and white-tailed eagle based on their observed flying height and distance from the proposed windfarm site, respectively. Studies show that, while low, there is still risk of collision for hen harrier. This view is in the context of two known mature adult hen harrier fatalities caused by collision with turbines in the county within the past five years (e.g. Planning Reference 13/5885, compliance reporting), which is not acceptable, given the population within the County. Further information should be sought in relation to the adequacy of the collision model used to predict the significance of impacts to rare and highly sensitive species including hen harrier.

11. The operation of renewable energy projects has led to anthropogenic fatalities of a number of bird species, including some considered to be of conservation concern. As it stands, the proposed development has not provided any dedicated operational measures for the sited turbines to minimize the potential for collision of turbine blades with avian species. This information should be requested. The applicants should explore the use of passive visual clues such as blade patterning to mitigate bird strikes, especially for raptors, which would afford incoming birds time to take evasive action. Consideration should be given to the requirement for the implementation of such biologically inspired aposematic patterns in respect to this proposal having regard to the concerns of the NPWS around White-tailed Sea Eagle and the recorded presence of a number of protected raptors at the study site. Birdlife South Africa and The Birds and Renewable Energy Specialist Group have developed guidance for the

recommendation of patterns to reduce avian impacts[2]. Comments of the Irish Aviation Authority should be sought in regard to any patterning put forward.

3. Environment

1. The respective number and distances of all noise sensitive receptors within 500m, 1000m,1500m and 2000m of the proposed turbines should be presented and quantified.

2. The referenced noise sensitive receptors that each selected background noise monitoring location is considered to be representative of should be identified and quantified and also shown on a suitably scaled map.

3. In terms of the derived background noise levels per Tables 12.17 and Table 12.18, it is noted specifically in respect of NML4 (H041) that the derived night-time noise levels for wind speeds 7m/s,8m/s and 9m/s are higher than the daytime noise levels for the corresponding wind speeds. The applicant may wish to comment on this having regard to any site observations or notes from the analysis of the background datasets.

4. Shadow Flicker

1. There are concerns regarding the application of the 2006 Wind Energy Guidelines in the assessment (8 no. sensitive receptors would exceed the annual threshold of over 30 hours for shadow flicker). In this regard, the 2019 Draft Revised Wind Energy Development Guidelines which require that no existing dwelling or other affected property should experience shadow flicker as a result of the wind energy development should be adhered to. The site design should also be re-examined with a view to establishing whether shadow flicker can be eliminated and a redesign would be encouraged to ensure that no dwelling experiences cumulative shadow flicker from both the proposed development and the Gortloughra windfarm which is currently on appeal (one dwelling would potentially shadow flicker from both proposed windfarms). These revisions may require the omission of turbines.

2. There is confusion in Chapter 5 of the Environmental Impact Assessment Report regarding exact figures which should be addressed. These include:
   - Pages 4, 9, 11, 13, 15, 49, 56 & 85 advise that there are 79 properties/ sensitive receptors located within 1,330m of the proposed turbines which is the shadow flicker study area.
   - Pages 50 advises that there are 102 sensitive receptors located with the shadow flicker study area.
   - Pages 50 & 85 advise that 41 no. sensitive receptors are theoretically predicated to experience some shadow flicker.
   - Pages 11, 85, 87 advise that 31 no. sensitive receptors are theoretically predicated to experience shadow flicker.
   - Page 4 advises that there "are 79 no. properties located within 250m of the Proposed Grid Connection."
   - Page 15 advises that "There are 83 no. properties located within 250m of the Proposed Grid Connection underground cable route."

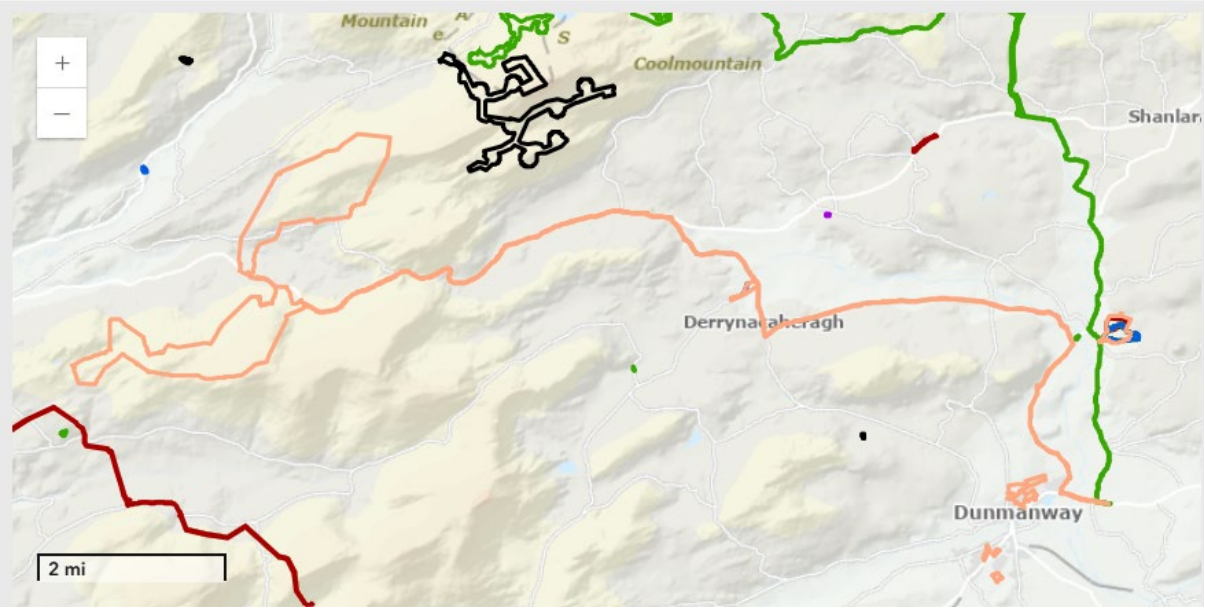
[2] Simmons, Robert & Ralston-Paton, Samantha & John, Gibbs & Rand, Caryn & Law, Matthew & Taylor, Shaun & Murgatroyd, Meg & Gibb, Andrea & Sookgrim, Santosh. (2024). BLADE PATTERNING GUIDELINES AN INITIATIVE OF THE SOUTH AFRICAN WIND ENERGY ASSOCIATION, BIRDLIFE SOUTH AFRICA AND THE BIRDS AND RENEWABLE ENERGY SPECIALIST GROUP

Appendix C: Internal Reports

Archaeological Officer Report

Proposal

The proposal is as described below:
A 10 year planning permission for Maughanaclea Wind Farm consisting of 14 no. wind turbines, a 110kV substation and 110kV underground cabling connection and associated works located in Ardrah, Maughanaclea, Ballynamought, Gortloughra, Cousane, Coomclogh, Derragh, Glanycarney, Keenrath, Derrynacaheragh, Shiplough, Coolsnaghtig and other townlands Co. Cork. REDIII Application.



County Development Plan 2022

County Development Plan 2022 Objectives HE 16-2:
Protection of Archaeological Sites and Monuments

Secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments and their setting included in the Sites and Monuments Record (SMR) (see www.archaeology.ie) and the Record of Monuments and Places (RMP) and of sites, features and objects of archaeological and historical interest generally. In securing such preservation, the planning authority will have regard to the advice and recommendations of the Development Applications Unit of the Department of Housing, Local Government and Heritage as outlined in the Frameworks and Principles for the Protection of the Archaeological Heritage policy document or any changes to the policy within the lifetime of the Plan.

County Development Plan 2022 Objectives HE 16-3:
Underwater Archaeology

Protect and preserve the archaeological value of underwater archaeological sites and associated underwater and terrestrial features. In assessing proposals for development, the development will take account of the potential underwater archaeology of rivers, lakes, wetlands, intertidal and sub-tidal environments through appropriate archaeological assessment by a suitably qualified archaeologist.

County Development Plan 2022 Objectives HE 16-5:
Zones of Archaeological Potential

Protect the Zones of Archaeological Potential (ZAPs) located within historic towns, urban areas and around archaeological monuments generally. Any development within the ZAPs will need to take cognisance of the upstanding and potential for subsurface archaeology, through appropriate archaeological assessment.

County Development Plan 2022 Objectives HE 16-6:
Industrial and Post Medieval Archaeology

Protect and preserve industrial and post-medieval archaeology and long-term management of heritage features such as mills, limekilns, forges, bridges, piers and harbours, water-related engineering works and buildings, penal chapels, dwellings, walls and boundaries, farm buildings, estate features, military and coastal installations. There is a general presumption for retention of these structures and features. Proposals for appropriate redevelopment including conversion should be subject to an appropriate assessment and record by a suitably qualified specialist/s.

County Development Plan 2022 Objectives HE 16-7:
Battlefield, Ambush and Siege Sites and Defensive Archaeology

Protect and preserve the defensive archaeological record of County Cork including strategic battlefield, ambush and siege sites, and coastal fortifications and their associated landscape due to their historical and cultural value. Any development within or adjoining these areas shall undertake a historic assessment by a suitably qualified specialist to ensure development does not negatively impact on this historic landscape.

County Development Plan Objectives HE 16-8:
Burial Places

Protect all historical burial places and their setting in County Cork and encourage their maintenance and care in accordance with appropriate conservation principles.

County Development Plan Objectives HE 16-9:
Archaeology and Infrastructure Schemes

All large-scale planning applications (i.e., development of lands on 0.5 ha or more in area or 1km or more in length) and Infrastructure schemes and proposed roadworks are subjected to an archaeological assessment as part of the planning application process which should comply with the Department of Arts, Heritage and the Gaeltacht's codes of practice. It is recommended that the assessment is carried out following pre planning consultation with the County Archaeologist, by an appropriately experienced archaeologist to guide the design and layout of the proposed scheme/development, safeguarding the archaeological heritage in line with Development Management Guidelines.

County Development Plan Objectives HE 16-10:
Management of Monuments within Development Sites

Where archaeological sites are accommodated within a development it shall be appropriately conservation/ protection with provision for a suitable buffer zone and long-term management plan put in place all to be agreed in advance with the County Archaeologist.

County Development Plan Objectives HE 16-11:
Archaeological Landscapes

To protect archaeological landscapes and their setting where the number and extent of archaeological monuments are significant and as a collective are considered an important archaeological landscape of heritage value.

County Development Plan Objectives HE 16-12:
Raising Archaeological Awareness

As part of the Heritage Plan, it is an objective to develop a management plan, if resources allow, for the archaeology of County Cork, which could include an evaluation of the Historic Character Assessment of Cork County helping to identify areas for tourism potential, and strategic research while also promoting best practice in archaeology and encouraging the interpretation, publication and dissemination of archaeological findings from the development application process.

County Development Plan Objectives HE 16-13:
Undiscovered Archaeological Sites

To protect and preserve previously unrecorded archaeological sites within County Cork as part of any development proposals. The Council will require preservation in situ to protect archaeological monuments discovered. Preservation by record will only be considered in exceptional circumstances.

County Archaeologist Comments 07/05/2026

Chapter 14 of the Environmental Impact Assessment Report pertains to Archaeology, Architectural and Cultural Heritage.

The proposal comprises 14 no. wind turbines, and associated infrastructure in the townland of Maughanaclea and adjacent townlands, near Kealkill in Co. Cork, including the proposed 110kV on-site substation and associated works, and 110kV underground cabling to connect to the national grid at Dunmanway 110kV substation, in the townland of Ballyhalwick, Co. Cork. The proposed Turbine Delivery Route (TDR) from Ringaskiddy Port to the Proposed Wind Farm site has been screened out of this assessment, as it will not require any interventions outside of the existing national/regional road network.

Chpt 14 notes that current land-use on the Proposed Wind Farm site is **predominantly commercial forestry**, with agricultural pastures and rough grazing also present. Having consulted aerial imagery, I consider that a large portion of land-use is also represented by upland mountainous peat, areas where huts sites, pre-bog walls and enclosures are typically found.

Chpt 14 notes that current land-use along the Proposed Grid Connection comprises of the public road corridor, public open space, pastures, and private land principally used by agriculture.

Methodology used in the Assessment of Known Archaeology

The study areas are appropriate allowing 10km for National Monuments, 5km for Recorded Monuments and 2km for those not subject to statutory protection and a 100m corridor along the grid connection route. The section of the Chapter 14 regarding the assessment of indirect visual effects

notes that the Zone of Theoretical Visibility model (thereafter ZTV) and photomontages were utilised. I do not see any mapping of the ZTV overlaid with Recorded Monuments, National Monuments.

Direct Negative Effects on Archaeology and Cultural Heritage (Construction Stage) Identified in the EIAR

1. The proposed new internal wind farm road passes through field boundary AH58 (Recorded Monument CO092-089 and CO092-094), which comprises a c. 200m length of a drystone wall, largely covered by earth and grass. Construction of the proposed new road will result in removal of a c. 12m section of the field boundary, which will have a direct negative (permanent) effect on the monument. This is of concern and is contrary to HE16-2 of the Cork County Development plan. This is considered as Slight Negative in Appendix 14-2 Construction Phase Residual Effects. I do not agree that removal of a 12m section of a Recorded monument (even if it recoded/surveyed prior to removal) is slight and the following is recommended by this office.

An engineering solution should be designed to avoid such impacts to the Recorded Monument such as bridging over the monument. **Further Information** should be sought for a re-design.

2. The construction of the Proposed Wind Farm will result in one direct, negative significant effect on a previously unrecorded cultural heritage site. This is CH55, a field containing north–south orientated lazy beds situated within a sub-oval enclosure. The enclosure and lazy beds, the archaeologist notes, may relate to nearby recorded monuments **AH59 CO092-097 and AH60 (CO092-090; CO092-095)** and possibly represent part of a **larger field system**. The proposed Turbine T03 and its associated hardstand are located directly on the site of CH55 and has noted that ground disturbance associated with the construction of the Proposed Project will have a direct, negative (permanent) effect on these remains.

If CH55 enclosure and lazy bed system is related to Recorded Monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095), this should be explored prior to a decision being made and **Further Information** should be sought for a re-design thus avoiding impacting on the identified features. Turbine 3 should be re-located as it is identified as a Significant effect in the EIAR (Chapter 14, Section 14.4.3).

Watercourses and underwater Archaeology

No instream works are required according to the EIAR either within the Wind Farm site boundary or along the proposed grid connection route.

Townland Boundaries

A number will be directly impacted and it is proposed to record prior to removal. This is acceptable save the aforementioned Recorded Monument AH58 above.

Sub-Surface archaeology

Chapter 14 notes that '*Much of the Proposed Wind Farm site has been disturbed by commercial forestry activities; however, it remains possible that previously unknown archaeological sites and features may survive below the current ground level across the area, particularly in areas of pasture which have not been previously disturbed. Ground disturbances associated with the Proposed Project, such as the construction of access roads and excavations for turbines bases and borrow pits, have the potential to result in direct, negative (permanent) effects on any such remains that may be present.*

Prior to the application of mitigation these effects have the potential to range from moderate to significant, depending on the sensitivity of any such sub-surface archaeological features'.

The Mitigation Measures proposed in Section 14.4.3 to deal with sub-surface archaeology include '*Prior to the commencement of construction, a programme of archaeological test trenching will be carried out at greenfield locations of the Proposed Wind Farm site, including the location of the proposed turbine hardstands, proposed temporary construction compounds, proposed borrows pit and along the proposed access roads. These works will include targeted test trenching of CH55. This work will be carried out under licence to the National Monuments Service of the DoHLGH. Dependent on the results of the testing assessment, further mitigation may be required, such as preservation by record or in-situ and/or archaeological monitoring. Any further mitigation will require agreement from the DoHLGH*'. This is both open ended and the actual impacts have not been established.

I consider that, save the sections of commercial forestry, the assessment of sub-surface archaeology has not been addressed and the mitigation measures to alleviate such impacts are based on an assumption of preservation by record/excavation/removal of such features (post consent if applicable) as a re-design of Turbines (to avoid impacting on archaeology, if identified) would be difficult to achieve post-consent without another planning application or loss of the turbine altogether to achieve preservation in situ. This does not allow preservation in situ of significant sub-surface archaeology which is State Policy and stated clearly in our own County Development plan HE16-13. In the context of a RED III application, this should have been addressed by archaeological testing in accessible areas of the site. I am recommending to the board that a programme of archaeological testing be undertaken as **Further Information** in lands outside the extent of commercial forestry so that any significant archaeology can be preserved in situ and avoided by re-design. This can realistically only be achieved prior to a decision being made by ACP for reasons stated above.

I consider that Archaeological Monitoring at the construction stage of areas within commercial forestry is acceptable.

VISUAL IMPACTS on Setting (indirect effects)

Direct construction stage impacts are avoidable by re-design as set out above.

Operational (visual) impacts, however, are difficult/not possible to mitigate and therefore the findings of the EIAR should be evidence based with monuments plotted /annotated on the ZTV and it should be clear which monuments / areas have no visibility. Photomontages should be provided for National monuments within 10km if they are located within areas with visibility on the ZTV at a minimum.

Chapter 14 notes the following: '*A full assessment of the operational impacts on the archaeological, architectural and cultural heritage resource has been carried out and is included in Appendix 14-2. This has been carried out utilizing the photomontages and Theoretical Zone of Visibility mapping for the development produced as part of the Landscape and Visual assessment (Ch. 13: Landscape and Visual)*'.:

There are no cross references between Chapter 14 and Chapter 13 with regard to how the significance of effects on setting of monuments was arrived at.

Appendix 13-1 LVIA does not specifically include Archaeological/National Monuments in their Viewpoint Selection process. Some key Cultural Heritage assets are addressed however.

Appendix 13-4 Baseline Mapping shows the ZTV and some receptors but not specifically archaeology. Chapter 14 should overlay the Recorded/National Monuments on the ZTV.

Appendix 13-3 LVIA Photomontages only references one Recorded Monument Kealkill Stone Circle (VP4). This PM is not referenced in the EIAR Chapter 14 and therefore it is not clear on what basis the assessment arrived at the significance of effects.

Overall, Visual impacts as a result of 14 turbines alone and more so cumulatively in the context of nearby windfarms are a concern and the density of Recorded Monuments and National Monuments in State care within 5 and 10km is notably high. It must be clear to the Competent Authority how the Archaeological Assessment arrived at the Significance of Impacts in Appendix 14-2 and the conclusions should be accompanied by photomontages where relevant and based on the ZTV results. Chapter 14 (Appendix 14-2 Assessment of Impacts) should ideally provide commentary on how many turbines are visible from each asset (Recorded/National Monument) and if there is no visibility, then this should be clearly stated. The ability to see turbines from archaeological monuments does not necessarily imply visual impact but the number of turbines visible from the asset as well as distance affects the Significance of Impacts. This information is not presented in Chapter 14.

Kealkill Stone Circle of Very High Sensitivity

Appendix 14-2 Assessment of Impacts assesses Kealkill Stone Circle a National Monument (AH157) as Moderate (negative) yet the photomontage shows the views as being blocked mainly by topography. No cross references are made in Chapter 14 to chapter 13. Table 13-2 of the LVIA suggests full theoretical visibility of turbines from Kealkill and that actual views may occur and therefore it is 'scoped in'. Having analysed PM04 from the stone circle the LVIA Table 13-7 VP04 suggest a slight visual effect. This is in total contrast to Chapter 14 that considers the residual effect as Moderate.

Carriganass Castle Recorded Monument

Furthermore and similarly Appendix 14-2 AH144, Recorded Monument CO106-001; CO106-001001 Carriganass Castle is considered to be a Moderate Negative impact and also residually. Chapter 13, however, considers the impact to be Slight (Chapter 13 Section 13.7.3.4.9). A Moderate effect (Chapter 14) is in stark contrast to Not Significant (Chapter 13). This needs clarification.

Furthermore Table 13-12 of the LVIA presents information on views/visibility from key assets (mainly National Monuments with public access) and this was not referenced in Chapter 14. The results are key to the findings of Chapter 14.

Protecting the Setting of Recorded Monuments is clearly set out in County Development Plan Objective HE16-2. Given that it is not possible to mitigate the operational effects (impacts on setting) of turbines on Archaeology it is essential that the conclusion drawn are evidence based. I am recommending to the board that **Further Information** be sought regarding the Visual Impacts on Archaeology and National Monuments. It needs to be clear how the conclusions on the Significance of effects were drawn in Appendix 14-2. If the ZTV was utilised, then the results of the analysis should be clearly presented to the Competent Authority. It should be clear how many turbines are theoretically visible from each monument presented in Appendix 14-2. The 'visibility' or otherwise, coupled with the distance from the monument should demonstrate a level of impact. Photomontages from specific monuments should be presented where moderate to significant effects have been identified. The LVIA Chapter 13 and Chapter 14 should be cross referenced where relevant.

The cumulative assessment on archaeology is not adequate and again evidence based conclusions should be presented based on the ZTV, photomontages/visualisations.

Conclusion

I am of the opinion that **Further Information** is required regarding some direct negative effects to Recorded Monuments and **Further Information** regarding impacts to the Setting of Recorded and National Monuments. These concerns are set out above in the interest of preserving the archaeological resource. If however ACP consider that Further Information is not required, I am recommending that the following planning conditions be attached to any grant of planning permission that may issue so that the full archaeological heritage resource can be dealt with including any impacts to sub-surface archaeological features and the appropriate exclusion of the known Recorded Archaeological Monuments located within the development site. In this regard the following conditions would ensure that Archaeology and Cultural Heritage is dealt with in full although it must be noted that effects to the setting of Recorded and National Monuments are difficult to mitigate post consent if applicable:

1. In accordance with HE16-2 of the County Development plan Recorded Monument CO092-089 and CO092-094 identified as AH58 in Chapter 14 of the EIAR, which comprises a c. 200m length of a drystone wall shall be preserved in situ by redesign. An engineering solution shall be designed to avoid such impacts to the Recorded Monument and submitted to the Planning Authority for agreement prior to the commencement of development.

2. In accordance with HE16-2 of the County Development plan, Turbine 3 should be omitted / re-designed as a direct, negative significant effect on CH55 relating to nearby recorded monuments AH59 CO092-097 and AH60 (CO092-090; CO092-095) and possibly representing part of a larger field system have been identified. The re-design or plan for omission shall be submitted to the Planning Authority for agreement prior to the commencement of development.

3. The developer shall engage a suitably qualified archaeologist (licensed under the National Monuments Acts) to carry out pre-development archaeological testing in areas of proposed ground disturbance (save those areas in forestry) and to submit an archaeological impact assessment report for the written agreement of the planning authority, following consultation with the National Monuments Service, in advance of any site preparation works or groundworks, including site investigation works/topsoil stripping/site clearance/dredging/underwater works and/or construction works. The report shall include an archaeological impact statement and mitigation strategy. Where significant archaeological material is shown to be present, avoidance by re-design allowing preservation in-situ will be required. Preservation by record [archaeological excavation] will only be permitted in exceptional circumstances. Any further archaeological mitigation requirements specified by the planning authority, following consultation with the National Monuments Service, shall be complied with by the developer. No site preparation and/or construction works shall be carried out on site until the archaeologist's report has been submitted to and approval to proceed is agreed in writing with the planning authority. The planning authority and the National Monuments Service shall be furnished with a final archaeological report describing the results of any subsequent archaeological investigative works and/or monitoring following the completion of all archaeological work on site and the completion of any necessary post-excavation work. All resulting and associated archaeological costs shall be borne by the developer.

4. A detailed Visual Impact Assessment by a suitably qualified archaeologist of Recorded Monuments within 5km and National Monuments within 10km shall be undertaken. The assessment should evaluate the potential impact on the monuments and their setting by the proposed development/turbines utilising and presenting the results of the ZTV overlaid on the Recorded/National Monuments. Appendix 14-2 of the EIAR shall include the results of the ZTV for each asset including where monuments have 'no visibility'. Where it is demonstrated (by ZTV analysis) that the proposed development will have moderate/significant impacts on any of these archaeological monuments, a photomontage/visualisation/wireframe from the archaeological

monument shall be provided (as well as presenting existing and proposed views). Where the proposed development is shown to have moderate/significant negative visual impact, realignment or omission of specific turbine(s) may be necessary as mitigation. The methodology for same and a detailed mitigation strategy shall be submitted to the Planning Authority and the NMS for agreement prior to finalising the report. A report on the Visual Assessment shall be submitted to the Local Authority for consideration.

5. *The Construction Environmental Management Plan (CEMP) shall include the location of any and all archaeological or cultural heritage constraints relevant to the proposed development as set out in Chapter 14 of the EIAR following consultation with NMS. The CEMP shall clearly describe all identified likely archaeological impacts, both direct and indirect, and all mitigation measures to be employed to protect the archaeological or cultural heritage environment during all phases of site preparation and construction activity. The CEMP shall be submitted to the County Archaeologist / Local Authority for written agreement prior to the commencement of any site preparation works and groundworks, including site investigation works/topsoil stripping/site clearance and/or construction works***.**

6. *The developer shall engage a suitably qualified archaeologist to monitor (licensed under the National Monuments Acts) all site clearance works, topsoil stripping, groundworks and/or the implementation of any agreed preservation in-situ measures associated with the development. The use of appropriate machinery to ensure the preservation and recording of any surviving archaeological remains shall be necessary. Should archaeological remains be identified during the course of archaeological monitoring, all works shall cease in the area of archaeological interest pending a decision of the planning authority, in consultation with the National Monuments Service, regarding appropriate mitigation [preservation in-situ/excavation]. The developer shall facilitate the archaeologist in recording any remains identified. Any further archaeological mitigation requirements specified by the planning authority, following consultation with the National Monuments Service, shall be complied with by the developer. Following the completion of all archaeological work on site and any necessary post-excavation specialist analysis, the planning authority and the National Monuments Service shall be furnished with a final archaeological report describing the results of the monitoring and any subsequent required archaeological investigative work/excavation required. All resulting and associated archaeological costs shall be borne by the developer.*

Area Engineer Report, Dunmanway Engineering Area

Maughanaclea Wind Farm- (PAX-04.324165)
The Proposed Project will comprise the construction of 14 no. wind turbines with a blade tip height of 169 metres and all associated works and a 110kV substation and associated works, including underground electrical 110kV cabling to connect the Proposed Wind Farm to the national grid at Dunmanway 110kV substation.

The Proposed Grid Connection route: Cable/Connection Route in Dunmanway Area
Keenrath, Derrynacaheragh, Inchireagh, Shiplough Coolsnaghtig, Mallabracka, Derrylahan, Keelaraheen, Gortanure, Derreens, Demesne, Dunmanway North, and Ballyhalwick, Co. Cork, with permanent underground 110kV electrical and communications cabling from the on-site substation to the existing Dunmanway 110kV substation in Ballyhalwich, Co. Cork.

The total length of the Proposed Grid Connection underground cable route, measures 20.5km in length, **10.82km in the Dunmanway Engineering Area**

From the turbine site the cable route follows:

1,221m -L4609-Keenrath, Derrynacaheragh, Inchireagh, Shiplough Road- - Junction Bay/Box no. 14- Water Crossing 05 (Direction Drilling) &06(Direction Drilling) & Drawing 2403225-27& 28 **Road RI completed in 2025 – Full Road reinstatement Required**.

5,669m -L4615-Coolsnaghtig, Mallabracka, Derrylahan, Keelaraheen Road- - Junction Bay/Box's no. 15, 16, 17, 18, 19, 20, 21, 22 - Water Crossing 07&08 Drawing 2403225-29& 30 Road **Section RI to be completed in 2023 – Full Road reinstatement Required.**

3,103m -R587 Derreens, Demesne, Dunmanway North- Junction Bay/Box's no. 23, 24,25,26- Water Crossing 09 Drawing 2403225-31- Road - **RI & RM to be completed in 2026 – Full Road reinstatement Required.**

829m - R586 Dunmanway North, and Ballyhalwick-Junction Bay/Box no. 27- Water Crossing 10, 11,11a (Long Bridge - Dunmanway Town – (**Direction Drilling under the Bandon River)** Drawing 2403225-32,33,34- Road - **RI completed in 2025 – Full Road reinstatement Required.**

The following conditions should apply for the cable route:
- All roads to be reinstated across their full width with Cl 806 wet-mix or Overlay macadam to match existing and double surface dressed roads outside the speed limits areas.
- No cable is to be attached to or placed on top of any bridge structure.
- All culverts and surface water drains crossed by the cable route are to be replaced across the full width of the road. A report detailing each such crossing, including before and after photographs is to be submitted to the Roads Authority each week while this element of the work is in progress.
- All roadside drains are to be maintained or relocated. A report detailing each such drain, including before and after photographs is to be submitted to the Roads Authority each week while this element of the work is in progress
- All diversion routes necessary for the works are to be maintained by the contractor for the duration of the diversion. Maintenance shall include hedge cutting, pothole filling and full road reinstatement where necessary at the direction of the Road Authority.
- All joint bay covers are to be located off the carriageway.

Senior Executive Engineer Report, Macroom Municipal District

This application itself lies outside the Macroom MD although the turbine delivery route does pass through the area.

I have no comments as such on it - the turbine deliveries will be subject to an Abnormal Load Permit application where all related issues will be conditioned.

Ecology Officer Report

Maughanaclea Windfarm Strategic Infrastructure Development - An Bord Pleanála Ref No PAX04.324165.

Cork County Council Ecology Office Report on Maughanaclea Windfarm

Brief Project Description of relevance to Cork County Council's ecology office
Project Elements: The proposed project development comprises the following:

i. 14 no. wind turbines with an overall turbine tip height of 169 metres, a rotor blade diameter of 133 metres, and turbine hub height of 102.5 metres, and a meteorological mast with a height of 30 metres, and subsequent decommissioning of the wind turbines and meteorological mast, following a thirty five-year operational period from the date of full commissioning of the wind turbines.
ii. Associated wind turbines and meteorological mast foundations and hardstanding areas.
iii. A 110kV substation compound (Including control buildings (with a combined floor area of 594Sq.m) with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, lightening protection poles, underground wastewater holding tank, site drainage and all ancillary works).
iv. Underground electrical (110kV) and communications cabling from the proposed 110kV substation to the existing Dunmanway 110kV substation in the townland of Ballyhalwick (including joint bays, communication chambers, earth sheath links, and ancillary works along the underground electrical cabling route). This cabling route is primarily located within the public road corridor.
v. Underground electrical (33kV) and communications cabling connecting the wind turbines and meteorological mast to the proposed 110kV substation.
vi. 3 no. temporary construction compounds (including site offices and welfare facilities (with a combined floor area of 585Sq.m).
vii. 2 no. temporary security cabins (with a combined floor area of 28. 8Sq.m);
viii. Junction accommodation works to facilitate turbine delivery and construction access to the site, including the upgrade of an existing site entrance off the R585 regional road, and the construction of a new access road off the R585 regional road, crossing the L8777 Local Road, including new permanent gated site entrances.
ix. Upgrade of existing site tracks/ roads and provision of new site access roads, junctions and hardstand areas (including upgrade of a short section of the L8777 local road);
x. 4 no. borrow pits.
xi. Peat and Spoil Management.
xii. Site Drainage.
xiii. Tree felling and vegetation removal.
xiv. Biodiversity Enhancement measures (peatland habitat enhancement, Kerry slug habitat enhancement, and native woodland planting).
xv. Operational stage site signage.
xvi. All associated site development works and apparatus.

Project Timeline: Per the submitted documents, the applicant is seeking a ten-year permission and an operational period of thirty-five-years for the wind turbines, meteorological mast and site signage from the date of full commissioning of the wind turbines. A permanent planning permission is being sought for all other works.

Management Plans: Per the submitted documents, a Construction and Environmental Management Plan (CEMP), which will include dust suppression measures, will be in place throughout the construction phase. The CEMP will incorporate other management plans, including a Peat and Spoil Management Plan, Harvest Management Plan, and Invasive Species Management Plan. The plan also outlines proposed management of surface water, at both construction and post-construction stages, and water quality management.

Surface Water Management: As per the submitted documents*, 'drainage water from any works areas of the Site will not be directed to any natural watercourses within the Site. Two distinct methods will be employed to manage drainage water within the Site. The first method involves keeping clean water clean by avoiding disturbance to natural drainage features, minimising any works in or around artificial drainage features, and diverting clean surface water flow around excavations and construction areas. The second method involves collecting any drainage waters from works areas within the Site that might carry silt or sediment, to allow attenuation and settlement prior to controlled diffuse release via recharge*.'

Watercourse Crossings: Four existing water crossings will be utilises, including three which will require upgrades, the other will be along the R585 between the northern turbine cluster and the southern turbine cluster to facilitate the construction of the 33kV internal wind farm cabling.

Five new water crossings are proposed as follows, which will be achieved (per the submitted documents) via clear span crossings:

- A new crossing is proposed over the Owngar River along the proposed access road to the northern turbine cluster and to facilitate the 33kV internal wind farm cabling
- A new crossing on the proposed access road to turbine T4
- A new crossing on the proposed access road between turbines T11 and T12
- A new crossing on the proposed access road to turbine T13
- A new crossing on the proposed access road between the proposed 110kV onsite substation and turbine T10.

Biodiversity Management and Enhancement Plan: A Biodiversity Management and Enhancement Plan was prepared to provide for the offset of loss of habitats identified within the Proposed Wind Farm site and further enhance the biodiversity of the Site and its environs. The Plan sets out specific enhancement measures for Kerry slug, native woodland planting, and peatland restoration.

This report relates to a 10 year planning permission for Maughanaclea Wind Farm consisting of 14 no. wind turbines, a 110kV substation and 110kV underground cabling connection and associated works, which will occur in Cork County Council's operational area and considers the potential for the proposals to give rise to impacts on sites designated for nature conservation, on habitats of high conservation value, and on protected species, having regard to information which has been provided in the Environmental Impact Assessment Report (EIAR). The report also considers the potential for the proposed wind farm to give rise to impacts to European sites, having regard to information which has been provided in the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement (NIS).

Cork County Council Ecology Office has reviewed specific chapters of the EIAR, the NIS and the supporting ecological survey information which has been provided by the applicants prior to completing this report. The primary considerations from an ecological perspective and to which particular attention is paid to in this report are as follows:

- Potential for the proposed development to give rise to negative effects on habitats of high natural value, including peatland habitats, and habitats deemed to be a potential critical resource (foraging, commuting and/or breeding habitat) to protected species.

- Potential for the proposed development to give rise to negative effects on conservation objectives of Natura 2000 sites.
- Potential for the proposed development to give rise to negative effects on protected invertebrates, terrestrial mammals and avian species.

All impacts / potential impacts of the proposal on habitats and species to be considered of particular concern to this office are within the boundaries of County Cork and are discussed further below.

Site Location and Description: The proposed wind farm site span a number of townlands west of the Cousane Gap in West Cork, namely Ardrah, Maughanaclea, Ballynamought, Gortloughra, Cousane, and Coomclogh, with the proposed grid connection route (GCR) running along the R585, L4609, L4615, and R587, and R586, from the Cousane Gap to Dunmanway Substation. The windfarm site will be mostly based within upland areas, approximately 2.3km east of the village of Kealkill, 9.5km northeast of the town of Bantry, and 12.2km west of Dunmanway, with elevations within the Proposed Wind Farm site range from c428mOD to c132mOD.

According to Tailte Eireann's National Landcover Map, the southern section of the windfarm site comprises mainly of wet heath, transitional woodland, conifer forestry, and wet grassland, while the northern section consists of wet heath, transitional woodland, conifer forestry, wet grassland, blanket bog. There are a number of streams and drains rising and flowing through the site, the majority of which drain into the Owngar River which flows in a generally western direction into Bantry Bay. Two lakes are also situated within the redline boundary of the proposed windfarm site, namely Lough Nabirree in the southern section, and an unnamed lake in northern section. The proposed c20km GCR comprises existing road networks (buildings and artificial surfaces), hedgerows, treelines, grassy verges, and scrub habitats.

A Geotechnical and Peat Stability assessment included in the application documents outlines that there is a low risk of peat instability/failure at the Site largely due to the shallow thickness and drained nature of the peat.

The proposed windfarm site is situated within the Dunmanus-Bantry-Kenmare WFD (catchment ID_21) surface water catchment and contained within sub-catchments; the Coomhola_SC_010 and the Mealagh_SC_010 where there are 11 no. and 3 no. proposed turbines respectively. Both subcatchments drain, the former containing the Owvane River catchment and the latter containing the Mealagh River catchment, drain into Bantry Bay. With the exception of 2.9km length at the Proposed Wind Farm site, the Proposed Grid Connection is located mainly in the Bandon River catchment where it passes through the Bandon_SC_010 to Bandon_SC_030 sub-catchments. The 2.9km length of the Proposed Grid Connection at the Proposed Wind Farm site, including the proposed 110kV onsite substation, is located in the Coomhola_SC_010 which drains locally to the Owngar River (Owngar (Cork)_010).

Natura Impact Statement (summary): The AA screening section document describes the proposed development, Grid Connection Route, and Turbine Delivery Route, describes the habitats within the proposed windfarm site, GCR, and proposed turbine delivery route, outlines the surveys undertaken. The report assesses the potential for the proposed development to give rise to significant impacts to a number of European sites, namely the Bandon River SAC, Derryclogher (Knockbog) Bog SAC, Glengarriff Harbour and Woodland SAC, Caha Mountains SAC, Glanlough Wood SAC, The Gearagh SAC, The Gearagh SPA, and Mullaghanish to Musheramore Mountains SPA. Per the document, as the proposed GCR crosses a number of water crossings within the public road upstream of the Bandon River SAC (site code: 2171), potential for indirect likely significant effect on the SAC via water quality deterioration as a result of construction of the Proposed Grid Connection was identified. With regard

to the windfarm site, while it was considered to be outside the maximum foraging range for hen harrier within Mullaghanish to Musheramore Mountains SPA (4162) and no hen harrier breeding activity was recorded within the Proposed Wind Farm during the ornithological surveys, the report outlines that post-breeding/winter hen harrier activity observed within the windfarm site may have originated from the SPA. As such, the report utilises the precautionary approach and considers that the potential for likely significant effect on birds which may use this SPA for breeding requires further consideration.

With regard to the Bandon River SAC, the document assesses the potential for adverse effects on its qualifying interests, namely freshwater pearl mussel (*Margaritifera margaritifera*), brook lamprey (*Lampetra planeri),* Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion vegetation,* and Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* in terms of conservation objectives and the targets for achieving these objectives. All potential effects are deemed likely to occur as a result of water quality deterioration and habitat degradation associated with construction of the proposed grid connection.

Bandon River SAC - The NIS includes a further assesses the potential for the proposed development to significantly affect the Bandon River SAC. It was considered that mitigation is required to protect the SAC's qualifying interests from the excess release of siltation and pollutants into the river system. The measures include:

Prior to the commencement of substation, cable trenching, access road or end mast works the following key temporary drainage measures shall be installed:

- All existing roadside drains (where present) that intercept the proposed works area shall be temporarily blocked down-gradient of the works using check dams/silt traps.
- Culverts, manholes and other drainage inlets (where present) shall also be temporarily blocked.
- A double silt fence perimeter shall be placed along the road verge on the down-slope side of works areas that are located inside the watercourse 50m buffer zone

The following mitigation measures are proposed for the underground cabling watercourse crossing works:

- No stock-piling of construction materials shall take place along the grid route.
- No refuelling of machinery or overnight parking of machinery shall be permitted in this area.
- No concrete truck chute cleaning shall be permitted in this area.
- Works shall not take place at periods of high rainfall and shall be scaled back or suspended if heavy rain is forecast.
- Local road drainage, culverts and manholes shall be temporarily blocked during the works.
- Machinery deliveries shall be arranged using existing structures along the public road.
- All machinery operations shall take place away from the stream and ditch banks, apart from where crossings occur. Although no instream works are proposed or shall occur.
- Any excess construction material shall be immediately removed from the area and sent to a licenced waste facility.
- No stockpiling of materials shall be permitted in the constraint zones.
- Spill kits shall be available in each item of plant required to complete the stream crossing.
- Silt fencing shall be erected on ground sloping towards watercourses at the stream crossings if required.

Fracture Blow-out (Frac-out) Prevention and Contingency Plan:

- The drilling fluid/bentonite shall be non-toxic and naturally biodegradable (i.e. Clear Bore Drilling Fluid or similar shall be used).
- The area around the drilling fluid batching, pumping and recycling plants shall be bunded using terram and/or sandbags to contain any potential spillage.
- Silt fencing shall be placed between the works area and the adjacent river.

- Spills of drilling fluid shall be cleaned up immediately and transported off-site for disposal at a licensed facility.
- Adequately sized skips shall be used where temporary storage of arisings are required.
- The drilling process / pressure shall be constantly monitored to detect any possible leaks or breakouts into the surrounding geology or local watercourse.
- This shall be gauged by observation and by monitoring the pumping rates and pressures. If any signs of breakout occur, then drilling shall be immediately stopped.
- Any frac-out material shall be contained and removed off-site.
- The drilling location shall be reviewed, before re-commencing with a higher viscosity drilling fluid mix. and,
- If the risk of further frac-out is high, a new drilling alignment shall be sought at the crossing location.

Per the NIS, there is no potential for adverse effects on the SAC during the operational phase of the Proposed Project.

Mullaghanish to Musheramore Mountains SPA - With regard to the Mullaghanish to Musheramore Mountains SPA, analysis of the survey results suggests that there is no evidence to suggest that hen harrier breeding within the SPA utilise the Proposed Wind Farm site to support breeding activity. However, the report does not rule out the possibility of the hen harriers recorded within the proposed site during the post-breeding and winter surveys originating from the SPA. Nevertheless, per the NIS, *given the extent of suitable hunting habitat that will remain in the Proposed Wind Farm site and surroundings, and the distance of proposed works and infrastructure from the SPA, suitable habitat will remain available to overwintering hen harrier to continue to utilise the area for hunting and roosting*. The report asserts that *no potential for adverse effects on the likelihood of overwintering hen harrier returning to the Mullaghanish to Musheramore Mountains SPA and no potential for adverse effects on juveniles dispersing from the Mullaghanish to Musheramore Mountains SPA as a result of the Proposed Project was identified*.

Cumulative and In-combination effects are considered in the NIS. Permitted and operational windfarms in the vicinity of the proposed development are considered, as are other developments. The NIS states that '*taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified with regard to any European Site*.'

Per the NIS, where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction and operation of the Proposed Project do not adversely affect the integrity of European Sites.

Environmental Impact Assessment Report (EIAR) – Biodiversity Chapter (summary): Desktop survey and field survey methods are described and the results of data gathering, and survey work are provided within Chapter 6 (Biodiversity), and Chapter 7 (Ornithology) of the EIAR. Terrestrial Ecological Surveys of Proposed Grid Connection & TDR Route were conducted on the 12th, 13th, and 14th of May 2025. These chapters include an assessment of the potential for the proposed project to impact negatively on sites designated or proposed to be designated for nature conservation, on protected species and/or on habitats of high natural value.

Potential for the development to give rise to impacts on designated nature conservation sites: Potential negative impacts on European designated sites due to their connectivity e.g. hydrological, have been addressed in the submitted NIS. In relation to potential impacts on NHAs, 3 occur within a 15km radius of the site with the nearest NHA being the Conigar Bog NHA, which is approximately 5.3km to the west.

Per the EIAR as all three lack any ecological or hydrological connectivity it is stated that it can be concluded with that the proposed wind farm project could not have any impacts on these 3 NHA sites.

With regards to pNHAs 14 occur within a 20km radius of the proposed wind farm site of which a hydrological linkage exists Bandon Valley South of Dunmanway pNHA (site code: 1035). As such mitigation is proposed to minimise any such risk. With the implementation of the mitigations and best practice procedures as outlined for water protection in the EIAR, which aim to negate potential impacts from deterioration of surface water quality, no potential for residual significant effects on this National Site is anticipated.

Potential for the development to give rise to negative impacts on terrestrial habitats and protected plant species: Chapter 6 outlines a number of Article 17 Annex I habitats were mapped within and in the vicinity the proposed windfarm, namely Wet heath [4010], Dry heath [4030], and Blanket bog (active)* [7130]. Per the report, the area of mapped Article 17 Alpine/ subalpine heath in the vicinity of T7/ T8 comprises Conifer Plantation (WD4) and does not conform to this Annex I habitat. As per the EIAR, the proposed wind farm site consists of a range of other, primarily peatland and/or high valued habitats, as follows:

- ***Conifer Plantation (WD4)*** - dominated by dense, mature Sikta spruce. Turbine 7, Turbine 8, Turbine 9, Turbine 10 and Turbine 11 and associated infrastructure (hardstands, access roads) are located within the larger conifer plantation in the south of the Proposed Wind Farm site. Further, two Borrow Pits and Temporary Construction Compounds, 110kV Substation, and Met Mast are proposed within the southern Conifer Plantation. Turbine 1 and Turbine 2 and associated infrastructure (hardstands, access roads) are located within the conifer plantation in the northeast of the Proposed Wind Farm site.

  A large area of recently planted Conifer Plantation was recorded in the northeast of the Proposed Wind Farm site. Smaller areas of recently planted conifer plantation were recorded in the centre, and southwest of the Proposed Wind Farm site. Turbine 6 and associated infrastructure (hardstand and access road) and the Proposed Access Road linking T1 and T2 to T3 and T5 are located in the north of the Proposed Wind Farm within an area of recently planted Conifer Plantation. Smaller areas of recently planted Conifer Plantation were recorded in the centre, and southwest of the Proposed Wind Farm site. Classified as **Local Importance (Lower Value)** and is not included as a KER. 42.8ha of conifer plantation/ recently felled woodland will be lost to accommodate the development.

- ***Recently Clear-Felled Woodland (WS5)*** - recorded in the south of the Proposed Wind Farm. One of the Proposed Borrow Pits is partially located within an area of recently felled conifer woodland. Classified as **Local Importance (Lower Value)** and is not included as a KER. 42.8ha of conifer plantation/ recently felled woodland will be lost to accommodate the development.

- ***Improved Agricultural Grassland (GA1)*** - recorded throughout the proposed wind farm. Turbine 12 and associated infrastructure are located within areas of improved agricultural grassland, in the southwest of the Proposed Wind Farm site. Turbine 13 and hard stand are located to the northwestern parcel of the proposed wind farm, predominantly on an area of reclaimed agricultural grassland, classified as improved agricultural grassland. Classified as **Local Importance (Lower Value)** and is not included as a Key Ecological Receptor (KER). It is predicted that 0.2ha of this habitat will be lost to accommodate the proposed development.

- ***Wet Grassland (GS4)*** - recorded throughout the proposed wind farm. The proposed access road linking T11 to T12 and T13 is located on an area of wet grassland. New roads are proposed through wet grassland (GS4) to the centre of the proposed wind farm. Classified as **Local Importance**

(Lower Value) and is not included as a KER. It is predicted that 1.5ha of this habitat will be lost to accommodate the proposed development.

- ***Dry Humid Acid Grassland (GS3)*** - areas of mosaic degraded dry humid acid grassland (GS3)/ wet grassland (GS4) were recorded in the north of the Proposed Wind Farm site. Turbine 5, and Turbine 3 and associated infrastructure, the proposed access road from T4, and the northern temporary construction compound are located on a mosaic of degraded dry humid acid grassland/ wet grassland. *'Due to the degraded nature of this mosaic habitat Dry Humid Acid Grassland/ Wet Grassland (GS3/GS4) as a result of intensive sheep grazing, these areas do not conform to the Annex I habitat.'* Classified as **Local Importance (Lower Value)** and is not included as a KER. It is predicted that 3.3ha of this habitat will be lost to accommodate the proposed development.

- ***Dry Meadows and Grassy Verges (GS2)*** - were recorded throughout the proposed wind farm, along existing access road/ public roads and forestry tracks. Classified as **Local Importance (Lower Value)** and is not included as a KER.

- ***Wet Heath (HH3)*** - was recorded throughout the proposed wind farm, on gently sloping peat soils. This habitat type has links to the Annex I habitat 'Northern Atlantic Wet Heaths with Erica tetralix (4010)'. Turbine 4 and Turbine 14, and associated infrastructure (hardstand and access roads) are located on areas of degraded Wet Heath (HH3) not mapped under Article 17. *'The wet heath habitat in these areas is degraded as a result of the intensive sheep grazing, resulting in a low cover of dwarf shrubs, and poor species diversity, with both areas being dominated by purple moor grass*.' While the mapped Article 17 wet heath habitat was considered to be of **County importance**, the report valued the degraded sections, upon which two turbines are proposed to be built, to be of **local importance (higher value)** and considered to be a **Key Ecological Receptor (KER).**

  According to Chapter 6 of the EIAR, 1.6ha of wet heath is predicted to be lost to facilitate the proposed windfarm development. According to the report, as construction works will take place within 50m of the Article 17 mapped habitats, the potential for impact to the habitat and associated plant communities as a result of dust deposition from construction works must be considered. Dust deposition has the potential to smother sensitive plant communities.

  With regard to mitigation measures, the report specifies three forms of mitigation, namely mitigation by design, specific mitigation, and dust mitigation. Mitigation by design outlines avoidance of Article 17 mapped and unmapped areas of blanket bog, wet heath and dry heath in good condition where possible and to minimise impacts thereon. Specific mitigation entails offsetting the loss of 1.4ha of degraded wet heath through a Biodiversity Management and Enhancement Plan which proposes to fell an area 5.3ha of young conifer plantation in the northern section of the Proposed Wind Farm site, in areas where wet heath habitat previously existed. Per the report, restoration efforts will restore the formerly occurring wet heath habitat to this area, with a Monitoring Plan to ensure success of the proposed measures are also provided in the BMEP. Dust mitigation measures are outlined in Chapter 10 of the EIAR and follow best practice guidelines. The report states that with the implementation of the prescribed mitigation measures, there is no potential for residual significant effect on wet heath habitat.

- ***Upland Blanket Bog (PB2)*** - recorded to the northeast and south of the proposed wind farm, on level or gentle sloping ground. large mosaic habitat of Upland Blanket Bog (PB2)/ Wet Heath (HH3) was recorded in the northeast of the Proposed Wind Farm site, north of T1 and T2. No Wind Farm infrastructure is proposed in this area. The floating Turbine 14 Access Road runs through an area of Upland Blanket Bog (PB2) for approximately 0.2ha. This access road also runs through Wet Heath (HH3), and Dense Bracken (HD1) habitats. Per the report, evidence of previous turbary activity, drainage, and grazing was recorded throughout these habitats, which has resulted in the degradation of this habitat in places. All Blanket Bog habitats recorded within the windfarm site

were evaluated as being of **County importance** and considered to be a **KER.** Chapter 6 of the EIAR predicts that 0.2ha of blanket bog will be lost to accommodate the development. Apart from avoidance of Article 17 mapped and unmapped areas of blanket bog. The report identifies that there will be a residual significant effect on blanket bog habitat as a result of the loss of approximately 0.2ha of degraded blanket bog habitat.

- ***Dry Siliceous Heath (HH1)*** - was recorded to the northwestern margin of the southern cluster of the proposed site. This habitat has links to the Annex I habitat 'European dry heaths (4030)'. No wind farm infrastructure is proposed for this area. Infrastructure associated with T13, including the southern portion of Turbine 13 hardstand and proposed access road are located partially within areas of fragmented dry siliceous heath in the south of the proposed wind farm site, which occurs between areas of reclaimed, intensively managed improved agricultural grassland. *'The cover of dry siliceous heath to the south of T13 is non-continuous and degraded.'* As none of the Annex I habitat 'European dry heaths (4030) are proposed for any development, it was not considered to be a KER. Per the report, given the degradation of the dry siliceous heath upon which T13 is proposed to be built, it also was not considered to be a KER. It is predicted that 0.2ha of this habitat will be lost to accommodate the proposed development.

- ***Spoil and Bare Ground (ED2)*** - recorded throughout the proposed wind farm, often associated with recently felled woodland, unpaved forestry/ farm access tracks, and areas of recently excavated grasslands.

- ***Recolonising Bare Ground (ED3)*** - recorded throughout the proposed wind farm, often associated with forestry access roads, recently felled woodland, and mounds of spoil/ gravel.

- ***Buildings and Artificial Surfaces (BL3)*** - existing forestry/farm access tracks, and the local road network within the proposed wind farm and along the proposed grid connection. Classified as **Local Importance (Lower Value**) and is not included as a KER.

- ***Scrub (WS1)*** - recorded throughout the proposed wind farm. The access road linking T12 to T14 in the south of proposed wind farm site and proposed new roads to the centre of the proposed wind farm runs through areas of scrub. **Local Importance (Lower Value**) will be removed to facilitate the Proposed Project. Per the report, the loss of scrub, including potential loss of its function as wildlife corridors, is included as a **KER** for further assessment. The report predicts that 0.4ha of scrub will need to be removed to facilitate the development.

  The loss of hedgerow and scrub for the Proposed Project will be offset through the planting of native woodland as part of the BMEP. Per the report, it is proposed to plant 0.6ha of native woodland. A section of immature native woodland is located to the east of the proposed 110kV onsite substation in the southern cluster. This section of immature native woodland is surrounded by conifer plantation. It is proposed to fell an area of the conifer plantation and replace this with native woodland. This native woodland area has been strategically chosen to link up with identified bat commuting corridors within the Proposed Wind Farm site and will provide enhanced foraging area relative to the commercial conifer stands. The proposed planting will comprise native tree species of various age structures and will be of greater biodiversity value than the habitats being lost. The report asserts that with the implementation of the BMEP, there is no potential for residual significant effect.

- ***Dense Bracken (HD1)*** - recorded throughout the proposed wind farm. Areas of dense bracken were often recorded on mounds/ hills, in association with areas of Wet Heath (HH3)/ Dry Heath (HH1). Recorded along the proposed access road from T3 and T14. Per the report, given its limited in biodiversity value and therefore classified as **Local Importance (Lower Value)** and is not included as a KER. It is predicted that 0.2ha of this habitat will be lost to accommodate the proposed development.

- ***Hedgerow (WL1)*** - recorded throughout the proposed wind farm, along road margins and forming agricultural field boundaries. **Local importance (higher value)** and been identified as a **KER**. Per the report, 23m of hedgerow will be lost to facilitate the works.

  The loss of hedgerow and scrub for the Proposed Project will be offset through the planting of native woodland as part of the BMEP. Per the report, it is proposed to plant 0.6ha of native woodland. A section of immature native woodland is located to the east of the proposed 110kV onsite substation in the southern cluster. This section of immature native woodland is surrounded by conifer plantation. It is proposed to fell an area of the conifer plantation and replace this with native woodland. This native woodland area has been strategically chosen to link up with identified bat commuting corridors within the Proposed Wind Farm site and will provide enhanced foraging area relative to the commercial conifer stands. The proposed planting will comprise native tree species of various age structures and will be of greater biodiversity value than the habitats being lost. The report asserts that with the implementation of the BMEP, there is no potential for residual significant effect

- ***Drainage Ditch (FW4)*** - recorded throughout the proposed wind farm, mainly associated with areas of coniferous forestry, grasslands, and along the margins of forestry/ farm access roads/ public roads. The drainage ditches were predominantly man-made, and as such were linear in nature, generally 1-1.5m wide. Flow types varied, with dry drains with no flow or stagnant water, and drains with fast flowing water recorded throughout the proposed wind farm. Assessed as being **Local Importance (lower value)** but are considered further as a KER due to potential for conductivity with higher value watercourses.

- ***Riparian Woodland (WN5***) - along the banks of the Owengar (Cork) River (and tributaries). No wind farm infrastructure is proposed for this area of the site. This habitat will not be impacted by the Proposed Project, and as such it is not included as a KER.

- ***Eroding Upland River (FW1) / Depositing Lowland River (FW2)*** - Various EPA mapped river waterbodies flow through the Site, namely the Owngar River, Mealagh River and Bandon River and associated tributaries. Two new watercourse crossings in the northern cluster, one crossing the Owngar River to facilitate the proposed site entrance and delivery of turbine components to the Proposed Wind Farm's northern cluster, and a second new watercourse crossing along the access road to T4. Three new watercourse crossings in the southern cluster: 1 no. on the new road southwest of the proposed 110kV onsite substation, 1 no. on the access road to T13, and 1 no. on access road between T11 and T12. There are also 3 no. existing watercourse crossings that require upgrading as part of the Proposed Wind Farm: all 3 no. are located on the existing forestry road southwest of the proposed 110kv onsite substation. **Local importance (higher value)** and been identified as a KER. Per the report, on a precautionary basis, Freshwater Pearl Mussel potentially present in watercourses downstream of the Site may be associated with QI populations of the River Bandon SAC and would therefore be of **International Importance**.

  Per the report, construction phase activities will require ground excavations, cement, tree felling, excavation dewatering, use of fuel powered machinery, all of which have potential to result in pollutive materials entering watercourses. The report states that in the absence of mitigation, there is potential for the Proposed Wind Farm to result in significant indirect effects on the identified aquatic habitats and species at a local geographic scale in the form of pollution during the construction phase. There is potential for an indirect, negative, significant, temporary, likely impact to surface waters within the Proposed Wind Farm site. This would result in impacts on a receptor of local importance (higher value). In the absence of mitigation, there is potential for the Proposed Grid Connection to result in significant indirect effects on the identified aquatic habitats and species in the form of pollution arising during the construction phase. This would result in impacts on receptors of local importance (higher value), and potentially of International

Importance due to the downstream connectivity with the River Bandon SAC/ Bandon Valley South of Dunmanway pNHA via the Proposed Grid Connection.

The drainage design for the windfarm outlines how water quality is proposed to be protected during the construction of the Proposed Project. Chapter 9 of the EIAR provides mitigation measures relating to earthworks (silt traps, correct stock piling, maintenance of drains and culverts, etc.), tree felling (complying with guidelines and regulations), potential release of hydrocarbons during construction and storage, contamination from wastewater disposal, groundwater impacts, flooding impacts, potential impacts during horizontal directional drilling, and release of cement-based products. Per the report, following the implementation of mitigation, there will be no significant residual effect on aquatic habitats or species as a result of the Proposed Project. Per the report, there will be no significant residual effect on aquatic habitats or species as a result of the Proposed Project, provided mitigation measures are followed.

- ***Dystrophic Lakes (FL1)*** - one in the north of the proposed wind farm site, north of T2, with the second in the south of the proposed wind farm site, south of T13. These lake habitats have links to the Annex I habitat 'Natural Dystrophic lakes and ponds (3160)'.
- ***Immature Woodland (WS2)*** recorded to the east of the proposed 110kV onsite substation. A mix of native woodland species was planted in an area of recently felled woodland. Deer proof fencing was erected around this area.
- ***Treeline (WL2), Hedgerow (WL1), Scrub (WS1) and Dry meadows and grassy verges (GS2***) all recorded along the proposed grid connection.

Per the report, having regard to the Turbine Delivery Route (TDR), limited areas of vegetation along the road corridor, along the roadside edges of treelines (WL2) and hedgerows (WL1), may need to be trimmed to accommodate irregular loads, however this comprises temporary reduction in cover and vegetation will not be felled/removed in these habitats.

When considering protected habitats, the report deems the Dry Siliceous Heath (associated with I habitat 'European dry heaths (4030)), Wet Heath (linked to Annex I habitat 'Northern Atlantic Wet Heath with *Erica tetralix* (4010)), and Upland Blanket Bog habitats that will be impacted by proposed windfarm development are in fragment and/or degraded states, while high quality examples of these habitats within the site will be protected from development.

Per the report, no botanical species listed under the Flora (protection) Order, 2022, or listed in the Irish Red Data Books were recorded on the Site.

Per the report, immature, individual stands of rhododendron (*Rhododendron ponticum*) were recorded in the north and south of the proposed wind farm, within conifer plantation and open peatland habitat, adjacent to the works footprint. Japanese knotweed (*Reynoutria japonica*) was recorded at one location along the bank of an unmapped watercourse This area is adjacent to the existing road along the TDR but outside of any proposed works areas. An Invasive Species Management Plan has been included in the EIAR. The rhododendron will be removed outside of the flowering period (May to July) with the roots dug completely out. To avoid regrowth, stumps will be turned upside down and soil will be brushed off roots. Once the supervising ecologist confirms that the material is dried out and non-viable, it will be chipped and composted on-site. As the stand of Japanese knotweed is outside any proposed works, it will only be cordoned off to ensure avoidance.

Potential for the development to give rise to negative impacts on Terrestrial Species: Per Chapter 6, faunal walkover surveys were designed to detect the presence, or likely presence, of a range of

protected species. Potential suitable habitats were investigated for signs of animal presence. Mammal surveys were conducted on three dates in July and August 2024, two dates in May 2025, and in July 2025. Kerry slug survey was undertaken in December 2025.

Chapter 6 of the EIAR states that the same mitigation to prevent significant impacts on water quality and associated aquatic fauna and other terrestrial fauna during construction, as summarised below, will be applicable to the decommissioning phase. It can be concluded that following the implementation of preventative mitigation, there is no potential for the decommissioning of the Proposed Project to result in significant effects on biodiversity.

- ***Bats***: Per the report, bats surveys, undertaken in 2024, included roost surveys, manual transect surveys and ground-level static surveys. None of the trees to be removed to accommodate bat buffers, mostly Sitka spruce, were assessed as having roosting potential. Manual transects were undertaken in spring, summer and autumn 2024, with activity concentrated along forest edges and linear habitats. Ground level static surveys found that bat activity within the proposed wind farm is generally Low to Moderate across species and seasons, with notable localised increases. The report states that '*High median activity was recorded only occasionally and in limited locations, suggesting that while certain areas of the Site support concentrated activity, the wider landscape exhibits relatively low baseline bat use. These patterns inform the spatial distribution of sensitivity across the Site and guide the subsequent assessment of potential impacts from the Proposed Project.*' Per the report, the habitats within and surrounding the Proposed Project are likely to be utilised by a bat population of **Local Importance (higher value)**.

  Per the report, in the absence of appropriate design, the loss or degradation of commuting/foraging habitat i.e., hedgerow, treeline etc has potential to reduce feeding opportunities and/or displace bat populations. As outlined in the report, it is not predicted that any potential roosting sites will be impacted by the development. The report highlights the BMEP which outlines establishment of 0.54 ha of native woodland, resulting in improved habitat available for bats. Per the report, construction stage lighting will be in line with the updated Dark Sky Ireland Lighting Principles. Having regard to the operational stage of the windfarm, the report outlines (per NatureScot guidelines) there is no requirement for conducting collision risk assessment for low risk bat species, of which three were recorded during surveys, namely *Myotis* ssp., brown long-eared bat, and lesser horseshoe bat, and relatively low activity levels were observed for these bats, significant collision-related effects are not anticipated. Four high risk species were recorded, namely Leisler's bat, common pipistrelle, soprano pipistrelle, and Nathusius' pipistrelle. Per the report, Site-level collision risk for high collision risk bat species was typically low, but the precautionary principle was considered due to the presence of high risk species, and the mitigation measures were prescribed:
    - Introduce felling buffers around turbines
    - Implement blade feathering as a standard
    - Lighting and noise restrictions
    - Implement curtailment as required on proposed turbines which recorded high median activity levels
    - A minimum of three years operational monitoring to assess changes in bat activity patterns post construction and to monitor the implementation of the mitigation strategy.
    - Adaptive mitigation strategy based on the results of the post-construction monitoring

  As per the Bat Report, an adaptive bat monitoring plan will be implemented for three years post construction, to assess the ongoing health on local population of bats within the Site.

  It is asserted that following the implementation of the monitoring and mitigation described above, there is no potential for significant residual effects on bat species.

- ***Non-volant mammals***: According to the report, no evidence of the site being used by ***Badgers*** was found. ***Otter*** spraint was recorded along the Gortnacowly River (a tributary of the Mealagh River), within the southern section of the proposed windfarm site. The Chapter quotes the Aquatic Baseline Report which states '*given the high fisheries potential and good connectivity of other sites within the vicinity of the proposed wind farm, it is very likely that otter actively utilise these watercourses for commuting and foraging.' **Irish hare*** (*Lepus timidus ssp. hibernicus*) was observed on occasion travelling across peatland habitats within the Proposed Wind Farm.

  Per the report, Badger and Otter as an ecological receptors have been assigned **Local Importance (Higher value)** on the basis that the habitats within the Proposed Wind Farm site are potentially used by badger populations of Local Importance and included as a **KER**s.

  Per the report the Site provides potential supporting habitat for ***Pine Marten*** and ***Red Squirrel*** in the form of conifer plantation and given the widespread and common occurrence of conifer plantation in the wider area, they are included as a **KER**.

  As per the report, there will be a reduction in foraging habitat due to the loss of agricultural grassland and conifer forestry. The report considers that, given extent of available foraging habitat, this loss will not be significant. As no setts were recorded, no significant disturbance related impacts were predicted in the report. However, as a precaution, due to time that can elapse between the original surveys, any future planning consent and construction, a pre-construction badger survey will be carried out in order to assess activity levels at setts and to identify any sett entrances that may have been established in the intervening period. Should a sett be discovered, appropriate best practice guidelines will be followed.

  With regard to otter, the construction of new watercourse crossings has the potential to be a temporary significant effect to otter in the area as a result of disturbance. given the clear span design of the proposed new crossings, there is no potential for introduction of barrier to movement. A pre-construction survey will be conducted within 150m upstream and downstream of the proposed new 4.no new watercourse crossings, and 3.no existing watercourse crossings that require upgrading within the proposed wind farm site in order to confirm whether the baseline survey conditions remain the same. Should a holt be identified, TII guidelines will be followed. If disturbance is likely to occur, a derogation licence will be sought from the NPWS.

  Although no significant effects to red squirrel or pine martin are predicted, a precautionary approach will be taken to ensure no disturbance to these species during construction works occurs. Pre-development surveys will be undertaken and, in the event of dreys or dens being recorded, a species protection plan will be prepared by the project ecologist.

- ***Marsh fritillary***: The report deems the Site did not provide significant supporting habitat for Marsh Fritillary, and no evidence of Marsh Fritillary was recorded within the Site.

- ***Kerry slug***: Per the report, hand searches confirmed the presence of Kerry slug at one location within the proposed wind farm, within an area of recently felled woodland (WS5) within the south of proposed wind farm site. The species was recorded to the base of a conifer stump. The species has potential to move throughout suitable habitats within the site. **County Importance** as they represent a resident or regularly occurring population of an Annex II species of the Habitats Directive and considered a **KER**.

  The Biodiversity Chapter states that '*the loss of habitats associated with the Proposed Wind Farm (i.e conifer plantation and degraded wet heath), has the potential to displace individual animals to other suitable habitat in close proximity to the works areas. Given the wide availability of suitable habitat for the species throughout the Proposed Wind Farm site and throughout the wider area, this is considered to be a permanent, but not significant, effect*.' Per the report, there is potential

for a temporary significant effect on the local Kerry Slug population as a result of disturbance/ mortality.

Mitigation is required to minimise potential loss of individual slugs; this includes pre-construction surveys of work areas in wet heath / blanket bog habitat and transfer of any Kerry slug found to suitable habitat in the surroundings. Taking the mitigation measures into consideration it has been assessed that the effect of the proposed development on Kerry Slug would not be significant

- ***Amphibians and reptiles***: The report outlines that frog spawn was recorded within drainage ditches and puddles adjacent to the southern conifer plantation, and along access roads, and that live adult frogs were recorded within wetland areas, wet grassland and drainage ditches. No smooth newts were recorded. The report considers the site to be suitable for common lizard, although none were recorded. Frogs have been evaluated as **Local Importance (Higher Value)**. The report considers that there will be not impacts to amphibians or reptiles and does not identify them as Key Ecological Receptors.

Potential for the development to give rise to negative impacts on Aquatic Habitats & Species: Per the EIAR Appendix 6-3, aquatic baseline surveys were undertaken on 26th–28th June 2024 (eDNA surveys), on the 7th–9th August 2024 (River and Fisheries Habitat Assessment, Electrofishing surveys, Otter surveys, Q-value assessment of Proposed Wind Farm Survey Sites) on 15th and 16th October 2024 ((River and Fisheries Habitat Assessment, Otter surveys, Q-value assessment of Proposed Grid Connection Survey Sites). According to the report, 21 survey sites located across two hydrological sub catchments were selected within the vicinity of the proposed wind farm. Environmental DNA (eDNA) sampling for both freshwater pearl mussel and white-clawed crayfish were undertaken in select watercourses within the proposed wind farm and proposed grid connection study areas in June 2024, with eDNA sampling conducted at 12 no. proposed wind farm survey sites and 9 no. proposed grid connection route survey sites.

According to the reports, overall fisheries potential for a range of fish species and age classes was limited by inaccessibility as a result of the headwater location and bedrock cascade-pool-step features within the wider riverine landscape. Q-values within the site ranged from Q2-3 (edge of northern windfarm section and downstream of southern section) to Q4-5 (outside or edge of northern section). There were no positive results for freshwater pearl mussel or white-clawed crayfish eDNA at any of the wind farm survey sites. Positive FPM samples were taken in the vicinity of the proposed grid connection route.

The report concluded that while the majority of upland watercourses exhibited limited fisheries value due to natural morphological constraints and steep gradients, select reaches provided ecologically important habitat for salmonids, European eel and otter. Chapter 6 of the EIAR, outlines that on a precautionary basis, Freshwater Pearl Mussel potentially present in watercourses downstream of the Site may be associated with QI populations of the River Bandon SAC and would therefore be of International Importance. In the absence of appropriate mitigation and design, taking a precautionary approach; potential for indirect effect on these watercourses during construction of the Proposed Project has been identified. These species include salmonid, trout, European eel, lamprey and other aquatic species. Fish and other aquatic species are therefore included as a KER for further assessment along with Eroding/ upland rivers (FW1)/ Depositing/ Lowland Rivers (FW2).

Per the report, construction phase activities will require ground excavations, cement, tree felling, excavation dewatering, use of fuel powered machinery, all of which have potential to result in pollutive materials entering watercourses. The report states that in the absence of mitigation, there is potential for the Proposed Wind Farm to result in significant indirect effects on the identified aquatic habitats

and species at a local geographic scale in the form of pollution during the construction phase. There is potential for an indirect, negative, significant, temporary, likely impact to surface waters within the Proposed Wind Farm site. This would result in impacts on a receptor of local importance (higher value). In the absence of mitigation, there is potential for the Proposed Grid Connection to result in significant indirect effects on the identified aquatic habitats and species in the form of pollution arising during the construction phase. This would result in impacts on receptors of local importance (higher value), and potentially of International Importance due to the downstream connectivity with the River Bandon SAC/ Bandon Valley South of Dunmanway pNHA via the Proposed Grid Connection.

The drainage design for the windfarm outlines how water quality is proposed to be protected during the construction of the Proposed Project. Chapter 9 of the EIAR provides mitigation measures relating to earthworks (silt traps, correct stock piling, maintenance of drains and culverts, etc.), tree felling (complying with guidelines and regulations), potential release of hydrocarbons during construction and storage, contamination from wastewater disposal, groundwater impacts, flooding impacts, potential impacts during horizontal directional drilling, and release of cement-based products.

Potential for the development to give rise to negative impacts on Avian Fauna: As per the Chapter 7 Ornithology, bird surveys completed at the site followed SNH/NatureScot guidance. It is noted that field surveys were undertaken during the survey period April 2022 – March 2025, consisting of three breeding seasons (April – September) and four winter seasons (October – March). A broad summary of the field survey results of highly sensitive species, which were considered to be of local importance (higher) or greater, recorded within the EIAR is detailed below.

- **Chough**: Confirmed breeding. Adults with chicks were observed. Six observations related to breeding behaviour within the Proposed Wind Farm site. Five of these were clustered together approximately 1km from the nearest proposed turbine. The final one was within 300m of a proposed turbine location.
  There were five observations of roosting behaviour, three of which were within the Proposed Wind Farm site. None were within 500m of a proposed turbine.
  Observed 35 times during breeding walkover surveys, on 25 of the 60 survey dates (42%) of breeding walkover survey. Of these records, eight were within the Proposed Wind Farm site. Observed 11 times during roost surveys.
  According to the report, chough is considered to be a breeding population of **County Importance** and a non-breeding population of **County Importance**.

- **Hen Harrier:** No evidence of breeding at the Proposed Wind Farm site during surveys. One record of a likely dispersing juvenile in the post-breeding period in September 2022. Origin of this juvenile bird is not known, as juvenile hen harrier may be dispersing from their natal area by September.
  The report outlines that there was one incidental record of a male and a ringtail possibly roosting in November 2023. This was outside the Proposed Wind Farm site, and approximately 850m from the nearest proposed turbine.
  Per the report, there were 19 observations of hen harrier during vantage point surveys. Ten of which were within 500m of the proposed turbine locations. Three observations on 3 of the 62 survey dates (5%) of winter walkover survey.
  The report outlines that the above observations suggest that the Proposed Wind Farm site was being used in the winter months by up to three birds for hunting. Thus, they are considered to be a population of **National Importance**.

- **Peregrine:** Confirmed breeding. Breeding behaviour was observed, within and in proximity, to the Proposed Wind Farm site but a territory was not located. Per the report, likely territory in the wider

area, given the presence of displaying birds, probable provisioning and juveniles in the breeding season. No evidence of winter roosting within windfarm site.
There were 28 observations of peregrine falcon during vantage point surveys (14 were within 500m of the proposed turbine locations).
According to the report, the peregrine falcon observed at the Proposed Wind Farm site are likely associated with a breeding territory pair, which is of **County Importance**.

- **Kestrel:** Confirmed breeding. One breeding territory was identified in 2022 and one in 2023. Both territories were in the wider area. No evidence of winter roosting within windfarm site.
  There were 327 kestrel observations recorded during vantage point surveys, 13 observed during winter walkovers, 35 observations of kestrel during breeding walkover survey, and 57 observations of kestrel on breeding raptor surveys.
  The population recorded at the Proposed Wind Farm site is considered to be of **Local Importance (Higher Value)**.

- **Red Grouse:** Confirmed breeding. A family unit were outside the proposed wind farm site and approximately 700m from the nearest proposed turbine. No evidence of winter roosting within windfarm site.
  There was a single observations of red grouse during vantage point surveys (four birds were observed flying and foraging approximately 2.2km west of the nearest proposed turbine location), six observations during winter survey (five of which within the site) and a single observation of two adults and five juveniles recorded flying and calling, outside of the proposed site, during breeding bird survey.
  Red grouse were confirmed to be utilising the Proposed Wind Farm site for breeding on one occasion, and had the potential on another occasion, suggesting two territories. Therefore, this species is considered to be a population of **County Importance.**

- **Snipe:** Possible breeding. Alarm calls and display flights observed within 500m of a proposed turbine. No evidence of winter roosting within windfarm site.
  There were 19 observations of snipe during vantage point surveys, 25 observations during winter walkover surveys, four observations during breeding walkover survey, and 26 during waterbird distribution surveys.
  This species is considered to be a population of **Local Importance (Higer Value)**.

- **Buzzard:** Confirmed Breeding. Breeding activity observed in all years, and one territory identified in 2022 and 2024. No evidence of winter roosting within windfarm site.
  There were 76 observations of buzzard during vantage point surveys, with 21 observations within 500m of the proposed turbines. Breeding behaviour was observed in breeding seasons 2022, 2023, 2024, and in early 2025. In 2022 and 2024 birds were exhibiting breeding behaviour in the same area of conifer forestry, to the east of the Proposed Wind Farm site, indicating a likely breeding territory. In March 2025 buzzards were displaying within the Proposed Wind Farm site. Four observations of buzzard during winter walkover survey, 15 observations during the breeding bird survey and 25 observations breeding raptor survey.
  Considered to be a population **of Local Importance (Higher Value).**

- **Sparrowhawk:** Confirmed Breeding. Breeding territories were located in 2022 and 2024 within the Proposed Wind Farm site. A second territory was located outside the Proposed Wind Farm site in 2024. No evidence of winter roosting within windfarm site.
  In 2022 sparrowhawk were confirmed breeding and the territory was likely within the Proposed Wind Farm site, within 320m of a proposed turbine. In 2024 there was confirmed breeding approximately 2km east, and, given this distance, it is possible this was the same or a separate pair. Also, an adult sparrowhawk was observed carrying prey into a patch of forestry approximately 900m south of the closest proposed turbine suggesting a territory.

Considered to be a population **of Local Importance (Higher Value).**

- **White-tailed Eagle:** There were two observations of this species. The first was approximately 3.2km from the Proposed Wind Farm site. A single individual was observed soaring at a height over 200m in August 2022. The other observation was a single immature bird being mobbed by a raven approximately 750m from the Proposed Wind Farm site in February 2023.
  The report states the following: '*Although white-tailed eagle were not recorded within 500m of the Proposed Wind Farm site, given their conservation status as a recently re-introduced species, they are discussed here. The white-tailed eagle range in Ireland is expanding, and it is therefore reasonable to assume that this species will become more widespread and frequently observed in the vicinity of the Proposed Wind Farm site. On a precautionary basis, the population in the area is likely to become one of* **County Importance** *over the lifetime of the Proposed Project.*'

Direct habitat loss:
Per the report, habitats utilised by the target bird species are not unique to the Proposed Wind Farm site and are abundant in the wider surrounds. **No significant effects of direct habitat loss** are anticipated at the county, national or international level.

Disturbance:
The report assumes that temporary disturbance will occur in areas of the Proposed Wind Farm site where species were observed roosting or foraging but as habitats utilised by the **target bird species** are not unique to the Proposed Wind Farm site and are abundant in the wider surrounds. No breeding behaviour was observed during surveys; **white-tailed eagle** were infrequently passing through the wider area. No suitable eagle breeding habitat is within proximity to the Proposed Wind Farm site. **No significant** effects of disturbance loss are anticipated at the county, national or international level.

Displacement and Barrier Effect:
The report outlines that given the distance from proposed turbines and the proposed windfarm itself that the recorded **chough** and **raptors** were observed and as the habitats utilised are not unique to the Proposed Wind Farm site and are abundant in the wider surrounds, **no significant effects of displacement** are anticipated at the county, national or international level.

With regard to **red grouse**, the report cited a 2011 study by Douglas *et al.* which found no significant change in the relationships between grouse occurrence and either turbine or track proximity and found no evidence for re-distribution in red grouse in response to wind farm operation.

Collision Risk:
Collision risk assessments were carried for all target bird species. Per Chapter 7 of the EIAR, collision risk has been assessed as **no effect** for hen harrier, white-tailed eagle and red grouse to **very low/not significant** for chough, peregrine, kestrel, snipe, buzzard and sparrowhawk.

The no effect assessments for hen harrier, white-tailed eagle and red grouse were due, per the report, to no observations of the species flying at the potential collision height (PCH) during the vantage point survey work undertaken. Therefore, the report deems that collision related mortality is not likely to significantly impact this species, based on available data. The collision rate for chough was calculated at 0.088 collisions per year (breeding season), and 0.014 (winter). The collision rate for peregrine falcon has been calculated at 0.024 collisions per year, 0.55 collisions were to occur per year for kestrel, 0.002 collisions per year for snipe, 0.071 collisions per year for buzzards, with the collision rate for sparrowhawk calculated at 0.009 collisions per year.

Mitigation:

A CEMP has been prepared and will be in place prior to the start of the construction phase. This will include measures specific to birds such as working outside of the bird breeding season, a pre-construction bird survey at the Proposed Wind Farm site to ensure that any sensitive roost or nest sites in the works area are identified and disturbance to these are avoided with no works permitted within the buffer until it can be demonstrated that the roost/nest, should one be recorded, is no longer occupied.

During operation of the windfarm post-construction bird monitoring will take place, per the submitted Bird Monitoring Programme, to establish possible effects on bird species as a result of the project. This will include collision searches / carcass searches with dogs. The collision searches will be carried out on a monthly basis in Years 1, 2, 3, 5, 10, and 15 of the operational phase of the wind farm.

Assessment:

The following assessment is made based on a review of aerial photography, National Landcover Mapping and all information provided in the EIAR, NIS and other relevant planning documentation. Regard has been had to County Development Plan policies including ET 13-4, ET-13-5, ET 13-6, ET-13-7, BE 15-2 and BE 15-6.

The primary considerations from an ecological perspective in respect of the windfarm development are the following:

- Potential for the proposed development to give rise to negative effects on designated sites.
- Potential for the proposed development to give rise to negative effects on habitats of high ecological value.
- Potential for the proposed development to give rise to negative effects on freshwater habitats and associated species.
- Potential for the proposed development to give rise to negative effects on populations of protected species.

Natura 2000 sites/Appropriate Assessment

Having reviewed the NIS and supporting documentation, I concur that the windfarm site is situated entirely almost entirely outside of the Bandon catchment and, thus, will not adversely affect the Bandon River SAC at construction, operational, or decommissioning stages. The potential effects on the SAC as a result of the installation of the grid connection (impacts to water quality, siltation, release of hydrocarbons, etc) are noted and the mitigation measures outlined in the NIS are considered sufficient.

Having regard to the Mullaghanish to Musheramore Mountains SPA, given the intervening distance between the SPA and the proposed windfarm site, I concur with the NIS in that breeding pairs associated with the SPA will be not adversely affected by the windfarm, nor will breeding and foraging opportunities within the SPA. Having regard to ex-situ impacts, I consider the intervening distance to be too great for any significant adverse effects to occur.

Habitats:

It is noted that the applicants propose a peatland enhancement area encompassing an area of recently afforested conifer plantation and degraded wet heath habitat. The proposed new road leading to the proposed T6 will run through this area. Per SEPA guidelines[3], the relevant buffer zones for all ground water dependent terrestrial ecosystems proposed infrastructure (provided expected dewatering rates

[3] Guidance on Assessing the Impacts of Developments on Groundwater Dependent Terrestrial Ecosystems (SEPA, August 2024)

do not exceed $10m^3$/day) are: 10m radius of all activities; 100m radius of all subsurface activities less than 1m in depth; and 250m of all subsurface activities deeper than 1m. As the new road and turbine may hinder enhancement measures, an alternative location for the peatland enhancement area should be sought. I also note that T2 appears to be proximal to Article 17 Annex I habitat (Figure 1). The applicant should be requested to clarify the distance from the Wet Heath [4010] habitat, as it too may be impacted by development. It is noted that the EIAR has outlined that 1.6ha of wet heath habitat, albeit degraded, will be lost to the development, along with 0.2ha of upland blanket bog to accommodate T4 and T14. While it is not mapped Article 17 Annex I habitat, the County Development Plan 2022 (and its variation) listed Wet Heath (HH3) as a Habitat Conservation Importance in County Cork and its removal would be contrary to Objective 15-2 of the Plan. As no distinction between intact or degraded has been made, the proposed removal of habitat to accommodate Turbines 4 and 14 would contravene the aforementioned objective. The removal of blanket bog habitat, at any scale, is unacceptable in this regard and should not be permitted to occur. The Planning Authority is of the opinion that to achieve biodiversity net gain, per Objective 15-6, and to ensure the protection of wet heath habitat and blanket bog, the sites originally proposed for T4 and T14, along with associated infrastructure, should be the focus of wet heath enhancement measures as set out in the Biodiversity Management and Enhancement Plan, and protection of Annex I habitats.

Bats:
While the windfarm site poses low risk impacts to lesser horseshoe bats, the only Annex II listed bat in Ireland, the applicants and An Coimisiún Pleanála (ACP) should note that a known maternity roost is located proximal to the proposed grid connection route. ACP may wish to request an assessment of potential impacts the construction stage of the proposed grid connection route may have on this important maternity roosting site.

Avian Species:
On viewing the walkover survey locations as outlined in Figures 7-1-2 and 7-1-3 of the EIAR (Figure 2 and Figure 3) it noted that no walkover surveys were conducted in the vicinities of Turbines 11, 12, 13, or 14. In order to inform a robust assessment and ensure no impacts, the applicants should be asked to clarify why no walkover surveys were conducted here and to undertake such surveys if deemed required by ACP.

It should be noted that a known chough nest site is located proximal to the proposed grid connection route. ACP may wish to request an assessment of potential impacts the construction stage of the proposed grid connection route may have on this site.

Having regard to hen harrier post-breeding and winter roosts, the submitted documents state that given the extent of suitable hunting habitat that will remain in the Proposed Wind Farm site and surroundings, and the distance of proposed works and infrastructure from the SPA, suitable habitat will remain available to overwintering hen harrier to continue to utilise the area for hunting and roosting. Per the EIAR Chapter 7, '*Pearce-Higgins et al. (2009) found significant avoidance of turbines by hen harrier within 250m, and reduced flight activity (52%) by hen harrier within 500m of turbines at operating wind farms. Goodship and Furness (2022, also reviewed in NatureScot, 2022) also found that disturbance may occur between 500-750m'*. It could be argued that with the intensification of windfarm development within the area, in addition to forestry in the surrounding environment transitioning to a closed canopy, the site in question may overtime become a vital resource to this species given its already known site usage, which may be lost.

Also, as described Chapter 6 of the EIAR, there are areas of recently felled conifer woodland (WS5) which may provide suitable nesting opportunities for hen harrier, prior to the commencement of works on the proposed windfarm site, especially. The applicants have not provided any information on what measures would be required in the event of nesting occurring within the site. The development of a windfarm so close to a hen harrier nest would significantly impact this Annex I species.

It is noted that the Ornithology Chapter asserts that there is no risk of collision for hen harrier and white-tailed eagle based on their observed flying height and distance from the proposed windfarm site, respectively. Studies show that, while low, there is still risk of collision for hen harrier. This view is in the context of two known mature adult hen harrier fatalities caused by collision with turbines in the county within the past five years (e.g. Planning Reference 13/5885, compliance reporting), which is not acceptable given the population within the County. Should it be decided to consider this application further, then it would be my recommendation that additional information be sought in relation to the adequacy of the collision model used to predict the significance of impacts to rare and highly sensitive species including hen harrier.

The push for renewable energies has unfortunately led to anthropogenic fatalities of a number of bird species, including some considered to be of conservation concern. As it stands, the proposed development has not provided any dedicated operational measures for the sited turbines to minimize the potential for collision of turbine blades with avian species.

Throughout the global wind farm industry, numerous operational techniques are utilised to help minimize the risk of avian mortalities through collision with turbine blades e.g. shut down on demand powered by automated SDoD systems or in places like Africa by trained observers who watch for incoming birds and take appropriate action when necessary. However, the expense of some of these measures can be significant in respect to the scale of the proposal. A more potential cost effective mitigation measure is the use of passive visual clues such as blade patterning to mitigate bird strikes, especially for raptors, affording incoming birds time to take evasive action.

Solid black blades were trialled first in the now famous Smøla wind-power plant study in Norway with good success, however a further study of black blade turbines in the Netherlands found no significant results. That said, recent studies in Africa, which utilised aposematic colourations / patterns on turbine blades i.e. red patterning have seen some very positive results with avian fatalities reduced by a median 83% over a 32 month post patterning period. This included reduced fatality rates for raptors (eagles, buzzards, harriers, falcons and owls). As many avian species have poor achromatic contrast sensitivity the increase in contrast through patterning allows for greater detection then pale blades alone, with bio-inspired patterns exploiting innate colour aversions seen in the natural world.

Therefore, while this novel approach has yet to be robustly tested or even employed in an Irish setting, An Coimisiún Pleanála should give consideration to the requirement for the implementation of such biologically inspired aposematic patterns in respect to this proposal having regard to the concerns of the NPWS around White-tailed Sea Eagle and the recorded presence of a number of protected raptors at the study site. Birdlife South Africa and The Birds and Renewable Energy Specialist Group have developed guidance for the recommendation of patterns to reduce avian impacts[4]. Comments of the Irish Aviation Authority should be sought in regard to any patterning put forward.

It should be noted that there is an error in Appendix 7-6. There are two collision risk assessments for chough and none for hen harrier. This should be corrected and revised.

Conclusions:

Overall, I have significant concerns relating to this proposal be it either the siting of the same within habitats County / National Importance or the inadequacy of the information and assessment provided by way of the supporting documentation.

[4] Simmons, Robert & Ralston-Paton, Samantha & John, Gibbs & Rand, Caryn & Law, Matthew & Taylor, Shaun & Murgatroyd, Meg & Gibb, Andrea & Sookgrim, Santosh. (2024). BLADE PATTERNING GUIDELINES AN INITIATIVE OF THE SOUTH AFRICAN WIND ENERGY ASSOCIATION, BIRDLIFE SOUTH AFRICA AND THE BIRDS AND RENEWABLE ENERGY SPECIALIST GROUP

It is the recommendations of Cork County Council Ecology Office that that no such development take place on intact peatland habitats, degraded peatland habitats or any habitats of high natural value.

Should ACP wish to consider this application further, I consider that a proposal redesign is required along with additional information which takes into consideration a number of direct, indirect to complete an Environmental Impact Assessment of this proposal.

Notwithstanding these concerns we have been asked and have provided conditions. However, it should be noted that there are concerns in relation to the proposal, which I believe should be resolved prior to a grant of permission and not done so by way of condition.

Conditions

No.	Condition	Reason
	Prior to the commencement of works, the applicant shall submit, for agreement from NPWS and the Planning Authority and in consultation with BirdWatch Ireland, plans for the inclusion of turbine blades which shall be designed with aposematic patterns	To reduce bird collision risk with wind turbines.
	Turbines 4 and 14, and their associated connection tracks, hardstanding areas etc., shall be omitted from the proposed scheme.	In the interests of minimising negative impacts on habitats and species of high biodiversity value within the site.
	Prior to the commencement of development, an Ecological Protection Plan shall be submitted to, and agreed in writing with, the planning authority. The Plan shall include the following: a) Development of a habitat's protection plan for the overall site. b) Specific proposals to deal with the Chough, Hen Harrier, White-tailed Sea Eagle, and Bats during the construction and operational phases. c) Ongoing monitoring of the conservation status of protected habitats and species within the site. The developer shall review usage by protected species, with a focus on birds and bats, of the wind farm site and document any casualties through the monitoring programme. An annual report on the ecological monitoring shall be submitted to the planning authority including for seven years post commissioning of the project.	To protect the ecological value of the site.
	Prior to the commencement of development, the applicants shall submit a Conservation and Habitat Management Plan for the site.	To minimise impacts on habitats and species of biodiversity value within the site.

	This should be based on revised design of the proposal. The plan shall provide details and programmes for the implementation of all habitat management / enhancement proposals required to mitigate / compensate for the loss of or damage to habitats of biodiversity value (including degraded wet heath), including habitats of value to protected faunal species. The plan shall include a map identifying the areas to be managed and shall also provide detailed information in relation to the measures to be implemented to achieve this. The plan shall also include a timeline for implementation of described measures and shall provide for ecological monitoring of management/enhancement works to examine the effectiveness of the proposal. The plan shall be prepared by a suitably qualified ecologist.	
	Prior to construction works being carried out between March and August, a survey for breeding birds shall be carried out by a suitably qualified ornithologist. The survey shall cover the area within a boundary of 500m of the works to be carried out during the above period. No construction works shall be carried out during the above period within 500m of a presenting breeding site and / or nest without the agreement from NPWS (if required) and the consent in writing of the planning authority.	In the interest of wildlife protection.
	A survey for breeding sites and resting places of protected terrestrial species, in particular Bats (all roost types), Otter, Badger, Red Squirrel and Pine Marten, will be carried out prior to construction works commencing. If these features are found, then appropriate mitigation measures shall be submitted to and agreed in writing with the planning authority, prior to commencement of development. Any mitigation measures in relation to otter or bat populations shall be carried out only under licence from the National Parks and Wildlife Service and details of any such licence shall be copied to the planning authority.	In the interest of wildlife protection.

Kieran Murphy
Cork County Council, Executive Ecologist

Figure 1: Location of T2 proximal to [4010] Wet Heath

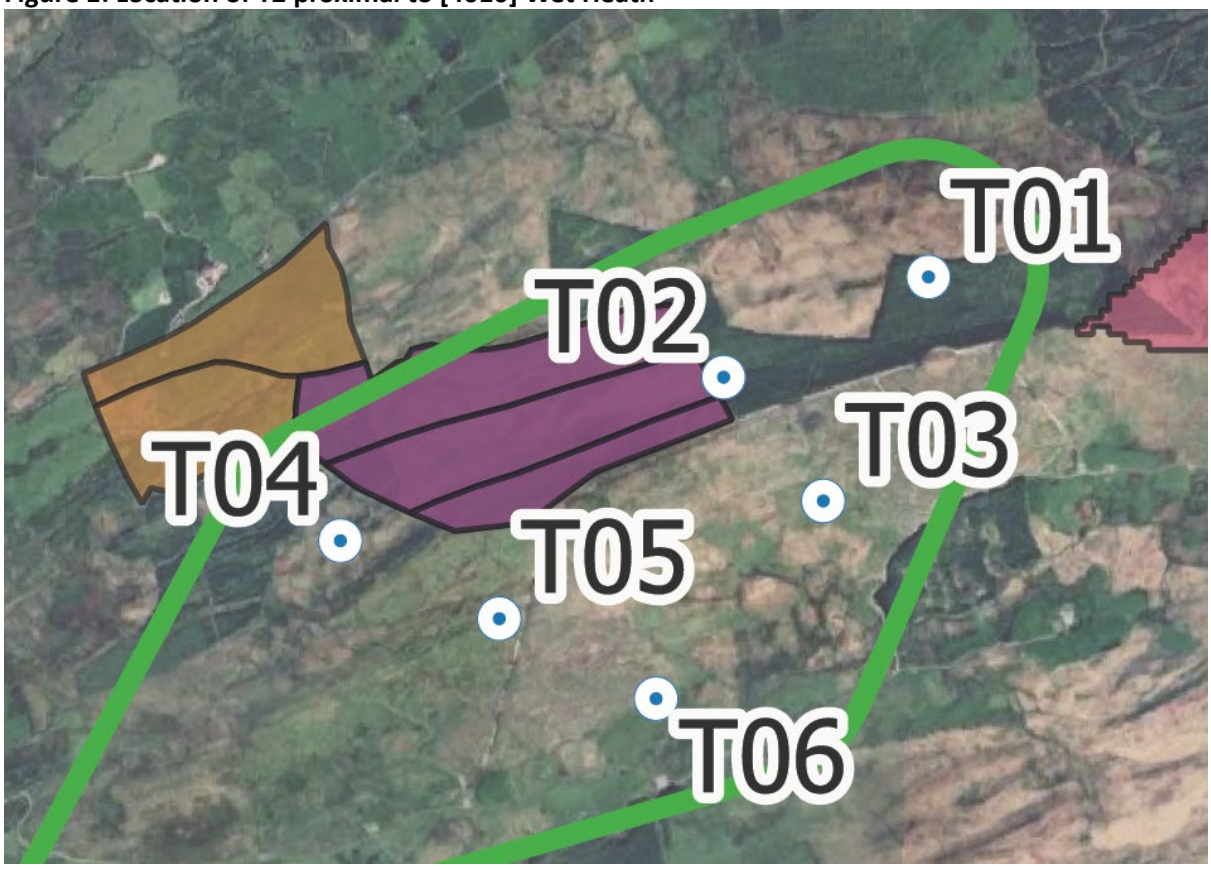


Figure 2: Locations of winter walkover surveys as provided by the applicants

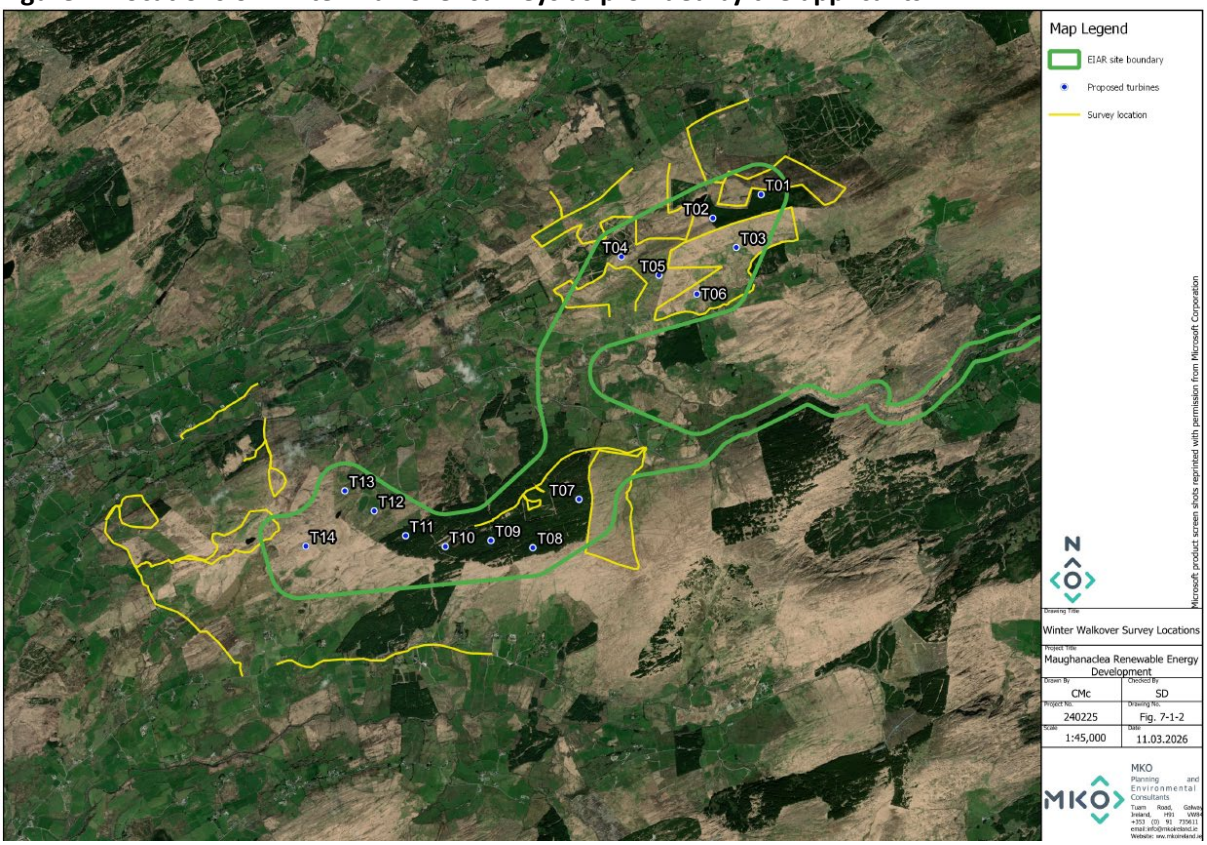
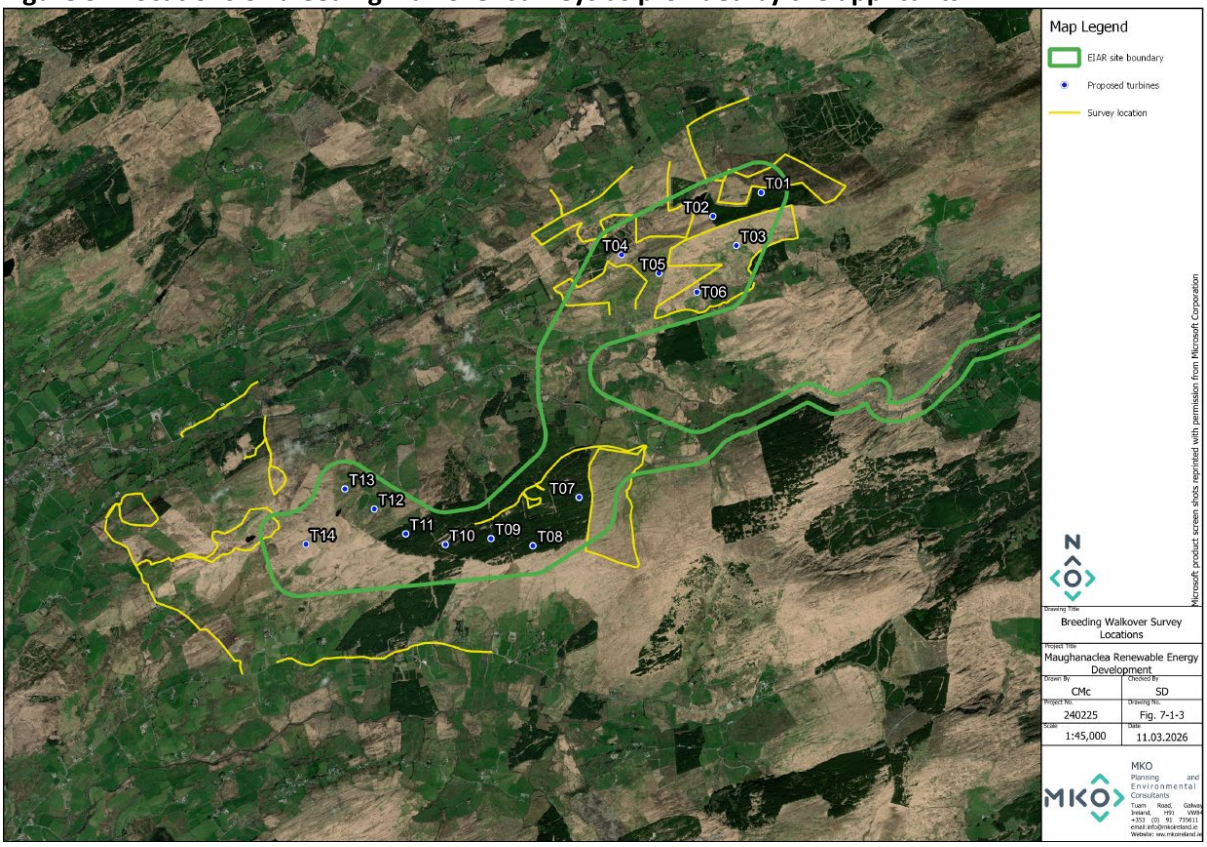


Figure 3 - Locations of breeding walkover surveys as provided by the applicants



Senior Planner Report

Maughanaclea Windfarm Strategic Infrastructure Development - An Bord Pleanála Ref No PAX04.324165.

The Environmental Impact Assessment Report, Natura Impact Statement, Appendices and drawings which form part of the proposed Maughanaclea Windfarm development are noted.

I have read the internal reports of the Ecology Officer, Archaeological Office, Roads Engineers and Environment Officers and concur with the opinions contained therein.

In assessing the proposed windfarm, regard has been had to Objective ET 13-7 in the Cork County Development Plan, 2022.

Objective ET 13-7 of the Cork County Development Plan, 2022 states that wind energy development is open to consideration where proposals can avoid impacts on the following:

- Residential amenity particularly in respect of noise, shadow flicker and visual impact.
- Urban areas and Metropolitan/Town Green Belts.
- Natura 2000 Sites (SPA's and SAC's), Natural Heritage Areas (NHA's), proposed Natural Heritage Areas and other sites and locations of significant ecological value.
- Architectural and archaeological heritage.
- Visual quality of the landscape and the degree to which impacts are highly visible over wider areas. In planning such development, consideration should also be given to the cumulative impacts of such proposals.

In regard to residential amenity, there are concerns regarding the application of the 2006 Wind Energy Guidelines in the assessment (8 no. sensitive receptors would exceed the annual threshold of over 30 hours for shadow flicker). Given the potential effects from shadow flicker, the 2019 Draft Guidelines, which require that no existing dwelling or other affected property should experience shadow flicker as a result of the wind energy development, should be adhered to. Review of the site design should also be examined with a view to establishing whether shadow flicker can be eliminated. A redesign, including the omission of T01, would be encouraged to ensure that no dwelling experiences cumulative shadow flicker from both the proposed development and the Gortloughra windfarm which is currently on appeal (dwelling HO35 would potentially experience cumulative shadow flicker from both proposed windfarms).

The proposed development raises a number of significant concerns regarding visual impact considerations. Most of the potential visual impact effects would arise within 5km/ in close proximity to the proposed windfarm. This is largely due to the location and prominence of the proposed development, comprising of 14 turbines in 2 no. clusters, on either side of key Scenic Route 29 (R585) with the northern cluster of turbines located just south of the R584 and Scenic Route 28 (R585). The 'Zone of Theoretical Visibility' indicates there would be high theoretical visibility within 5km of the proposed turbines. Key scenic routes and roads are located with the 5km zone in addition to the Cousane Gap and a significant number of residential properties. It is recognised that Scenic Routes R585 to Kealkill via the Cousane Gap and the R548 north of Kealkill through the Pass of Keimaneigh to Gougane Barra are important 'gateways' to West Cork and are synonymous with the scenic values of this landscape and the identity of Kealkill, Bantry, Cousane Gap and the Shey Mountains.

Notwithstanding the location of the proposed windfarm in an area where windfarms are open to consideration, the proposal would be located very close to the adjoining designated High Value Landscape where windfarms are normally discouraged. The close proximity of the turbines to designated High Value Landscape is seen in the location of T13 and T14 which would be approx. 469m

and 484m respectively from the boundary with the 'Normally Discouraged' High Value Landscape. The Environmental Impact Assessment Report does not address the overlap of landscape forms close to the wind strategy boundaries which is indicative of the visual sensitivity of this area. It is noted that the Environmental Impact Assessment Report identifies the windfarm as being located in a Landscape Character Type 'Ridged and Peak Upland' and having a 'Landscape Value' and a 'Landscape Sensitivity' of High. Given the site's location so close to the High Value Landscape and the open scenic views, the landscape value of the area is significantly higher than assessed in the Environmental Impact Assessment Report.

The Environmental Impact Assessment Report states that visibility is only likely to occur in isolated elevated vantage points. However, given the topography of the landscape, the proposed windfarm would be visible from large areas within the site's vicinity. The view contained within the Environmental Impact Assessment Report that the proposed turbines would be sited to "ensure the turbines are at the periphery of views" within Maughanaclea Valley would not be supported. The Planning Authority is of the opinion that views from the adjoining Scenic Routes, the S29 and S28, would be significant and would not represent long distance views. The magnitude of the visual impact on Scenic Route 29 (R585) would be higher and more pronounced than that illustrated in VP10 when travelling westbound. The visual impact along the R585 would be significant and unlikely to be reasonably screened, given the scale and number of turbines proposed.

While the Environmental Impact Assessment Report asserts that the landscape can accommodate the proposed windfarm, it is not accepted that the surrounding landscape would have the capacity to absorb a 14-turbine windfarm and provide visual containment of the proposal. The proposed turbines would be prominently visible, and the Landscape and Visual Impact Assessment has not demonstrated that the landscape can absorb the scale of development proposed.

The scale and quantum of turbines proposed is considered to be excessive for this visually sensitive location, particularly given its proximity to the Cousane Gap, which offers open panoramic views to Bantry Bay when travelling westwards. Views from the Cousane Gap are open across the adjacent landscape.

The Environmental Impact Assessment Report recognises that there is a cumulation of windfarms, both existing and under appeal, in the vicinity of the proposed site. Proximity to the proposed Gortoughra windfarm (currently on appeal) is significant with T01 stated to be within 1.5km from the site boundary of Gortoughra windfarm at its closest point. Intervisibility between the proposed windfarm and Gortloughra windfarm cannot be mitigated, and it is considered that the landscape cannot absorb the scale of windfarm currently proposed, in tandem with the proposed Gortloughra windfarm, for this visually sensitive location.

I would not agree with the assessment and conclusions of the cumulative and in-combination effects from other projects, including windfarms, which is set out in Chapter 5. It is submitted that there is potential for a short-term negative not significant effect on property values within 1km of the proposed turbines of the proposed windfarm site. The Environmental Impact Assessment Report considers the proposal would not overlap with any other cumulative turbines and there is no potential for cumulative effects on property values to arise as there are no other cumulative turbines located within 2km of the proposed turbines. However, the Planning Authority notes the proposed Gortloughra windfarm (currently under appeal) would be located 2km from the proposed Maughanaclea windfarm and in combination, there is potential for significant effects on property values.

Cumulative impacts in respect to visual effects, property values and residential amenity would be difficult to mitigate, given the scale and location of the proposed turbines.

Based on the information submitted in the Environmental Impact Assessment Report, it is considered that the significance of adverse impacts arising from the proposed windfarm cannot be ruled out and the proposal, in its current form, would not be contrary to Objective ET 13-7 in addition the policy objectives relating to scenic landscape qualities as set oy in GI 14-9, GI 14-12 and GI 14-13 of the Cork County Development Plan, 2022

On the basis of the above assessment, it is recommended that the proposal should be refused. A refusal reason has been set out below, should An An Coimisiún Pleanála be minded to refuse permission for the proposed windfarm.

Recommended Refusal Reason

The proposed windfarm development would be located within a Landscape Character Type of Ridged and Peaked Upland, within an area of open unspoilt landscape and within an area where commercial wind energy developments are 'Open to Consideration', as designated in the Cork County Development Plan 2022, subject to compliance with normal planning and environmental criteria, as set out in the specific Objective ET 13-7. The proposed wind farm site would also be sited in an area of High Landscape Sensitivity and Local Landscape Importance and would be visible from scenic routes S29 and S28. On the basis of the information submitted and having regard to the siting, excessive height and number of turbines proposed, it is considered that the proposed development would seriously detract from the views and prospects from parts of the S29 Scenic Route, would seriously detract from the visual quality of the landscape and visual amenities of the area and would be visually obtrusive when viewed from therein. The proposed development would, thus, materially contravene Objectives ET 13-7, GI 14-9, GI 14-12 and GI 14-13 of the Cork County Development Plan, 2022 which seek to protect the landscape and visual and scenic amenities of the area, including the views attainable from Scenic Routes, the character of such views and prospects and those with very special views. Accordingly, the proposed development would be contrary to the proper planning and sustainable development of the area.

G.O'Mahony
Senior Planner

Environment Officer (Water and Air)

Chapter 9 – Hydrology and Hydrogeology

This Section assesses the impacts of the proposed development on the aquatic environment from a physical-and chemical perspective, and *inter alia* aquatic biology. Where negative effects are predicted, the section identifies appropriate mitigation strategies therein.

The assessment will consider the potential effects during the following phases of the Development:
• Construction of the Development
• Operation of the Development
• Decommissioning of the Development

Cumulative impacts are considered, and mitigation measures identified. A desktop study and field surveys were carried out. The focus in this section is on the effects on water quality, status and objectives under the Water Framework Directive.
The primary risks to water quality from the proposed development will arise during the construction phase from a number of sources. Once constructed and with controls in place, the risks from the operational phase will be largely confined to spills from maintenance. Decommissioning phase will result in the construction phase risks being re-presented.

Source	Effect
Hydrocarbon contamination • Leaks from construction plant inc. refuelling • Leaks from lubricant storage • Maintenance leaks (operational stage)	• Toxic to aquatic and avian fauna. • Sediment contamination. • Public water supply contamination • Water discoloration • Odour
Suspended Solids /Fines/colloidal • Groundworks inc. site clearance, excavation of soil/subsoils, earthworks - grading and profiling • Pump out of groundwater from excavations • Drainage works and exposed soils. • Watercourse crossings • Instream works • Borrow pit • Peat transport	• Increased turbidity • Increased disinfection byproducts in public supplies. • Smothering of stream bed and interstitial spaces. • Reduced light transmissivity through water column – reduced photosynthesis • Deposition/accumulation in slack waters/channelisation • Increased BOD from peat deposition
Cement washout/alkaline (pH) pollution • Concrete foundations • Concrete washout	• Irritant/caustic burn to aquatic life • Increased ammonia toxicity from secondary point sources.

The main risks to water quality are from physical deterioration rather than from nutrient or organic loading. Due to the nature of wind farm and grid connection developments, being near surface construction activities, effects on groundwater are generally negligible and surface water is generally the main sensitive receptor assessed during impact assessments.

A number of pathways are identified in the EIAR that are either at risk themselves as receptors in their own right as they have environmental quality objectives established under the Water Framework Directive, or will act as pathways to other sensitive receptors dependant on the local surface/ground water environment.
Table 3.1 of Aquatic Baseline Report identifies water bodies potentially at risk from the Development inc. grid connection

Waterbody Name	WFD Code	Current WFD Status 2019-2024	Risk of failing to achieve WFD objectives
Owvane (Cork)_010	IE_SW_21O070200	High	Not At Risk
Owvane (Cork)_020	IE_SW_21O070400	Poor	Not At Risk
Owngar (Cork)_010	IE_SW_21O040400	High	Not At Risk
Mealagh_010	IE_SW_21M010200	High	Not At Risk
Mealagh_020	IE_SW_21M010400	High	Not At Risk
Bandon_010	IE_SW_20B020050	Good	Not At Risk
Bandon_020	IE_SW_20B020200	Moderate	At Risk
Beara Sneem	IE_SW_G_019	Good	Not At Risk
Bandon	IE_SW_G_086	Good	Not At Risk

There are a number of identified downstream sensitive receptors potentially at risk from the proposed development:

- Bantry Bay Shellfish Waters
- Kealkill Public Water abstraction (approx. 1km d/s)
- Bantry abstraction on the Mealagh (approx. 9km d/s)
- Bandon Regional Supply (approx. 20km d/s)
- Bandon River SAC (freshwater pearl mussel)

A Water Framework Directive (WFD) Compliance Assessment (Appendix 9-3) has been completed for all waterbodies (surface water and groundwater bodies) with the potential to be impacted by the Proposed Project.
Agriculture is the principal pressure on the single waterbody with less than favourable status , and at risk of failing to achieve WFD objectives.

Mitigation
The EIAR cites a number of industry guides to prevent pollution from construction sites including:

- CIRIA C648 (2006) – Control of water pollution from linear construction projects
- CIRIA C532 (2001) – Pollution control from construction sites
- GPP5 – Works or Maintenance Near Water
- Inland Fisheries Ireland (2016) – Protection of fisheries during construction works
- Scottish Natural Heritage (2010) – Good Practice During Wind Farm Construction

The CEMP/SWMP identifies a number of standard mitigation measures are proposed, including, detail provided in Appendices 4-3, 4-4, 9-3

- Planned works to avoid unnecessary vegetaion stripping
- Avoiding unnecessary movements of soils
- Reinstatement after excavation
- Silt fences/Sediment barriers on slopes and between watercourses.
- Settlement ponds/lagoons/silt traps/check dams
- Buffer zones (50m) from watercourses

- Stockpiling away from water features
- Avoid work during heavy rain
- Good construction practices
- Temporary crossing/clear span of water courses
- Dewatering through settling tanks/siltbusters
- No direct discharge to surface water

Cumulative Effects

The EIAR concludes that the overall cumulative impact of wind farms is small. Where multiple developments occur within the same catchments, the number of turbines is low relative to the catchment size (approx. 1 turbine/5.6Km^2), so their combined influence on runoff and water quality is negligible. The main potential for cumulative effects arises during the construction phase, when ground disturbance is greatest, but this is effectively controlled through standard mitigation measures such as buffer zones and sediment management.

The distribution of developments across different sub-catchments and the avoidance of in-stream works further reduce the likelihood of overlapping impacts. Consequently, when assessed together, wind farm developments are not expected to result in any significant cumulative effects on hydrology or water quality.

With the implementation of the mitigation measures detailed in this EIAR there will be no adverse impact in the WFD status of the underlying groundwater body or downstream surface waterbodies as a result of the Proposed Project.

The Proposed Project has been found to be compliant with the WFD and will not prevent any waterbody from achieving its WFD objectives.

During the operational phase drainage control measures will ensure that surface runoff from the developed areas of the site will continue to be of good quality and will therefore not impact on the quality of down-stream rivers and streams.

Conclusion

Having regard to the information contained in Chapter 9 of the EIAR and supporting WFD Assessment undertaken, and subject to the implementation of the proposed mitigation measures, the predicted effects on hydrology and hydrogeology are acceptable.

The potential impacts have been clearly identified and assessed, and the proposed mitigation measures are considered satisfactory.

The conclusions are reasonable and supported by the evidence presented. Overall, the water quality assessment is deemed acceptable.

Chapter 10 – Air and Climate

The main risks to air quality are dust emissions from the construction phase, and shadow flicker from the operational phase. The production of energy from wind turbines has no direct air emissions as is expected from fossil fuel based power stations. No baseline air quality assessments were conducted.

The EPA has designated four Air Quality Zones for Ireland:

- Zone A: Dublin City and Environs
- Zone B: Cork City and Environs
- Zone C: 16 urban areas within population greater than 15,000
- Zone D: Remainder of the country

These zones were defined to meet the criteria for air quality monitoring, assessment and management as described in the CAFE Directive. The Site lies within Zone D - rural
areas located away from population centres over 15,000 pers.

The main risks to air quality are dust generation from earthworks and emissions from construction traffic and machinery, which may temporarily increase particulate levels and air pollutants locally; however, these impacts are short-term, confined to the construction phase, and negligible during operation.

The main risk from the operation phase is shadow flicker.

Source	Effect
Dust Generation / wind transport • Excavation and earthworks • Internal road construction • Stockpiling materials • Cementitious dust • siliceous dust	• Temporary increase in particulate matter (PM_{10} / $PM_{2.5}$) • Local nuisance (dust deposition on vegetation/properties) • Occupational respiratory effects • Long range transport to public
Vehicle & plant emissions • NO_x • SO_x • Particulates	• respiratory effects

A number of air quality mitigation measures are proposed:

- Water spraying of haul roads, exposed ground, and stockpiles to suppress dust
- Limiting the extent and duration of exposed soil and peat
- Covering or stabilising stockpiles and transported materials
- Enforcing low speed limits for construction vehicles
- Using designated haul routes to minimise dust generation
- Maintaining vehicles and machinery to reduce exhaust emissions
- Careful handling and storage of materials to limit dust release
- Covering loads during transport where required
- Regular site inspections and dust monitoring
- Adjusting or halting works during dry or windy conditions

Shadow Flicker (from Landscape and Visual Impact Assessment – Chapter 13).
Shadow flicker is identified as a potential effect of the wind turbines when rotating blades pass between the sun and nearby receptors (e.g. houses). Shadow flicker is an indoor phenomenon, which may be experienced by an occupant sitting in an enclosed room when sunlight reaching the window is momentarily interrupted by a shadow of a wind turbine's blade.
Shadow flicker is predictable and limited in duration and is highly localised, affecting only properties within a certain distance, lasts only for a short period of time and occurs only during certain specific combined circumstances:

- When the sun is low in the sky
- When turbines are aligned with a property
- During clear, sunny weather

The Guidelines (DoEHLG, 2006) recommend that shadow flicker at neighbouring dwellings within 500 metres of a proposed turbine location should not exceed a total of 30 hours per year or 30 minutes per day.

It is further noted that at distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low, and therefore the Shadow Flicker Study Area is set at 1.33km (10 x rotor diameter 1.33km).

79 no. sensitive receptors located within 1.33km of the proposed turbine locations are identified. From modelling, 39 of these are predicted to have no flicker. 30 are potentially at risk of the daily exceedance of 30mins/day or 30hours/year. 8 are potentially at risk of the annual exceedance of 30hours/year. That they are "involved landowners" is moot – where sensitive receptors are identified, appropriate controls are required.

Conclusion
Having regard to the information contained in Chapter 10 (Air Quality) of the EIAR, it is considered that the assessment has been carried out in accordance with relevant guidance and best practice.

The potential impacts have been clearly identified and assessed, and the proposed mitigation measures are considered satisfactory.

The conclusions are reasonable and supported by the evidence presented. Overall, the air quality assessment is deemed acceptable.

Recommended Conditions:

No.	Condition	Reason
	During the construction phase operations on site shall be carried out in such a manner that no polluting material, rubble, waste material or contaminated surface water enters any adjacent watercourses or public roadway around the site. No burning of waste material shall take place on site.	In the interests of environmental protection.
	All watercourses in or adjacent to the works area shall be monitored on a daily basis by the Drainage Engineer, or designate, to ensure they are not being impacted by silt/sediment laden storm water run-off from works area. A record of this monitoring shall be maintained on site.	To protect surface water quality.
	All over ground tanks containing hydrocarbons shall be contained in a waterproof bunded area, the capacity of the bund is to be the greater of the following: 110% of the largest tank size or 25% of total volume stored in the bunded area. All valves on the tank shall be contained within the bunded area. The bunded area shall be fitted with a locking valve that shall be opened only to discharge storm water. The developer shall ensure that this valve is locked at all times.	In the interests of environmental protection
	Hydrocarbon spill kits shall be in place on all site vehicles/plant. Suitable interceptor drip trays shall be used when refuelling vehicles/plant & when vehicles/plant are parked. No servicing of vehicles/plant shall be carried out on site.	To prevent water pollution
	All drainage and sediment /silt traps shall be in place before any other works are undertaken on the site. All work shall be carried out in favourable weather conditions to minimise the generation of silt & fines.	To prevent water pollution.
	Silt fencing shall be constructed to protect watercourses on site from run-off of silt laden water prior to commencement of development. These silt fences shall be maintained as required during the construction phase, & on an ongoing basis, until the site is fully vegetated & the risk of silt run-off is minimised.	To protect water quality.
	Clear span crossing of watercourese only is permitted. No watercourses shall be culverted.	To protect water quality & aquatic habitats.

	The construction of the development shall be managed in accordance with a Construction Environmental Management Plan which shall be submitted to and agreed in writing with the Planning Authority prior to the commencement of the proposed development. In relation to air and noise, this plan shall provide details of the construction practice for the development including. (a) Proposals for the suppression of on-site noise (b) Proposals for the suppression of dust on site (c) Proposals for the suppression of vibration (d) Proposals to minimise any odours. This plan shall include a comprehensive monitoring plan to include inter alia noise, vibration, and dust with regular reporting to the planning authority.	In order to protest the Environment and Local amenities during construction.
	An environmental monitoring and reporting programme shall be agreed with the Planning Authority for all identified water and air pollution mitigation controls to verify efficacy and ensure appropriate corrective action can be implemented where loss of control is evidenced or at risk.	In the interests of environmental protection
	A shadow flicker monitoring and management programme shall be agreed with the Planning Authority for all identified sensitive receptors to ensure recommended daily/annual exposure limits are not exceeded. This programme shall provide satisfactory mitigation measures including automated temporary shutdown of relevant turbines.	To protect human health

Environment Officer (Noise)

NOISE & VIBRATION:

Having regard to the specific nature of wind farm noise impact assessment, I would respectively suggest that the Bord should seek their own acoustic expertise to peer review the methodologies and modelling followed in the noise impact assessment. It is not in any way questioning the competency of the author of the submitted noise impact assessment report.

Chapter 12 of the submitted Environmental Impact Assessment (EIS) report and associated appendices describes the assessment undertaken of the potential noise and vibration effects on local residential amenity from the proposed Maughanaclea Renewable Energy development, County Cork. Noise and vibration impact assessments have been prepared for the construction, operational and decommissioning phases of the proposed project at noise sensitive locations (NSL). To inform this assessment it is submitted that baseline noise levels have been surveyed at six representative noise sensitive locations surrounding the proposed wind farm site. It is further submitted that noise predictions for the nearest noise sensitive locations have been prepared for all key elements of the proposed project that have the potential for noise and vibration impacts and effects.

The chapter is supported by material in the following appendices;
Appendix 12.1: Glossary of Acoustic terms.
Appendix 12.1: Noise Study area.
Appendix 12.3: Noise modelling parameters
Appendix 12.4: Predicted noise levels
Appendix 12.5: Predicted noise contour
Appendix12.6: Calibration Certification
Appendix 12.7: Protocol for management of Complaints.

An overview and outline of the assessment methodology including guidance documents and assessment criteria for the proposed project is detailed per Section 12.3 of the submitted Environmental Impact Assessment report.

The assessment methodology is detailed as per section 12.4 of the submitted documentation. It is submitted as per section 12.4.1. that the study area for the noise and vibration impact assessment was defined by the area where there is potential for noise and vibration impacts at noise sensitive locations associated with the proposed project during the construction, operational and decommissioning phases. The construction and decommissioning study area is detailed as per Section 12.4.1.1. It is submitted that noise could occur at any location within the proposed wind farm site and along public roads where there are increases in traffic associated with the proposed project. Noise sensitive locations in proximity to construction activities and those situated along haul routes have the most potential to experience noise and vibration from the proposed project. Taking account of the works associated with the construction and decommissioning phases, the study area is based on the nearest noise sensitive locations to the working areas, these distances are in the range between 63m for the internal roads, and over 325 m for the substation.

Section 12.4.1.2 details the operational phase study area. It is submitted that due to the potential for cumulative effects with other existing wind farm developments, the study area for the operational phase was determined as the area predicted to exceed 30 dB L_{A90} at the maximum predicted turbine noise emission level from the proposed project in isolation. (Ref. Figure 12.2). It is also submitted that consideration was given to potential cumulative impacts from other wind turbines in the wider area

and all wind farms referenced have been considered in the cumulative assessment, namely Curraglass wind farm, Dereenacreenig West wind farm, Gortloughra wind farm and Shehy More wind farm.

Section 12.4.2 details the background noise survey undertaken to establish typical background noise levels at representative noise sensitive locations surrounding the proposed wind farm. This was conducted through installing unattended sound level meters at 6 no. representative locations in the surrounding area. The locations were identified by preparing a preliminary noise model contour at an early stage of the assessment. The selection of the noise monitoring locations was also informed by a site visit and supplemented by reviewing aerial images of the study area and other online sources of information.

The co-ordinates for selected locations for the noise monitoring locations are outlined in Table 12-6 and identified on a map in Figure 12.3 of the submission. Site visits by survey personnel were carried out during morning and afternoon periods; during these visits primary noise sources contributing to the noise environment were noted as occasional local traffic noise, birdsongs, local foliage mowing with the wind and distant agricultural activity. In addition during the installation, wind turbine noise was not audible at any location. In respect of night time periods, when noise due to traffic on local roads, agricultural activities and other sources tend to reduce, there was no indication of any significant local night-time sources of noise at any location.

In general, it is submitted that the significant noise sources in the area were noted to be local and distant traffic movements, agriculture and farming typical noise, activity in and around residences, wind generated noise from local foliage and other typical anthropogenic sources typically found in such rural settings. No significant sources of vibration were noted at any of the survey locations.

Plate 12.1 to 12.6 illustrate the installed noise monitoring kits at each monitoring location. The survey period was typically six weeks or until such time that enough data points were captured at each survey location. (Ref. Table 12.7). It is submitted that a variety of wind speed and weather conditions were encountered over the survey periods in question.

Section 12.4.3 details the analysis of the survey data. It is submitted that the proposed turbine is a Nordex N133 at 102.5m hub height. It is further submitted that while the noise profiles of the Nordex N133 wind turbine have been used for the purposes of the assessment, the exact make and model of the turbine installed on the proposed wind farm site will be dictated by a competitive procurement process, but will adhere to the specifications and parameters set out in the submission. It is also noted and submitted that a warranty will be provided by the manufacturers of the selected turbine to ensure that the noise output will not require a tonal noise correction under best practice guidance. Cumulative turbine details are provided as per Tables 12.11-12.16 for cumulative wind farms included in the assessment namely Dereenacreenig West wind farm, Shedy more wind farm, Gortloughra wind farm and Curraglass wind farm.

Section 12.5 details the existing environment and documents the typical background noise levels measured in the vicinity of the noise sensitive locations in closest proximity to the proposed wind farm site. Figures 12.5 to Figures 12.16 show the derived daytime and night-time background noise levels for noise monitoring locations references NML1, NML2 , NML3, NML4, NML5 and NML6.
Table 12.17 and Table 12.18 below presents the various derived $L_{A90,10\ min}$ noise levels for each of the noise monitoring locations for daytime quiet periods and night time periods, for various wind speeds. It is submitted that these levels have been derived using regression analysis carried out on the data sets in line with best practice guidance contained in the IOA GPG and its SGN No.2 data collection.

Table 12-17 Derived Background Noise Levels of $L_{A90,10min}$ for Various Wind Speeds - Daytime

Locations	Period	Background Noise Levels dB L_{A90} at standardised 10m height wind speed m/s for 102.5 m Hub Height							
		3	4	5	6	7	8	9	10
NML1 (H014)	Daytime	32.4	33.0	33.7	34.7	36.0	37.6	39.5	41.7
NML2 (H003)	Daytime	24.6	26.2	28.2	30.4	32.5	34.3	35.6	36.1
NML3 (H015)	Daytime	33.2	34.3	35.0	35.4	35.8	36.3	37.2	38.7
NML4 (H041)	Daytime	28.6	29.5	30.7	32.2	34.3	37.0	40.6	45.0
NML5 (H031)	Daytime	29.6	30.2	31.0	32.0	33.3	35.0	37.0	39.4
NML6 (H018)	Daytime	30.6	31.0	31.4	32.0	33.0	34.4	36.5	39.3

Table 12-18 Derived Background Noise Levels of $L_{A90,10min}$ for Various Wind Speeds – Night-time

Locations	Period	Background Noise Levels dB L_{A90} at standardised 10m height wind speed m/s for 102.5 m Hub Height							
		3	4	5	6	7	8	9	10
NML1 (H014)	Night-time	30.5	31.1	31.7	32.4	33.0	33.6	34.1	34.5
NML2 (H003)	Night-time	23.4	24.4	25.7	27.2	28.8	30.3	31.6	32.6
NML3 (H015)	Night-time	27.0	27.9	28.6	29.4	30.4	31.7	33.3	35.4
NML4 (H041)	Night-time	24.1	26.1	28.9	32.2	35.7	39.1	42.0	44.2
NML5 (H031)	Night-time	26.6	27.2	27.9	28.8	29.8	31.0.	32.4	33.9
NML6 (H018)	Night-time	27.7	28.3	29.2	30.1	31.1	32.2	33.2	34.1

Details of the Wind Turbine noise limits are subsequently detailed and presented as per Section 12.5.3 of the assessment report. It is submitted that the limits proposed are in line with the applicable guidelines (DoEHLG 2006) and noise conditions applied to similar sites previously granted planning permission by An Coimisiun Pleanala. Table 12.19 below details the proposed noise criteria curves.

Table 12-19 Proposed Noise Criteria Curves

Location	Period	Turbine Noise Limits LA90, 10min Levels (dB) at Various Standardised 10m Height Wind Speeds)							
		3	4	5	6	7	8	9	10
NML1 (H014)	Day	45	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML2 (H003)	Day	40	40	40	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML3 (H015)	Day	45	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML4 (H041)	Day	40	40	45	45	45	45	45.6	45.6
	Night	43	43	43	43	43	44.1	47	47
NML5 (H013)	Day	40	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43
NML6 (H018)	Day	45	45	45	45	45	45	45	45
	Night	43	43	43	43	43	43	43	43

In relation to the proposed substation, it is noted that this will operate on a 24 hour basis. It is submitted as per Section 12.5.4 that the proposed absolute criterion of 35 dB L_{Aeq}, T, for noise from the substation is robust and should prevent adverse effects at noise sensitive locations.

An assessment of the likely significant effects is detailed as per Section 12.6 of the noise impact assessment. Section 12.6.2 and Section 12.6.4 assesses the construction and decommissioning phases. In relation to the construction phase, it is submitted that the assessment of construction noise and vibration has been conducted in accordance with best practice guidance contained *in BS5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites -Noise* and *BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on Construction and open sites -Vibration*. It is further submitted that the residual noise associated with the construction and decommissioned phases have been predicted to be below the proposed threshold values and the associated noise and vibration levels are not likely to cause significant effect at any noise sensitive location. Mitigation measures in relation to construction phase noise, construction phase vibration and decommission phases are detailed per section 12.7.1 to 12.7.3 respectively.

In respect of the operational phase, it is submitted that under the assessment methodology described in Section 12.4.5, the predicted turbine noise levels have been calculated at all noise sensitive locations within the study area of the proposed project. It is also submitted that these calculations are based on theoretical precautionary conditions favourable to noise propagation. i.e. downwind propagation from source to receiver and/or downward refraction under temperature inversions. It is stated that at all noise sensitive locations the worst omni-directional cumulative turbine noise levels are below the noise criterion curves. Appendix 12.4 presents the predicted omni-directional turbine results at all noise sensitive locations in tabulated form. Table 12.28 presents the results of the turbine noise predictions and assessment review at 15 no. locations with the highest levels of wind turbine noise predicted. At all other locations the maximum turbine noise levels are predicted to be less than 40dB L_{A90}.
Section 12.7.4.2 deals with amplitude modulation and tonality and details the approach to be followed in the event of complaints being received in relation to same.

Cumulative effects are detailed as per Section 12.9. It is stated that existing, permitted and proposed wind farm development with the potential for cumulative impacts have been considered as part of the turbine noise impact assessment. It is further stated as per Section 12.9.3 that it is not anticipated that they will be any other activities that would give rise to significant cumulative noise effects during the construction or decommissioning phases.

Items An Coimisiún Pleanála may request or seek further clarification in relation to Noise:

1) The respective number and distances of all noise sensitive receptors within 500m, 1000m,1500m and 2000m of the proposed turbines should be presented and quantified.
2) The referenced noise sensitive receptors that each selected background noise monitoring location is considered to be representative of should be identified and quantified and also shown on a suitably scaled map.
3) In terms of the derived background noise levels per Tables 12.17 and Table 12.18 of the submission and reproduced below, it is noted specifically in respect of NML4 (H041) that the derived night-time noise levels for wind speeds 7m/s,8m/s and 9m/s are higher than the daytime noise levels for the corresponding wind speeds. The applicant may wish to comment on this having regard to any site observations or notes from the analysis of the background datasets.

Locations	Period	Background Noise Levels dB L_{A90} at standardised 10m height wind speed m/s for 102.5 m Hub Height							
		3	4		6	7	8	9	10
NML1 (H014)	Daytime	32.4	33.0	33.7	34.7	36.0	37.6	39.5	41.7
NML2 (H003)	Daytime	24.6	26.2	28.2	30.4	32.5	34.3	35.6	36.1
NML3 (H015)	Daytime	33.2	34.3	35.0	35.4	35.8	36.3	37.2	38.7
NML4 (H041)	Daytime	28.6	29.5	30.7	32.2	34.3	37.0	40.6	45.0
NML5 (H031)	Daytime	29.6	30.2	31.0	32.0	33.3	35.0	37.0	39.4
NML6 (H018)	Daytime	30.6	31.0	31.4	32.0	33.0	34.4	36.5	39.3

Table 12-18 Derived Background Noise Levels of $L_{A90,10min}$ for Various Wind Speeds – Night-time

Locations	Period	Background Noise Levels dB L_{A90} at standardised 10m height wind speed m/s for 102.5 m Hub Height							
		3	4	5	6	7	8	9	10
NML1 (H014)	Night-time	30.5	31.1	31.7	32.4	33.0	33.6	34.1	34.5
NML2 (H003)	Night-time	23.4	24.4	25.7	27.2	28.8	30.3	31.6	32.6
NML3 (H015)	Night-time	27.0	27.9	28.6	29.4	30.4	31.7	33.3	35.4
NML4 (H041)	Night-time	24.1	26.1	28.9	32.2	35.7	39.1	42.0	44.2
NML5 (H031)	Night-time	26.6	27.2	27.9	28.8	29.8	31.0.	32.4	33.9
NML6 (H018)	Night-time	27.7	28.3	29.2	30.1	31.1	32.2	33.2	34.1

Suggested Conditions that may be considered for inclusion:

1.) The operation of the proposed development, either by itself or in-combination with any other permitted wind energy development, shall not result in noise levels when measured externally at nearby noise sensitive locations which exceed:
(A) Between the hours 0700 and 2300:
Where background noise levels ($L_{A90,10\ min} \geq 30$ dB)
(i) The greater of 5dB(A) above background noise levels or 45 dB, $L_{A90\ 10\ mins}$
Where background noise levels ($L_{A90,10\ min} < 30$ dB)
(ii) 40 dB $L_{A90,10\ mins}$
(B) 43 dB $L_{A90\ 10\ mins}$ at all other times.

Reason: In the interest of residential amenity.

2.) A noise compliance monitoring programme shall be submitted for agreement with the planning authority prior to the commissioning of the proposed development. The noise compliance monitoring programme shall include a detailed methodology for all noise measurements, the frequency of monitoring and recording of results which shall be made publicly available. All results should be submitted to the Planning Authority within 1 month of the completion of any survey. The developer shall carry out any additional noise mitigation measures as may be deemed necessary following a review of such survey.

Reason: In the interest of residential amenity.

3.) A designated member of the company's staff shall interface with the Planning Authority or member of the public in the event of complaints or queries in relation to environmental emissions. Details of the name and contact details and the relationship to the operator of this person shall be made available to the Planning Authority.

Reason: In the interest of residential amenity.

4.) The construction of the development shall be managed in accordance with a Construction Noise Management Plan which shall be submitted to and agreed in writing with the Planning Authority prior to the commencement of development. This plan shall provide details of the construction practice for the development including:

(a) Proposals for the suppression of on-site noise
(b) Proposals for the suppression of vibration

This plan shall include a comprehensive monitoring plan to include inter alia noise and vibration with regular reporting to the planning authority.

Reason: In order to protest the Environment and Local amenities during construction.

Report By: Andrew Mc Donnell, Date: 15th May,2026.
Executive Scientist,
Environment & Planning Directorate,
Cork County Council.

Environment Officer (Waste)

The applicant is proposing to construct a Wind Farm of 14 no.Turbines at a site in west Cork, located 2.5km approx. east of Kealkill and across a number of townlands. The proposal also includes an underground electrical cabling connection.

Any waste soil and stone from site clearance works, and construction waste should be recycled on site or taken to a licensed waste recycling facility off site.

Any end-of-life equipment should be removed off site to a licensed waste recycling facility.

Management of Site Clearance Waste
The planning application documents provided include a "A Peat and spoil Management Plan" and a "Construction and Environmental Management Plan". I have reviewed both documents.

Peat & Spoil Management Plan
The peat and spoil management plan includes details of the site clearance materials peat, subsoil, rock etc. and details of the expected volume of material generated with site construction works. Details of proposed storage areas and the reuse of the material on site are given.

The developer intends to reuse most of this waste material on site in reinstatement works.

Construction and Environmental Management plan (CEMP)
The applicant has provided a construction and environmental plan for the project. Details of expected waste types are provided. Also, details of methods of waste minimisation are given. While the construction and environmental management plan and the peat and spoil management plan provide details of expected wastes and details of volumes an updated construction resource waste management plan should be prepared for the project prior to the project commencing, if planning permission is granted.

Construction and Resource Waste Management Plan -
Should planning permission be granted, the developer should prepare a Construction and Resource Waste Management Plan for the project. The waste plan for the project should be prepared according to the EPA guidelines and prior to the commencement of the any site clearance works.

Details of any site clearance waste and construction waste should be provided in the plan as well as details of proposals to recycle any waste, particularly details of recycling at any off site Licensed Waste Recycling Facility.

A hard copy of the Plan should be available for inspection at the site office at all times during project construction.

Condition -Resource Waste Management Plan
Prior to the commencement of the development, the developer (or any agent acting on its behalf) shall prepare a "Construction and Resource Waste Management Plan" for the project. The Waste Management Plan preparation should be guided by the EPA Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for C&D Projects. The plan should provide details of proposals to adhere to best practice and protocols on C&D waste.
The Waste Management Plan and all records for waste management / waste recycling shall be available for inspection at the site office at all times during the construction phase.

To Protect the Environment.