Cahermurphy West Wind Farm

Cahermurphy West Wind Farm, Co. Clare

Chapter 1: Introduction

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1. INTRODUCTION

1.1 Introduction

This Environmental Impact Assessment Report (EIAR) has been prepared by MKO on behalf of Cahermurphy Renewables Designated Activity Company (the Applicant), who intend to apply to An Coimisiún Pleanála (ACP) for planning permission under sections 37E and 182A of the Planning and Development Act 2000 (as amended) (the "PDA") to construct a wind energy development known as Cahermurphy West Wind Farm at Cahermurphy and adjacent townlands, located in Co. Clare. The Proposed Project is being brought forward in response to local, national, regional and European policy regarding Ireland's transition to a low carbon economy and associated climate change policy objectives

The proposed Cahermurphy West wind farm will comprise 8 No. turbines with a limited tip height range of 180 metres to 185 metres and all associated foundations and hardstanding areas, access roads and entrance(s) including upgrade of existing site roads and provision of new roads, 110kV electrical substation and wind farm control building, underground cabling, 2 no. borrow pits, electrical cabling for 110kV grid connection, biodiversity enhancement areas, 2 no. temporary construction compounds, peat and spoil management and a permanent meteorological mast. A full description of the Proposed Project is available in Chapter 4 of this EIAR.

Due to the nature of the proposed wind energy development, which will have a potential generating capacity of greater than 50 megawatts (MW), the provision of 110kV grid infrastructure will be required. The 110kV grid infrastructure will form part of the national electricity transmission network. As such, two separate planning applications are required, as outlined below.

One planning application will be submitted to ACP under sections 37E of the PDA seeking permission for Cahermurphy West Wind Farm, the proposed 8 No. wind turbines and associated infrastructure with a potential generating capacity of greater than 50 megawatts (MW). The application meets the threshold for wind energy set out in the Seventh Schedule of the PDA (being 'An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50 megawatts') and is therefore being submitted directly to ACP as a Strategic Infrastructure Development (SID) in accordance with Section 37E of the PDA. This approach has been confirmed following consultations with ACP under the provisions of Section 37B of the PDA and an opinion from ACP under section 37A(2) of the PDA confirming the SID status of the Proposed Project (case reference ABP-319676-24). The Proposed Project is therefore subject to the requirements of the RED III Directive transposed into Irish Law by the European Union (Planning and Development) (Renewable Energy) Regulations 2025 (S.I. No. 274 of 2025). The planning application for the Proposed Wind Farm will include the 110kV electrical substation and wind farm control building.

The Cahermurphy West Wind Farm planning application will include a design flexibility opinion from the Coimisiún to allow for a limited range of turbine dimensions under Section 37D(1) of the PDA (case reference ACP-323567-25).

A second planning application will be submitted to ACP under sections 182A of the PDA seeking permission for the 110kV underground cabling, connection Cahermurphy West Wind Farm to Moneypoint 110kV electrical substation and associated works under the provisions of Section 182A of the PDA ('*a high voltage line where the voltage would be 110 kilovolts or more,...*'. This approach has been confirmed following consultations with ACP under the provisions of Section 182E of the PDA and an opinion from ACP under section 37A(2) of the PDA confirming the SID status of the proposed development (case reference ABP-315645-23).

The EIAR will assess all component parts of the proposed Cahermurphy West Wind Farm development and Proposed Grid Connection that will be submitted within the planning applications to ACP. All elements of the Proposed Project included as part of the planning applications will henceforth

be referred to as the 'Proposed Project' throughout the EIAR. The planning applications are also accompanied by a Natura Impact Statement ('NIS') which will assess all elements of the Proposed Project .

1.1.1 References to Proposed Project

For the purposes of this EIAR:

- Where the 'Proposed Project' is referred to, this relates to all the project components described in detail in Chapter 4 of this EIAR i.e. Proposed Wind Farm and Proposed Grid Connection as detailed below.
- Where 'the Site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1. Generally, the study area extends beyond the planning application site boundary depending on the requirements of individual assessments. Individual topics for assessment purposes, i.e., each chapter, will indicate the study area used for that topic. The planning application red line boundary occupies a smaller area within the primary EIAR Site Boundary. The EIAR Site Boundary represents the primary area of study and not necessarily areas where proposed works will occur as part of the Proposed Project. The EIAR Site Boundary encompasses an area of approximately 637 hectares (ha). Where the 'Application Site Boundary' is referred to, this refers to the planning application boundaries as shown in Figure 1-4 below and Appendices 4-1 and 4-2, of this EIAR. Two planning application boundaries are included for within the Proposed Project, which denote the 'Proposed Wind Farm' and 'Proposed Grid Connection' as outlined below. Both Application Site Boundaries are shown in Figure 1-4.
- Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hard-standing areas, meteorological mast, site entrance, junction accommodation works, access roads, accommodation works along the turbine delivery route (TDR Works), temporary construction compounds, temporary transition compound, 110kV electrical substation, underground cabling, borrow pits, site drainage, tree felling, biodiversity management and enhancement measures and all ancillary works. The Proposed Wind Farm site (EIAR Site Boundary without corridor that encompasses the Proposed Grid Connection) is shown in Figure 1-2. The Proposed Wind Farm site encompasses an area of approximately 375 hectares (ha). The permanent footprint of the Proposed Wind Farm measures approximately 15.55 ha, which represents approximately 4.1% of the Proposed Wind Farm site.
- Where 'Proposed Grid Connection' is referred to, this refers to the underground 110kV electrical cabling and all associated site development works connecting the Proposed Wind Farm to the existing Moneypoint 110kV electrical substation in the townlands of Carrowdotia South and Carrowdotia North, Co. Clare. The Proposed Grid Connection is shown in Figure 1-3.
- Where 'the Applicant' is referred to, this refers to Cahermurphy West Designated Activity Company (DAC), who are discussed further in Section 1.4 of this EIAR.

Both the EIAR and NIS take into account the combined impacts of these individual elements of the Proposed Project.

For clarity in this EIAR, all elements of the Proposed Project will be assessed cumulatively and in combination with other projects to aid the competent authority in carrying out an EIA. The methodology for the identification of projects with the potential for in combination effects is set out in detail in Chapter 2 of this EIAR.

The Proposed Project is described in detail in Chapter 4 of this EIAR.

1.1.2 Brief Description of the Proposed Project

This section of the EIAR describes the development and its component parts (the 'Proposed Project') including the works subject of two proposed applications for planning permission to ACP.

The full description of the Proposed Project, as per the public planning notices, is as follows:

An Coimisiún Pleanála – Planning Notice Project Description – Wind Farm Site

i. *Construction of 8 no. wind turbines with a blade tip height range from 180m to 185m inclusive, a hub height range from 98.5m to 110.5m inclusive and a rotor diameter range from 149m to 163m inclusive with associated foundations, hard-standing and assembly areas.*
ii. *Construction of 1 no. permanent 110 kV electrical substation including 2 no. control buildings lightening protection, welfare facilities, car parking, and all associated electrical plant and apparatus, security fencing, external lighting, underground cabling, wastewater holding tank and all associated infrastructure, apparatus and landscaping;*
iii. *Underground electrical cabling (33kV) and communications cabling connecting the wind turbines to the proposed on-site 110kV electrical substation and associated ancillary works;*
iv. *Erection of 1 no. Meteorological Mast of 100m metres above existing ground level for the measuring of meteorological conditions, including a lightning rod which will extend above the mast ;*
v. *Construction of new permanent access roads and upgrade of existing roads to provide access within the site and to connect the wind turbines and associated infrastructure;*
vi. *Upgrade of 1 no. new existing agricultural/forestry access to the site, off the L6254 local road, to serve as the sole entrance to the wind farm during its operational phase and to facilitate the delivery of the construction materials and turbine components to site during the construction and operational phases (including the installation of security fencing and gates);*
vii. *Development of 2 no. borrow pits;*
viii. *Construction of 2 no. temporary construction compounds and associated ancillary infrastructure including temporary site offices, staff facilities and car-parking areas, all to be removed at end of construction phase;*
ix. *Temporary works at 6 no. locations along the N68 national road, R484 regional road and L-2074, L-2082 and L-2048 local roads associated with the facilitation of turbine component and abnormal load delivery to site. These works will primarily include the trimming of vegetation and strengthening of road verges;*
x. *Permanent and temporary Site Drainage;*
xi. *Operational Stage Site Signage;*
xii. *Ancillary forestry felling to facilitate construction and operation of the proposed development;*
xiii. *Biodiversity enhancement measures including the permanent removal of commercial forestry (deforestation) over an area of 56.3ha and restoration of farmland habitat to good quality hen harrier foraging habitat through diversifying the range and extent of habitats over an area of 67.4ha, and;*
xiv. *All related site works and ancillary development including landscaping considered necessary to facilitate the proposed development*

This application is seeking a ten-year permission and 35 year operational life from the date of commissioning of the wind energy development.

i. *The provision of c.25km of underground electrical cabling (110kV) from the proposed Cahermurphy West Wind Farm development to the existing Moneypoint 110kV electrical substation to facilitate the connection to the national grid;*
ii. *Provision of 36 no. joint bays, communication chambers and earth sheath links along the proposed underground electrical cabling route;*
iii. *Permanent and temporary Site Drainage;*
iv. *Reinstatement of land, road and track surface above the proposed cabling trench;*
v. *All related site works and ancillary development considered necessary to facilitate the proposed development.*

Current and future wind turbine generator technology will ensure that the wind turbine model, chosen for the Proposed Project, will have an operational lifespan greater than the 35 year operational life that is being sought as part of this application.

The turbines proposed as part of the Proposed Project will have an output ranging from 6.3MW to 7.2MW. The overall export capacity of the Proposed Project will, therefore range from a minimum of 50.4MW and a maximum of 57.6MW.

The layout of the Proposed Project has been led by consideration of constraints and facilitators, thereby avoiding the environmentally sensitive parts of the site. For example, the roads layout for the Proposed Project maximises the use of the existing onsite access roads and tracks where possible, with approximately 4.5km of existing roads and paths to be upgraded and 5.4km to be built.

The Proposed Grid Connection is located predominately within existing agricultural tracks and the public road corridor.

All elements of the Proposed Project, including the Proposed Wind Farm Site, Proposed Grid Connection, as defined below, have been assessed as part of this EIAR.

1.1.3 Site Location

The Wind Farm site is located approximately 4.3km northwest of Kilmihil, 4.3km southeast of Mullagh, and 4.7km northwest of Creegh, Co. Clare (See Figure 4-1 below). The Grid Reference co-ordinates for the approximate centre of the site are E508533 N668982. The Wind Farm Site is accessed via local roads from the R483 Regional Road, which travels north-south of the Wind Farm site, the R484 Regional Road which travels east-west between Kilmihil and Creegh and the L-2048 local road, which travels in a northeast-southwest direction between Kilmaley and Creegh. The Wind Farm site is served by a number of existing forestry tracks.

Current land-use on the Proposed Wind Farm site comprises coniferous forestry under Coillte management, peat bog and third-party lands currently being used for agriculture and forestry. Current land-use along the Proposed Grid Connection comprises primarily of public road corridor, with some instances of private agricultural pastures and access roads. Land-use in the wider landscape comprises a mix of agriculture, low density residential, renewable energy generation and commercial forestry.

The Proposed Wind Farm site is located primarily within an area which is designated as a 'Strategic Area' for wind energy development (7 no. turbines) and also within an area which is designated as 'Acceptable in Principle' (1 no. turbine) in the Wind Energy Strategy (WES) for County Clare which was published in 2017 to meet the policies and objectives of the Clare County Development Plan 2017-2023. The WES has been adopted as part of the Clare County Development Plan 2023 – 2029.

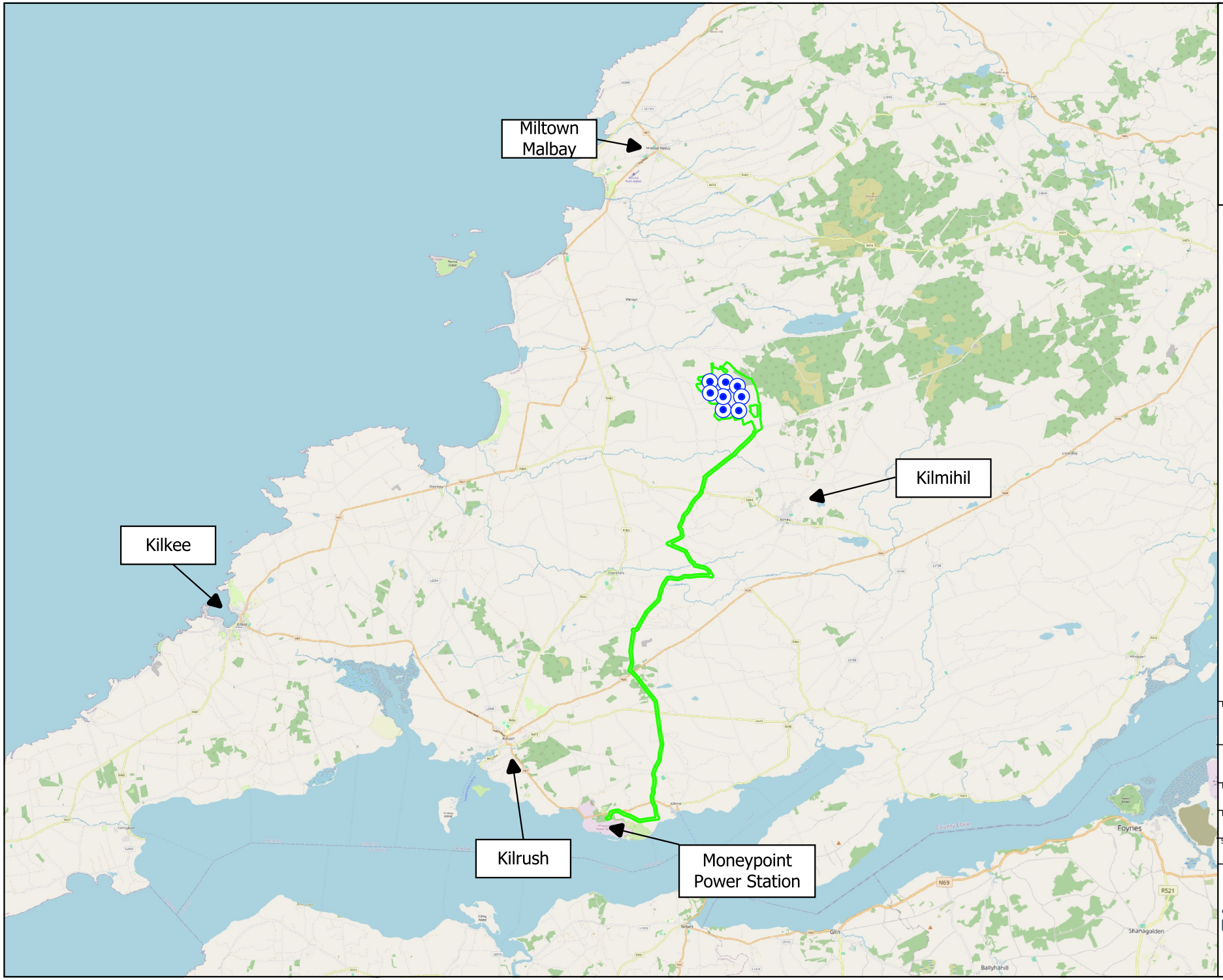
The Proposed Grid Connection includes for underground 110kV electrical cabling from the proposed onsite 110kV electrical substation within the Wind Farm Site to the Moneypoint 110kV electrical

substation in the townlands of Carrowdotia South and Carrowdotia North, Co. Clare. The underground cable route measures approximately 25km in length, located within existing forestry tracks, private lands and predominantly within the public road corridor.

The townlands in which the Proposed Project is located are listed in Table 1-1.

Table 1-1 Townlands within which the Proposed Project is Located

Proposed Project Element	Townland
Proposed Wind Farm	Cahermurphy, Carrowmagry South, Castlepark, Caheraghacullin, Doolough, Drummin, Kilmihil, Knockalough, Knocknahila More South.
Proposed Grid Connection	Cahermurphy, Cloonwhite South, Sheeaun, Leitrim, Cloonreddan, Kilmacduane East, Clooncullin, Lissanair, Teernagloghane, Brisla East, Brisla West, Gowerhass, Tullagower, Garraunnatooha, Knockerry West, Carrowfree, Derrylough, Dunneill, Doonnagurroge, Poulnadarree, Carrowdotia South, Carrowdotia North.



Map Legend

- EIAR Site Boundary
- Proposed Turbine Locations

N

Drawing Title

Site Location Context

Project Title

Cahermurphy West Wind Farm

Drawn By	Checked By
MC	EMC
Project No.	Drawing No.
230843	Figure 1-1
Scale	Date
1:200,000	08.01.2026

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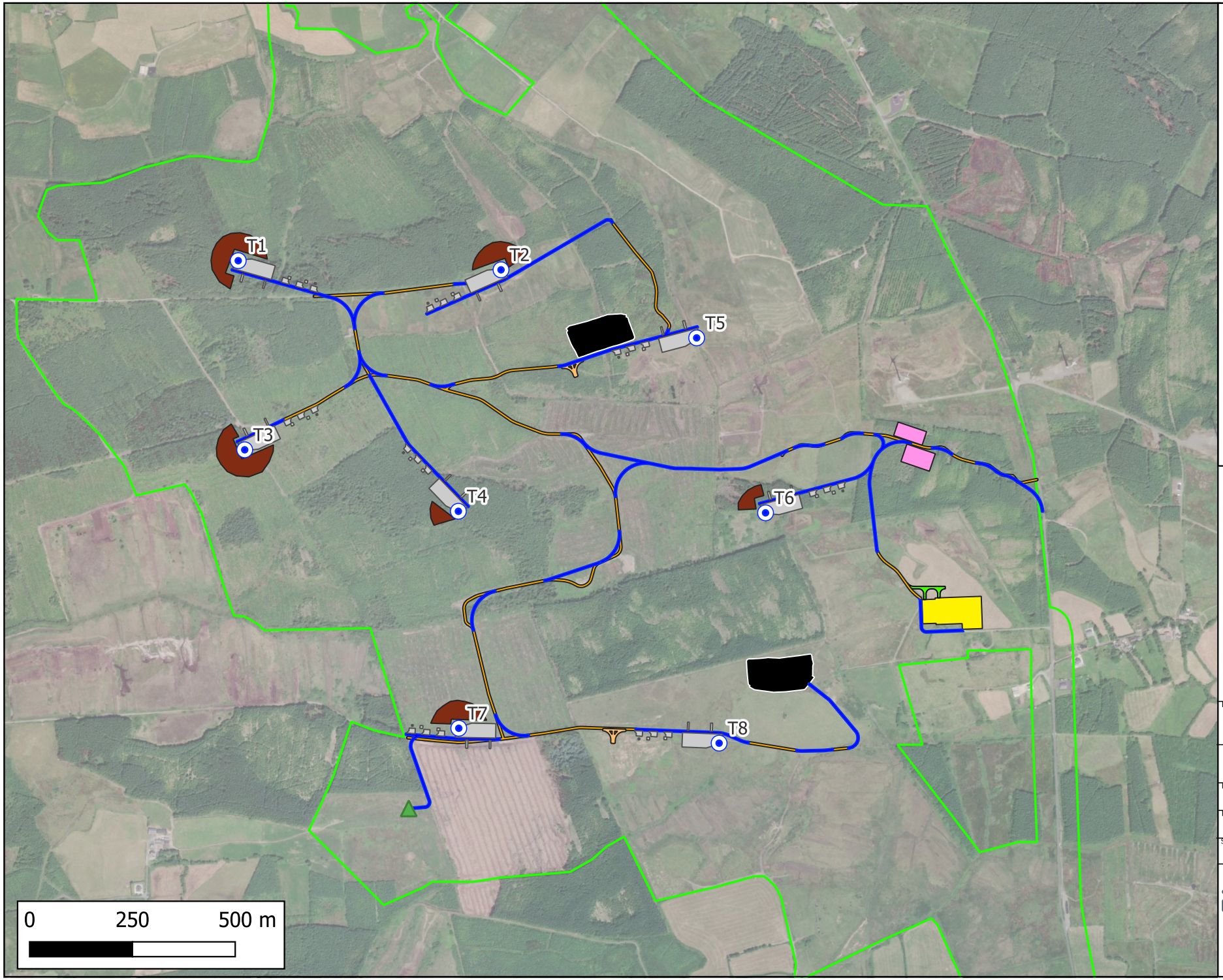

Map Legend

- EIAR Site Boundary
- Proposed Turbine Location
- Proposed Met Mast Location
- Proposed Hardstand
- Existing Roads to be Upgraded
- Proposed New Roads
- Temporary Transformer Delivery Road
- Proposed Turning Heads
- Proposed 110kV Substation
- Proposed Temporary Construction Compounds
- Peat Placement Areas
- Proposed Borrow Pit

Drawing Title

Proposed Wind Farm

Project Title	
Cahermurphy West Wind Farm	
Drawn By: MC	Checked By: EMC
Project No.: 230843	Drawing No.: Figure 1-2
Scale: 1:12,000	Date: 08.01.2026

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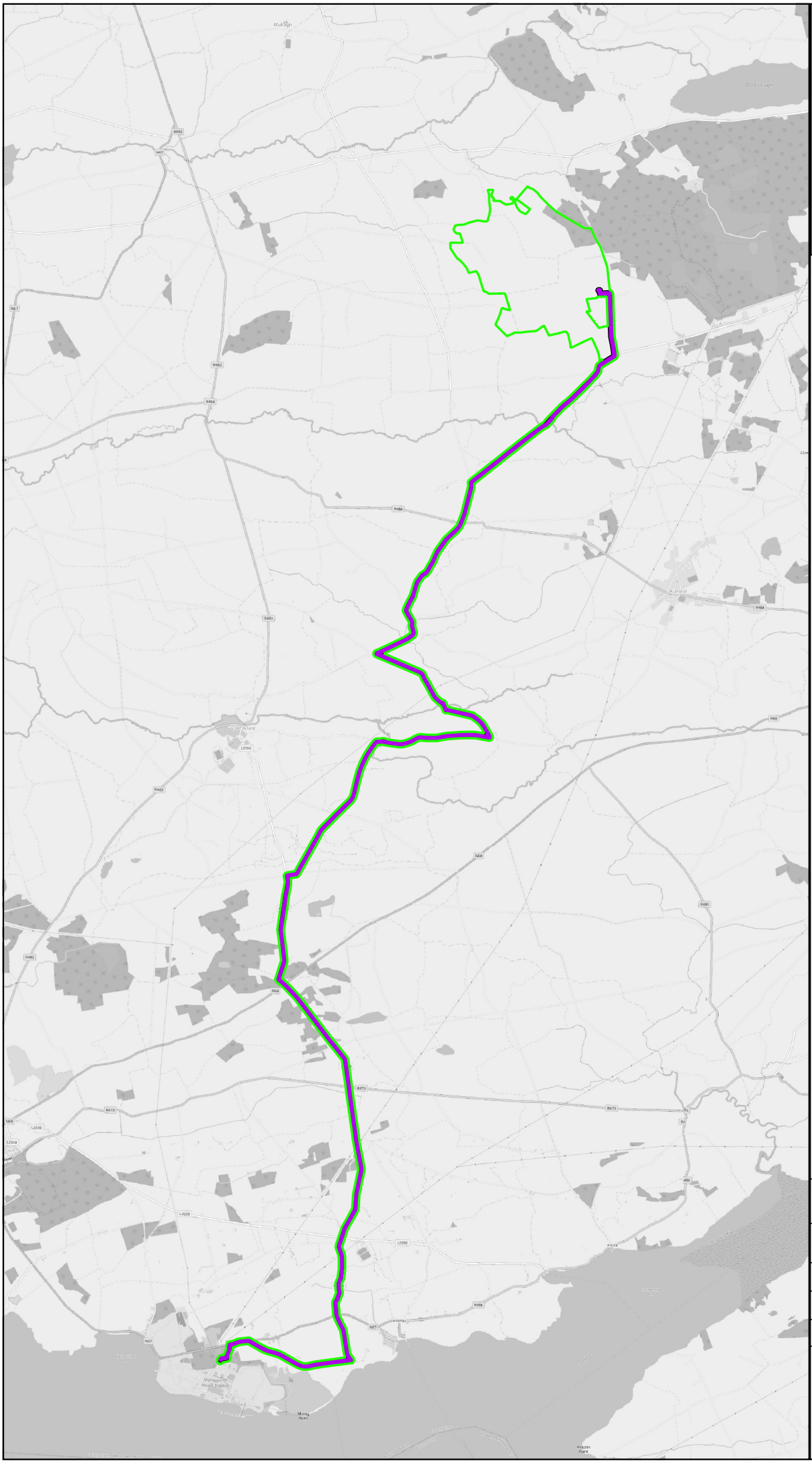

Map Legend

EIAR Site Boundary

Proposed Grid Connection

Drawing Title: Proposed Grid Connection

Project Title: Cahermurphy West Wind Farm

Drawn By	Checked By
MC	EMC
Project No.	Drawing No.
230843	Figure 1-3
Scale	Date
1:80,000	12.12.2025

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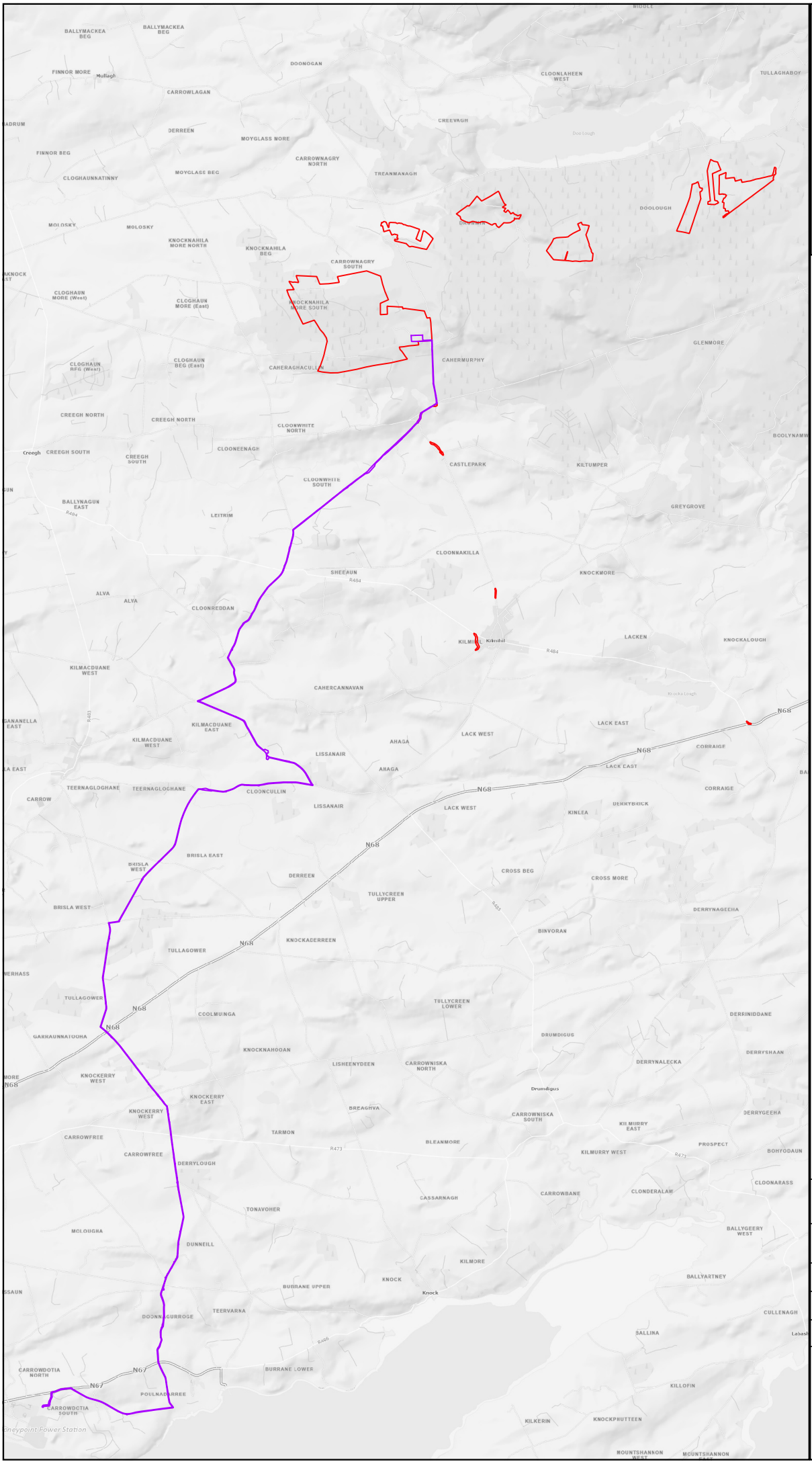

Map Legend

- Proposed Wind Farm Planning Application Boundary
- Proposed Grid Connection Planning Application Boundary

Drawing Title: Planning Application Boundaries

Project Title: Cahermurphy West Wind Farm

Drawn By	Checked By
MC	EMC
Project No.	Drawing No.
230843	Figure 1-4
Scale	Date
1:80,000	04.03.2026

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1.2 Legislative Context

1.2.1 Strategic Infrastructure Development

In relation to projects that may be deemed to be Strategic Infrastructure Development (SID), Part 1 of the Seventh Schedule for the PDA, specifies, inter alia, the following classes of development:

> *"An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50 megawatts."*

Once an SID determination request is made by a prospective applicant, ACP must satisfy itself that the Proposed Project meets one or more of the conditions set out in section 37A(2) of the PDA, namely—

> *"(a) the development would be of strategic economic or social importance to the State or the region in which it would be situate,*
>
> *(b) the development would contribute substantially to the fulfilment of any of the objectives in the National Spatial Strategy or in any regional spatial and economic strategy in force in respect of the area or areas in which it would be situate,*
>
> *(c) the development would have a significant effect on the area of more than one planning authority."*

Development for the purposes of electricity transmission falls within the scope of Section 182A(1) of the PDA. The definition of electricity transmission as set out in Subsection 9 of Section 182A is as follows:

> *"In this section 'transmission' in relation to electricity, shall be construed in accordance with section 2(1) of the Electricity Regulation Act 1999 but, for the purposes of this section, the foregoing expression, in relation to electricity, shall also be construed as meaning the transport of electricity by means of*
>
> *(a) a high voltage line where the voltage would be 110 kilovolts or more, or*
>
> *(b) an interconnector, whether ownership of the interconnector will be vested in the undertaker or not."*

Section 2(1) of the Electricity Regulation Act 1999 defines "transmission" in relation to electricity as follows (emphasis added):

> *"The transport of electricity by means of a transmission system, that is to say a system which consists, wholly or mainly, of high voltage lines and electric plant and which is used for conveying electricity from a generating station to a substation, from one generating station to another, from one substation to another or to or from any interconnector or to final customers, but shall not include any such lines which the Board may, from time to time, with the approval of the Commission, specify as being part of the distribution system, but shall include any interconnector owned by the Board."*

Distribution is defined as

> *"The transport of electricity by means of a distribution system, that is to say, a system which consists of electric lines, electric plant, transformers and switch gear and which is used for conveying electricity to final customers."*

Electric plant is defined as:

"any plant, apparatus or appliance used for, or for the purposes connected with, the generation, transmission, distribution or supply of electricity other than –

(a) An electric line

(b) a meter used for ascertaining the

(c) quantity of electricity supplied to any premises, or (c) an electrical applicant under the control of a consumer".

1.2.2 Background

The Site is currently subject to an application for a wind energy development which is currently before An Coimisiún Pleanála in a remitted first party grounds of appeal (ABP-318525-23). A summary of the project history of this original application is as follows:

- In September 2020, a planning application was submitted by MKO (agent for the Applicant) to Clare County Council for the Cahermurphy II Renewable Energy Development.
- Clare County Council requested further information for 7 no. items, two months later in November 2020. MKO submitted a Response to Further Information (RFI) in May 2021 on behalf of the applicant. Subsequently, in July 2021, Clare County Council refused planning permission for the Cahermurphy II Renewable Energy Development, citing 1 no. reason relating to potential landscape and visual impacts arising from the Proposed Project.
- In August 2021, MKO lodged a First Party Grounds of Appeal (FPGoA) to An Coimisiún Pleanála (previously An Bord Pleanála) in response to the decision to refuse by the Planning Authority. Furthermore, a Third-Party Grounds of Appeal was lodged to An Coimisiún Pleanála by Cahermurphy Wind Farm No II Opposition Group asking that they refuse permission for Cahermurphy II Renewable Energy Development on more extensive grounds than those considered by the Planning Authority, which MKO submitted a response to in September 2021.
- An Coimisiún Pleanála upheld the decision of Clare County Council in March 2023, and refused planning permission for the Cahermurphy II Renewable Energy Development, citing 3 no. reasons for the refusal. Following a judicial review, ACP's decision was quashed by Order of the High Court in October 2023, and the matter is now remitted to ACP for a new decision.

Please note that should Cahermurphy II Renewable Energy Development and Cahermurphy West Wind Farm both be granted planning permission, only one of the permissions will be brought forward for development, as the Site can only accommodate one development. Both the Cahermurphy II Renewable Energy Development and Cahermurphy West Wind Farm developments have been designed and assessed from an EIAR and appropriate assessment perspective independently from one another to reflect this single build out approach.

1.2.3 Environmental Impact Assessment

The consolidated European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, is transposed into Irish planning legislation by the Planning and Development Act 2000 (as amended) (the 'Planning Act') and the Planning and Development Regulations 2001 (as amended) (the 'Planning Regulations'). Directive 2011/92/EU was amended by Directive 2014/52/EU (the 'EIA Directive') which has been transposed into Irish law with the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

The EIA Directive requires Member States to ensure that a competent authority carries out an assessment of the likely significant effects of certain types of project, as listed in the Directive, prior to development consent being given for the project.

The Environmental Impact Assessment (EIA) of the Proposed Project will be undertaken by An Coimisiún Pleanála, as the competent authority.

This EIAR complies with the EIA Directive in terms of the structure and content of the information required.

Article 5 of the EIA Directive provides where an EIA is required, the developer shall prepare and submit an EIAR previously referred to as an Environmental Impact Statement ('EIS'). The information to be provided by the developer shall include at least:

a) *a description of the project comprising information on the site, design, size and other relevant features of the project;*
b) *a description of the likely significant effects of the project on the environment;*
c) *a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;*
d) *a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;*
e) *a non-technical summary of the information referred to in points (a) to (d); and*
f) *any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.*

In addition, Article 94 of the Planning Regulations sets out the information to be contained in an EIAR, with which this EIAR complies.

MKO was appointed as environmental consultant on the Proposed Project and commissioned to prepare this EIAR in accordance with the requirements of the EIA Directive.

Part 2 of Schedule 5 of the Planning Regulations, as amended, identifies classes and scales of development that require Environmental Impact Assessment (EIA). The relevant class of development in this case relates to "installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts", as per Item 3(i) of the Schedule. The Proposed Project exceeds 5 Megawatts in scale and proposes more than 5 turbines, and is mandatory for 7th Schedule SID and is therefore subject to EIA.

The EIAR provides information on the receiving environment and assesses the likely significant effects of the Proposed Project on it and proposes mitigation measures to avoid or reduce these effects. The function of the EIAR is to provide information to allow the competent authority to conduct the EIA of the Proposed Project.

All elements of the Proposed Project as detailed in Section 1.1 above have been assessed as part of this EIAR.

1.2.4 EIAR Guidance

The Environmental Protection Agency (EPA) published *its 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'* in May 2022, which is intended to guide practitioners preparing an EIAR.

In preparing this EIAR regard has also been taken of the provisions of the *'Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment'*, published by the Department of Housing, Planning and Local Government (DHPLG) in August 2018.

The European Commission also published a number of guidance documents in December 2017 in relation to Environmental Impact Assessment of Projects (Directive 2011/92/EU as amended by 2014/52/EU) including 'Guidance on Screening', 'Guidance on Scoping' and 'Guidance on the preparation of the Environmental Impact Assessment Report'. MKO has prepared the EIAR in accordance with these guidelines also.

1.2.5 Wind Energy Development Guidelines for Planning Authorities

The relevant considerations under the *'Wind Energy Development Guidelines for Planning Authorities'* (Department of the Environment, Heritage and Local Government (DOEHLG), 2006) (hereafter referred to as the Guidelines) have been complied with during the preparation of this EIAR.

The Guidelines were the subject of a targeted review. The proposed changes to the assessment of impacts associated with onshore wind energy developments were outlined in the document *'Proposed Revisions to Wind Energy Development Guidelines 2006 – Targeted Review'* (December 2013), the *'Review of the Wind Energy Development Guidelines 2006 – Preferred Draft Approach'* (June 2017), and the Draft Wind Energy Development Guidelines, December 2019 (the draft Guidelines). A consultation process in relation to the draft Guidelines closed on 19th February 2020. The proposed changes presented in the draft Guidelines give certain focus on the setback distance from residential properties (four times the proposed maximum tip height), along with shadow flicker and noise requirements relative to sensitive receptors and under grounding grid connections.

At time of writing, the draft Guidelines have not yet been adopted, and the relevant guidelines for the purposes of section 28 of the Planning and Development Act 2000, as amended, remain to be the 2006 Guidelines. Notwithstanding this, however, due to the timelines associated with the planning process for renewable energy projects and the commitment within the Climate Action Plan 2025 (CAP25) to develop revised wind energy development guidelines for onshore wind in Q1 2025[1], it is possible that new draft guidelines may be published during the consideration period for the current planning application. Should new guidelines be adopted in advance of a planning decision being made on this application, the Proposed Wind Farm site will be capable of adhering to any revised noise and shadow flicker standards. While the final updated guidelines have not yet been published it should be noted that Noise and Shadow Flicker are entirely controllable and are discussed further in Chapter 12 and Chapter 5, respectively. Furthermore, the Applicant endeavours to the adhere to the draft guideline limits for Shadow Flicker (i.e. zero shadow flicker occurrences if adopted as currently proposed). The Proposed Wind Farm site has been designed to achieve the recommended distance of 4 times turbine tip height from proposed turbines to third party sensitive receptors, which has become a recognised standard for the purposes of protecting residential visual amenity, as currently outlined in the draft Guidelines.

1.3 The Applicant

The Applicant for the Proposed Project is Cahermurphy Renewables Designated Activity Company (DAC). Cahermurphy Renewables DAC is a joint venture between FuturEnergy Ireland and Mid Clare Renewable Energy (MCRE) Ltd. FuturEnergy Ireland are an Irish-owned, joint venture company with Coillte and ESB, which launched in November 2021.

[1] *Department of the Environment, Climate and Communications (April 2025) Climate Action Plan 2025 Annex of Actions (EL/24/5)*

FuturEnergy Ireland's ambition is to develop more than 1GW of renewable energy capacity by 2030 and make a significant contribution to Ireland's commitment to produce 80% of electricity from renewable sources by the end of the decade. Using their knowledge and expertise, FEI aim to develop wind farms in a responsible manner with the support of local host communities thereby enabling Ireland, and its people, to combat climate change and contribute to a better, brighter world.

MCRE Ltd is a 100 percent Irish owned company, owned by shareholders based in county Clare. The local ownership and local involvement are both seen as an important features in community acceptance of such renewable energy projects. These local shareholders are also the developers and operators of the adjacent existing Cahermurphy Wind Farm. The existing Cahermurphy Wind Farm was successfully planned with the assistance of MKO between 2014-2019 and was built and brought into operation in 2020, demonstrating the suitability of this area for onshore wind development.

1.4 Need for the Proposed Project

1.4.1 Overview

In July 2021, the Climate Action and Low Carbon Development (Amendment) Act 2021 was signed into law, committing Ireland to reach a legally binding target of net-zero emissions no later than 2050, and a cut of 51% by 2030 (compared to 2018 levels). On this pathway to decarbonisation, the Government published the Climate Action Plan 2025[2] reaffirming the renewable electricity target of 80% by 2030, without compromising security of energy supply. The Proposed Project is expected to be operational before 2030 and would therefore contribute to this 2030 target.

The document titled 'Ireland's Greenhouse Gas Emissions Projections 2022-2040' published by the EPA in June 2023, provides an in-depth analysis and projections of greenhouse gas emissions in Ireland from 2022 to 2040.

In relation to the sectoral emissions ceilings for the first two carbon budget periods, the report notes that:

- Sectoral emissions ceilings for 2025 and 2030 are projected to be exceeded in almost all cases, including Agriculture, Electricity, Industry, and Transport (Page 4).
- For the first budget period (2021-2025), the projected emissions from the electricity sector are 45.2 Mt CO_2 eq, while the sectoral ceiling is set at 40 Mt CO_2 eq.
- For the second budget period (2026-2030), the projected emissions are 28.2 Mt CO_2 eq, with a sectoral ceiling of 20 Mt CO_2 eq (Page 14).

In percentage terms, the largest sectoral ceiling exceedances projected are for Industry and Electricity in the second budget period.

In July 2024, the EPA published '*Irelands Provisional Greenhouse Gas Emissions 1990-2023*'[3] which stated a provisional total of national greenhouse gas emissions (excluding Land Use, Land Use Change and Forestry (LULUCF)) for 2023 to be 55.01 million tonnes carbon dioxide equivalent ($MtCO_2eq$) which is 6.8% lower than emissions in 2022 (60.76 $MtCO_2eq$). Ireland's 2023 emissions are below the 1990 baseline for the first time in three decades.

In 2023, the energy industries, transport and agriculture sectors accounted for 73.5% of total greenhouse gas emissions. Agriculture is the single largest contributor to the overall emissions, at 37.8%. Transport, energy industries and the residential sector are the next largest contributors, at 21.4%, 14.3% and 9.7%,

[2] *Department of Environment, Climate and Communications (2025) Climate Action Plan 2025*
[3] *Ireland's Provisional Greenhouse Gas Emissions (1990-2023)* <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/EPA-Provisional-GHG-Report-Jul24-v6.pdf>

respectively. The report further states that there was a substantial reduction in coal, natural gas and peat used in electricity generation (-22.1%, -13.9% and -13% respectively), and renewable energy usage increased from 39% in 2022 to 40.7% in 2023. The report highlights that whilst emissions are beginning to reduce, transformative measures will be needed to meet National Climate ambitions.

The '*National Energy Projections 2025*'[4], published annually by the Sustainable Energy Authority of Ireland (SEAI), state that in the 'With Existing Measures' and 'With Additional Measures' scenarios, greenhouse gas emissions from the combined energy use and process emissions sectors are projected to exceed the first carbon budget ceiling by approximately 4% by 2025. This overshoot means that 7% of the second carbon budget will be consumed before the period begins. The second sectoral ceiling is then projected to be exceeded in 2029, by 14% to 17% in the WAM and WEM scenarios, respectively.

By 2028 it is expected that the largest input to electricity will be by renewable energy, i.e., onshore wind, offshore wind and solar. The deployment of renewables needs to outpace the growth of energy demand for the absolute reductions in greenhouse gas emissions that are required to be met to achieve national and international greenhouse gas emission targets. The SEAI National Energy Projections state that the projected exceedance in the first carbon budget period for energy sectors and industrial processes has decreased from the 2024 projections, while the projected exceedance in the second carbon budget has increased. By the end of the second budget period, the total exceedance in the electricity sector is projected to be 2MtCO_2eq and 4MtCO_2eq in the WAM and WEM scenarios, respectively. The main driver of this change from last year is the electricity sector, which has experienced higher levels of imports through interconnection in recent years. This net imports behaviour is projected to continue in the near term, but the electricity sector is also subject to projected delays in the installation of renewable capacity by 2030.

The critical need for renewable energy is underscored by European legislation. RED III[5] contains a presumption in favour of renewable projects being in the '*overriding public interest and serving public health and safety*'. The prioritisation of renewable energy projects in European law has been acknowledged by the Irish judicial system in recent caselaw. most recently in the Carrownagowan Wind Farm judgement ([2024] IEHC 549) and the Toole II judgment ([2024] IEHC 610) which emphasises the importance of national climate and renewable energy policy when assessing renewable energy projects.

As such, the Proposed Project is critical to helping Ireland address these challenges as well as addressing the country's over-dependence on imported fossil fuels. The need for the Proposed Project is driven by the following factors:

i. *A legal commitment from Ireland to limit greenhouse gas emissions under the Kyoto protocol to reduce global warming*
ii. *A requirement to increase Ireland's national energy security as set out in Ireland's Transition to a Low Carbon Energy Future 2015-2030*
iii. *Climate Action Plan 2025 which aims to ensure that Ireland achieves its legally binding target (the Climate Action and Low Carbon Development (Amendment) Act 2021) of net-zero greenhouse gas emissions no later than 2050, and a reduction of 51% by 2030, as well as an Onshore Wind Capacity of 9GW by 2030*
iv. *Increasing energy price stability in Ireland through reducing an over reliance on imported fossil fuels*
v. *Provision of cost-effective power production for Ireland which would deliver local benefits; and*

[4] *SEAI National Energy Projections 2025 Report.* <https://www.seai.ie/sites/default/files/publications/National-Energy-Projections-Report-2025.pdf>
[5] *Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652.*

vi. *To facilitate the Government in meeting its ambitious 80% renewable energy target by 2030.*
vii. *Energy security and a decrease in imported fossil fuel sources*

In March 2025, the World Meteorological Organisation (WMO) published the State of the Global Climate 2024 Report[6]; an update for the United Nations Framework Convention on Climate Change (UNFCCC) 30th Conference of the Parties was published in November 2025.[7] The 2024 Report provides a summary on the state of the climate indicators in 2024 and with sections on key climate indicators, extreme events and impacts. The key messages in the report include:

- Greenhouse gases reached record observed levels in 2023. Real time data indicate that the levels continued to rise in 2024.
- January – September 2024 global mean surface air temperature was 1.54 ± 0.13°C above the pre-industrial average.
- Glacier mass loss from 2021/2022 to 2023/2024 represents the most negative three-year glacier mass balance on record, and seven of the ten most negative annual glacier mass balances since 1950 have occurred since 2016.
- The strong 2023/2024 El Niño followed three consecutive years of La Niña from late 2020 to early 2023.
    - El Niño conditions were established by mid-2023, became strong by the end of 2023 and dissipated by the second quarter of 2024
- Extreme weather continued to lead to severe socio-economic impacts. Extreme heat affected many parts of the world.
- Food security, population displacement and impacts on vulnerable populations continue to be of mounting concern in 2024, with weather and climate hazards exacerbating the situation in many parts of the world.

There has been a substantial worldwide energy transition, with renewable capacity additions increasing by nearly 60% from 2022, totalling 565 gigawatts (GW)[8]. This growth represents the highest rate observed in the past two decades, signalling a significant momentum toward achieving the clean energy goal set at the United Nations Framework Convention on Climate Change (UNFCCC) 28th Conference of the Parties (COP28) meeting in 2023, and reiterated at the 29th Conference of the Parties (COP29) in Azerbaijan in 2024, to triple renewable energy capacity globally to 11,000 GW by 2030. Considering existing policies and market conditions, the International Energy Agency (IEA) predicts that there will be approximately 5,500GW of new renewable capacity becoming operational by 2030. This implies that global renewable capacity additions will continue to increase every year, reaching almost 940GW annually by 2030 – 70% more than the record level achieved last year. Solar PV and wind together account for 95% of all renewable capacity growth through the end of this decade due their growing economic attractiveness in almost all countries.

The recent joint publication of WMO and International Renewable Energy Agency on Climate-driven Global Renewable Energy Potential Resources and Energy Demand in 2023[9] underscores the inherent links between renewable energy resources and weather and climate conditions. It calls for better integration of climate variability considerations into energy resource operation, management, and planning to enhance effectiveness and sustainability in these regions

These factors are addressed in further detail below. Appendix 1 of the Planning Report, submitted alongside this EIAR, provides a comprehensive description of the international and national renewable

[6] *World Meteorological Organisation (2025) State of the Global Climate 2024 <https://library.wmo.int/records/item/69455-state-of-the-global-climate-2024>*
[7] *World Meteorological Organisation (2025) State of the Global Climate Update for COP30 <https://wmo.int/publication-series/state-of-climate-update-cop30>*
[8] *IEA (2024), Renewables 2024, IEA, Paris <https://www.iea.org/reports/renewables-2024>*
[9] *International Renewable Energy Agency + WMO (2024) 2023 Year in Review: Climate-driven Global Renewable Energy Potential Resources and Energy Demand <https://wmo.int/publication-series/2023-year-review-climate-driven-global-renewable-energy-potential-resources-and-energy-demand>*

energy policy context for the project and also addresses climate change, including Ireland's current status with regard to meeting greenhouse gas emission reduction targets. Chapter 2 of the EIAR similarly presents a more brief description of the above.

An Coimisiún Pleanála in determining the proper planning and sustainable development of the area must by virtue of Section 15(1) of the Climate Action and Low Carbon Development Act 2015 (as amended) perform its functions in a manner consistent with, amongst other things, the furtherance of the national climate objective and the most recent Climate Action Plan in so far as practicable. Thus, significant weight must be given to the requirements of the latest Climate Action Plan and the targets set out within same for the deployment of wind energy development within the state. As stated above, this is particularly critical at a time when the national climate objective and the CAP targets are in jeopardy according to leading body experts.

1.4.1.1 Climate Change and Greenhouse Gas Emissions

Although variation in climate is thought to be a natural process, the rate at which the climate is changing has been accelerated rapidly by human activities. Climate change is one of the most challenging global issues facing us today and is primarily the result of increased levels of greenhouse gases in the atmosphere. Moving away from our reliance on coal, oil and other fossil fuel-driven power plants is essential to reduce emissions of greenhouse gases and combat climate change. Whilst Climate Policy is discussed in detail in Appendix 11-1 of this EIAR, it will be briefly touched on throughout this section of the chapter.

Globally, governance relating to climate change has changed significantly since 1994 when the United Nations Framework Convention on Climate Change (UNFCCC) entered into force. Greenhouse Gas emissions have been a primary focus of climate related international agreements for almost two decades. At the Paris Conference of the Parties (COP) climate meeting (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to avoid dangerous climate change by limiting global warming to well below 2°C above pre-industrial levels. Under the agreement, Governments also agreed on the need for global emissions to peak as soon as possible, recognising that this will take longer for developing countries and to undertake rapid reductions thereafter in accordance with the best available science.

In 2014 the International Panel on Climate Change (IPCC) put forward its clear assessment in their Fifth Assessment Report[10], that the window for action on climate change is rapidly closing and that renewable energy sources such as wind will have to grow from 30% of global electricity at present to 80% by 2050 if we are to limit global warming in accordance with the COP21 agreement, i.e., to limit global warming to well below 2°C above pre-industrial levels. Former Minister Kelly remarked in 2015 that *"As a nation we must do everything in our power to curb our emissions".*

In November 2023, the IPCC published the *'AR6 Synthesis Report: Climate Change 2023'*[11], and is the final product of the AR6 of the International Panel on Climate Change. It summarizes the state of knowledge of climate change, its widespread impacts and risks, and climate change mitigation and adaptation. It confirms that the unsustainable and unequal energy and land use as well as historical use of fossil fuels have unequivocally caused global warming, with global temperatures approximately 1.1°C above 1850-1900 levels.

In May 2024, the EPA[12] reported, for the 2022 year, that the energy sector contributed to 17% of Ireland's total emissions. The latest EPA projections show that currently implemented policies and measures (WEM) will result in Ireland achieving a total greenhouse gas emission reduction of 9% on

[10] *IPCC Fifth Assessment Synthesis Report, Intergovernmental Panel on Climate Change AR5 Report*
[11] *IPCC Sixth Assessment Synthesis Report, Intergovernmental Panel on Climate Change AR6 Report: Climate Change 2023*
[12] *Ireland's Greenhouse Gas Emission Projections 2023-2050* <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/EPA-GHG-Projections-Report-2022-2050-May24--v2.pdf>

2005 levels by 2030, significantly short of Irelands 2030 target under the EU Effort Sharing Regulation (ESR), i.e., 42% reduction of emissions compared to 2005 levels by 2030, and also lower than the 10% reduction projected in the 2023 report.[13]

It is estimated that the Proposed Project will have a potential output in the range of 50.4 MW to 57.6 MW. On this basis, the Proposed Project will result in the net displacement of a maximum of 40,600 tonnes of carbon dioxide (CO_2) per annum, including accounting for back-up generation. When considering these greenhouse gas emissions within the context of the Electricity Sector Emissions Ceilings detailed in Appendix 11-1 of this EIAR, Carbon Budget 1 (2021-2025) has an Electricity Sector budget of 40 $MtCO_2eq$. and Carbon Budget 2 (2026-2030) has an Electricity Sector budget of 20 $MtCO_2eq$ for large-scale deployment of renewables. Therefore, greenhouse gas emissions abatement associated with the Proposed Project will occur under the Electricity sector emissions ceiling first and second budget periods and throughout its operational life. Detailed information on the carbon offsets as a result of the operation of the Proposed Project are provided in Section 11.5.3 of Chapter 11 of this EIAR.

1.4.1.1.1 *Reduction of Carbon Emissions and Other Greenhouse Gases*

The production of renewable energy from the Proposed Project will assist in achieving the Government's and EU's stated goals of ensuring safe and secure energy supplies, promoting an energy future that is sustainable and competitively priced to consumers whilst combating energy price volatility and the effects of climate change. In April 2022 the first national carbon budget programme proposed by the Climate Change Advisory Council, was approved by Government and adopted by both Houses of the Oireachtas. Ireland national carbon budgets represent the total amount of emissions that may be released during a five-year period by a sector. The Sectoral Emissions Ceilings were launched in September 2022 with the objective to inform on the total amount of permitted greenhouse gas emissions that each sector of the Irish economy can produce during each carbon budget. All greenhouse gas emissions and all relevant sectors are included in the carbon budgets. They are as follows:

- 2021-2025: 295 Mt CO_2 eq. an average of -4.8% for the first budget period.
- 2026-2030: 200 Mt CO_2 eq. an average of -8.3% for the second budget period.
- 2031-2035: 151 Mt CO_2 eq. an average of -3.5% for the third provisional budget.

The carbon budgets are calculated on an economy-wide basis and if Ireland does not achieve one of the carbon budgets, any deficit must be made up in the next period.

In addition to a reduced dependence on oil and other imported fuels, the generation of electricity from wind power by the Proposed Project will displace a maximum 40,600 tonnes of carbon emissions per annum from the largely carbon-based traditional energy mix, the detail of which is presented in Section 11.5.3 in Chapter 11 of this EIAR.

The European Environmental Agency (EEA) Report, '*Air Quality in Europe 2022*[1] report highlights the negative effects of air pollution on human health. The report assessed that poor air quality in Europe accounted for premature deaths of approximately 238,000 people in the 27 EU Member States in 2020[2]. Furthermore, in 2020 damaging levels of nitrogen deposition to ecosystems were exceeding in 75% of the total ecosystems that are in the EU-27. The estimated effects on the population in Europe of exposure to NO_2 and O_3 concentrations in 2020 were around 49,000 and 24,000 premature deaths, respectively. From this, 490 Irish deaths were attributable to fine particulate matter ($PM_{2.5}$), 50 Irish deaths were attributable to nitrogen oxides (NO_2) and 70 Irish deaths were attributable to Ozone (O_3). These figures are further informed by the EEA publication of 'Ireland – air pollution country fact sheet

[13] *Irelands Greenhouse Gas Emission Projections 2022-2024 (June 2023)* <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/EPA-GHG-Projections-2022-2040_Finalv2.pdf>
[1] *Air Quality in Europe 2022* <https://www.eea.europa.eu/publications/air-quality-in-europe-2022>
[2] https://www.eea.europa.eu/publications/air-quality-in-europe-2022/

2024', published on the 10th December 2024 [3] This states that 530 Irish deaths were attributable to fine particulate matter ($PM_{2.5}$), 100 Irish deaths were attributable to nitrogen oxides (NO_2) and 240 Irish deaths were attributable to Ozone (O_3).[14]The EPA 2016 report '*Ireland's Environment – An Assessment*' states that the pollutants of most concern are NOx, (the collective term for the gases nitric oxide and nitrogen dioxide, PM (particulate matter) and O_3 (ozone). The EPA 2016 report goes on to state that:

> *"Ireland has considerable renewable energy resources, only a fraction of which are utilised to address our energy requirements.*

CAP25[15] was published on the 15th of April 2025 by the Department of the Environment, Climate and Communications (DECC). Following on from Climate Action Plans 2019, 2021, 2023, and 2024, CAP25 sets out the roadmap to deliver on Ireland's climate ambition. It aligns with the legally binding economy-wide carbon budgets and sectoral ceilings that were agreed by Government in July 2022 following the Climate Action and Low Carbon Development (Amendment) Act 2021, which commits Ireland to a legally binding target of net-zero greenhouse gas emissions no later than 2050. As of January 2025, there were 6.3GW of wind energy capacity installed on the island of Ireland; Of this, 4.9GW was installed in the Republic of Ireland.[16] When all data from 2024 is recorded an updated carbon intensity factor for the Irish national grid will be published. It should be noted that of the 4,347 MW of operational wind farms connected to the national grid in Q3 2023, 854 MW will be decommissioned by 2030, 1,753MW by 2035 and 2,488 MW by 2040, unless these wind farms are repowered or granted permission for extension of operational life. Without significant increases in the delivery of new wind farms, and the rate and speed of repowering and extensions to the operational life of existing operational wind turbines, Irelands ability to achieve our 2030 and 2050 renewable energy targets will continue to reduce .

CAP25 presents clear and unequivocal support for the provision of additional renewable energy generation and presents yet further policy support for increased wind energy.

CAP25 sets out the following targets for electricity generation and transmission:

- Share of electricity demand generated from renewable sources to up to 80% where achievable and cost effective, without compromising security of electricity supply;
  - Onshore Wind Capacity: up to 9GW
  - Offshore Wind Capacity: 5GW (minimum)
  - Solar PV Capacity: 8GW
- Ensure that 20-30% of system demand is flexible by 2030;
  - Ensure electricity generation grid connection policies and regular rounds of connection offers which facilitate timely connecting of renewables, provides a locational signal and supports flexible technologies.

The Proposed Project therefore represents an opportunity to further harness Ireland's significant renewable energy resources, with valuable benefits to air quality and in turn to human health. The consumption of fossil fuels for energy results in the release of particulates, sulphur dioxide and nitrogen dioxide to our air. The use of wind energy, by providing an alternative to electricity derived from coal, oil or gas-fired power stations, results in emission savings of carbon dioxide (CO_2), oxides of nitrogen (NO_x), and sulphur dioxide SO_2, thereby resulting in cleaner air and associated positive health effects.

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[3] *https://www.eea.europa.eu/en/topics/in-depth/air-pollution/air-pollution-country-fact-sheets-2024/ireland-air-pollution-country-fact-sheet-2024*

[14] *https://www.eea.europa.eu/en/topics/in-depth/air-pollution/air-pollution-country-fact-sheets-2024/ireland-air-pollution-country-fact-sheet-2024*

[15] *Government of Ireland (2025) Climate Action Plan 2025 <https://www.gov.ie/en/department-of-the-environment-climate-and-communications/publications/climate-action-plan-2025/>*

[16] *Wind Energy Ireland (June 2024) Repowering Ireland, How we stay global leaders in onshore wind energy < https://windenergyireland.com/images/files/final-repowering-ireland-report-june-2024.pdf>*

1.4.2 Energy Security

At a national level, Ireland currently has one of the highest external dependencies on imported sources of energy, including coal, oil and natural gases.

In November 2023 the Department of the Environment, Climate and Communications (DECC) released *'Energy Security in Ireland to 2030'*[17] which states that 'Irelands future energy will be secure by moving from an oil-, peat-, coal, and gas-based energy system to an electricity-led system, maximising our renewable energy potential flexibility and being integrated in Europe's energy systems. This report proposes a package of measures to implement to 2030 to improve Ireland's energy security. Ireland is currently one of the most energy import dependent countries in the EU, having imported 77% of its energy supply in 2021 and 82% in 2022.[18] The *'Energy Security in Ireland to 2030'* report provides a roadmap to energy security in Ireland, on the basis of current energy policies and project and to implement the measures proposed as part of the energy security package. EirGrid in their *'All Island Generation Capacity Statement 2022 - 2031'* (October 2022), states that new wind farms commissioned in Ireland in 2021 brought total wind installed capacity to over 4,300MW, contributing to the overall RES-E percentage of 36.4% with wind energy accounting for 32.5%. Prior to 2015, Irelands import dependency of energy was over 90% but dropped to 71% in 2016 with the Corrib gas field starting production. Since 2018, Ireland's import dependency has been increasing as the output from the Corrib gas field reduces faster than we are adding new renewable sources.

In December 2025 the SEAI published their '*Energy in Ireland 2025 Report*'[19], stating that in 2025, wind energy was responsible for 33.8% of primary energy production in Ireland, with natural gas accounting for 29.6% of the share of primary energy production. After natural gas, which consisted of 42% of electricity supply in Ireland, wind energy was the second largest source of electricity supply at 32%. The SEAI Energy in Ireland 2025 report, states that energy-related emissions were at their lowest level in over 30 years, down 1.5% from 2023 levels.

Total indigenous energy production in Ireland reached the highest level ever in 2018 of 5,048 ktoe but has fallen since due to declining natural gas and peat production. Ireland continues to be hugely energy import-dependent leaving it exposed to large energy price fluctuations at a minimum and possibility of fuel shortages if a major energy crisis were to occur. The international fossil fuel market is growing increasingly expensive and is increasingly affected by international politics which can add to price fluctuations. This volatility will be increased as carbon prices increase in the future. This has implications for every Irish citizen.

The SEAI has stated that Ireland's heavy dependence on imported fossil fuels, *"is a lost opportunity in terms of keeping this money here in Ireland and further developing our abundant renewable resources"*[20].

The cost of carbon credits is included in all electricity traded, and the price of electricity generated by coal is particularly vulnerable due to its high carbon emissions per unit of electricity generated. Coal and peat generate almost 5% of Ireland's electricity, while gas generates 51%. Climate Action Plan 2025 calls for a reduction of 75% in electricity related emissions to not exceed the carbon budget allocations. The use of Ireland's indigenous renewable energy resources, such as wind, will contribute to a reduction in energy imports and money spent on carbon credits.

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[17] *Department of the Environment, Climate and Communications (2023) Energy Security in Ireland to 2030.* https://assets.gov.ie/276471/2d15ce6d-e555-4ada-a3cf-b325a5d7ba20.pdf
[18] *Sustainable Energy Authority of Ireland (2023) Key insights from SEAIs 2022 National Energy Balance.* https://www.seai.ie/data-and-insights/seai-statistics/key-publications/national-energy-balance/Key-Insights-from-2022-National-Energy-Balance.pdf
[19] *Sustainable Energy Authority Ireland (2025) Energy in Ireland – 2025 Report*
[20] *Dr Eimear Cotter, Head of Low Carbon Technologies, SEAI - "Energy Security in Ireland 2015"*

The Energy White Paper 2015[21] ('the White Paper) notes "There will be a substantial increase in the cost of carbon in the short and medium term, through the EU Emissions Trading Scheme". Any steps to reduce dependence on imported fossil fuels will add to financial autonomy and stability in Ireland. As the White Paper notes:

"In the longer term, fossil fuels will be largely replaced by renewable sources".

1.4.2.1 REPowerEU

In a Communication from the European Parliament on Joint European Action for more affordable, secure and sustainable energy[22], the European Commission proposed an outline of a plan to make Europe independent from Russian fossil fuels well before 2030 in light of Russia's invasion of Ukraine. Commission President Ursula von der Leyen stated:

> *"We must become independent from Russian oil, coal and gas. We simply cannot rely on a supplier who explicitly threatens us. We need to act now to mitigate the impact of rising energy prices, diversify our gas supply for next winter and accelerate the clean energy transition. The quicker we switch to renewables and hydrogen, combined with more energy efficiency, the quicker we will be truly independent and master our energy system.".*

In May 2022, the EU published the REPowerEU Plan[23] in light of Russia's invasion of Ukraine in February 2022. The core purpose of the plan, in addition to accelerating the EU's transition from the use of fossil fuel to renewable energy sources, is to end the dependence on Russian fossil fuels.

In April 2022, the Government published the National Energy Security Framework (NESF) providing a single overarching and initial response to address Ireland's energy security needs in the context of the war in Ukraine. This framework mirrors that of the EU, in which accelerating Ireland's transition from the use of fossil fuel to renewable energy sources is a key objective.

In September 2023, the European Parliament agreed to update the Renewable Energy Directive (RED III). The amending Directive EU/2023/2413 entered into force on 20th November 2023. RED III increases the EU wide renewable energy target from 32% set under the previous revision of the directive to 42.5%, with an ambition to reach 45% by 2030. Under RED III, EU member states must identify areas for the acceleration of renewables where projects will undergo a simplified and fast-track procedure. The deployment of renewables will also be of "*overriding public interest*" in order to limit the number of legal challenges on new renewable energy installations.

On 6 August 2025, the European Union (Planning and Development) (Renewable Energy) Regulations 2025 (S.I. No. 274 of 2025) were adopted for the purpose of giving effect to Articles 15e(5), 16, 16b, 16c(2), 16d, 16e and 16f of the RED III Directive.

The legislation introduces new decision timelines based on a "completeness check" (ss.34E, 37JB, 295B): 52 weeks for new wind farms, 30 weeks for repowering projects, and one to two years for IROPI cases (two years for projects over 150 kW, one year for projects under 150 kW or repowering). Importantly, renewable energy developments, including related grid and storage infrastructure, are now presumed to be in the **overriding public interest.**

[21] *Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Department of Communications, Energy & Natural Resources, 2015)*
[22] *European Commission (March 2022) REPowerEU: Joint European Action for more affordable, secure and sustainable energy. Strasbourg. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1511*
[23] *https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131*

1.4.2.2 EU Renewable Energy Targets

The EU adopted the Renewable Energy Directive (2018/2001 EU) on the Promotion of the Use of Energy from Renewable Sources in December 2018 which sets EU 2030 Renewable Energy Targets.

The Directive sets a legally binding mandatory national target for the overall share of energy from renewable sources for each Member State. This package is designed to achieve the EU's overall 20:20:20 environmental target, which consists of a 20% reduction in greenhouse gases, a 20% share of renewable energy in the EU's total energy consumption and a 20% increase in energy efficiency by 2020.

The first Renewable Energy Directive (RED)[24] is legislation that influenced the growth of renewable energy in the EU and Ireland for the decade ending in 2020. From 2021, RED was replaced by the second Renewable Energy Directive (REDII)[25], which continues to promote the growth of renewable energy out to 2030. In November 2023, a revision of the Renewable Energy Directive[26] (RED III), came into force. RED III increases the EU wide renewable energy target from 32% set under the previous revision of the directive to 42.5%, with an ambition to reach 45% by 2030 and on the 6th August 2025, the European Union (Planning and Development) (Renewable Energy) Regulations 2025 (S.I. No. 274 of 2025) were adopted for the purpose of giving effect to Articles 15e(5), 16, 16b, 16c(2), 16d, 16e and 16f of the RED III Directive.

Ireland's mandatory national target for 2020 was to supply 16% of its overall energy needs from renewable sources. This target covered energy in the form of electricity (RES-E), heat (RES-H) and transport fuels (RES-T). Ireland fell just short of this target with the total renewable share of gross final consumption (GFC) reaching 13.5%. The updated Directive has introduced a binding EU-wide target for overall RES of 42.5% in 2030 and requires Member States to set their national contributions to the EU-wide target. As per the National Energy and Climate Plan (NECP) 2021-2030, Ireland's overall RES target is 34.1% in 2030.

Under RED, the RES-E target was for 40% of gross electricity consumption to come from renewable sources in 2020 The actual RES-E achieved in 2020 by Ireland was 39.1%, falling just short of the national target. Under REDII, Ireland's National Energy and Climate Plan 2021-2030 included a planned RES-E of 70% in 2030, which has been replaced by the 80% by 2030 RES-E target as detailed in the more recent Climate Action Plan 2025, which will ensure that renewable electricity continues to form the backbone of Irish renewable energy use for the coming decade and beyond.

1.4.2.3 EU 2030 Renewable Energy Targets

The Climate Action and Low Carbon Development (Amendment) Act 2021 commits Ireland to reach a legally binding target of net-zero emissions no later than 2050, and a cut of 51% by 2030 (compared to 2018 levels). Under the 2021 Act, Ireland's national climate objective requires the state to pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.

Ireland's statutory national climate objective and 2030 targets are aligned with Ireland's obligations under the Paris Agreement and with the European Union's objective to reduce GHG emissions by at least 55% by 2030, compared to 1990 levels and to achieve climate neutrality in the European Union by 2050.

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[24] *Directive 2009/28/EC on the promotion of the use of energy from renewable sources. Available from: https://eur-lex.europa.eu/legalcontent/EN/ALL/?uri=celex%3A32009L0028*
[25] *Directive (EU) 2018/2001 on the promotion of the use of energy from renewable resources (recast). Available from: https://eurlex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L2001*
[26] *Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast)*

Given the need to ratchet up the EUs clean energy transition, RED was revised in 2023, and the amending Directive EU/2023/2413 (REDIII)[27] entered into force on 20 November 2023. REDIII amended the EU-wide overall 2030 RES target from 32% to at least 42.5%, and it is assumed that Ireland's 2030 RES target will increase accordingly.

As stated above, in 2023, Ireland had 4.74GW of installed wind capacity, up 4.5% on the previous year; the SEAI provisional estimate for installed wind capacity in 2024 is 4.85GW, based on EirGrid data to the end of August, and ESB-Networks data to the end of September.[28] Please note, Irelands installed capacity for wind generation in January 2025 was 4.9GW.[29] As noted previously, Ireland missed it's 2020 renewable energy target of 40% with a renewable share in electricity of 39.1%, and by the end of 2021, Irelands renewable energy share for electricity generation was 32.5%. With a renewable share of electricity generation at 80% in mind and a target of 9GW installed onshore wind by 2030, it is now more critical than ever that we continue to progress renewable energy development in Ireland so that we are successful in meeting our 2030 targets. Further detail on the EU 2030 targets can be seen in Chapter 2 of this EIAR and the accompanying planning report.

1.4.3 Increasing Energy Consumption

As detailed above, the Climate Action Plan 2025 identifies a need for 9 GW of onshore wind generation in order for Ireland to meet its 2030 targets. In their '*All Island Generation Capacity Statement 2022 - 2031'* (October 2022), EirGrid estimate that installed capacity of wind generation is set to increase to at least 12 GW between onshore and offshore capacity as Ireland endeavours to meet its renewable targets in 2030 and beyond.

Failure to meet Ireland's targets for renewable energy will result in substantial EU sanctions. The Department of Public Expenditure and Reform (DPER) in their report 'Future Expenditure Risks associated with Climate Change/Climate Finance'[30] concluded that *'potential costs of purchasing non-ETS GHG compliance for the Irish Exchequer for the 2020 to 2030 period could have a cumulative total in the billions in the absence of any further policy changes'*. If Ireland decided to backfill shortfalls in the RES-H target with additional renewable electricity this could significantly reduce these costs.

In April 2016[31], the SEAI estimated the historic build rate for wind energy deployment as 180 MW per year since 2005. If this average build rate over the remaining period between 2018 and 2020 is assumed, then approximately 3.85 GW of wind would be built up to 2020. The SEAI has provided a provisional estimate of wind capacity in Ireland in 2023 to be 4.59GW[32].

It is noted that the key driver for electricity demand in Ireland for the next number of years is the connection of new large energy users, such as data centres. This statement notes that 'Large industrial connections normally do not dominate a country's energy demand forecast but this is the case for Ireland at the moment'. EirGrid[33] analysis shows that demand from data centres could account for 31% of all demand by 2027 in a median demand scenario (accounts for the connection of all 1400MVA of potential demand in the connection process). The median demand scenario is now higher than for last year's forecast for high demand, indicating the progression of many of the data centre projects.

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[27] *Directive (EU) 2023/2413 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources and repealing Council Directive (EU) 2015/652. Available from:* https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302413

[28] *SEAI (December 2024) Energy in Ireland 2024 Report* <https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>

[29] *EirGrid,* https://www.eirgrid.ie/grid/system-and-renewable-data-reports

[30] https://igees.gov.ie/wp-content/uploads/2013/10/Future-Expenditure-Risks-associated-with-Climate-Change-Climate-Finance1.pdf

[31] https://www.seai.ie/publications/Ireland___s-Energy-Targets-Progress-Ambition-and-Impacts.pdf

[32] *Sustainable Energy Authority of Ireland (2024) Energy in Ireland – 2023 Report*

[33] *Eirgrid (2018). All-Island Generation Capacity Statement 2018-2027*

In 2015, IWEA commissioned a study *'Data Centre Implications for Energy Use in Ireland'* which concluded that an extra approximately 1 Gigawatt (GW) of electricity demand could materialise between 2015 and 2020 due to growth in data centres. More recently, data available from Bitpower[34] at the end of 2021 noted a 25% increase in completed data centre capacity over the past 12 months with a total of 70 operational data centres with a combined total of 900 MW of connected power capacity. Ten new data centres came online between the period of November 2020 and November 2021. The increase in growth of data centres means an increase in electricity demand, with many of the proposed data centres committing to using 100% renewable energy which will result in an increased demand for renewable electricity as detailed above.

In the context of increasing energy demand and prices, uncertainty in energy supply and the effects of climate change, our ability to harness renewable energy such as wind power plays a critical role in creating a sustainable future. The Department of the Environment, Climate and Communications have set a target for Ireland of 80% of total electricity consumption to come from renewable resources by 2030, this target forms part of the Government's strategy to make the green economy a core component of its economic recovery plan for Ireland. It is envisaged that wind energy will provide the largest source of renewable energy in achieving this target, with a target of 9 GW onshore wind installed generation capacity and a target of 5 GW offshore wind installed generation capacity.

EU countries have agreed on a new 2030 Framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030. These targets aim to help the EU achieve a more competitive, secure and sustainable energy system and to meet its long-term 2050 greenhouse gas reductions target. It is noted that a binding EU target of 42.5% for renewable energy by 2030 has been set by the EU 2030 Framework for Climate and Energy.

Ireland will therefore have to meet even more demanding climate change and renewable energy supply obligations in order to play its part in achieving the European climate and energy ambitions. The development of additional indigenous wind energy generating capacity, such as that proposed at the Proposed Project, will not only help to reduce carbon emissions but will also improve Ireland's security of energy supply. Such penetration levels of wind are technically and economically feasible once paired with other energy system changes such as increasing electric vehicle penetration and electrification of heat. Further information on the 2030 commitments for Ireland are noted in Chapter 2.

Climate Action Plan 2025 states that as electrification and decarbonisation of other sectors continues, there will be an increase in electricity demand, and a transferring of emissions from those sectors to the electricity sector. The deployment of renewables needs to outpace the growth in energy demand for it to deliver the absolute reductions in greenhouse gas emissions required. Therefore, the timing of the delivery of the renewable energy generation relative to the scale and pace of growth in electricity demand is a critical factor. In the high demand scenario outlined in the Programme for Government, electricity demand will almost double by 2030, while electricity emissions are to be reduced by 60-80% at the same time.

Underlying drivers of changes in electricity demand include:

- Data centres are forecast to continue to grow by up to ~9 TWh in 2030 (~2316% of total demand).
- Transport electricity demand is forecast to grow (~23% p.a.) as a result of a fast uptake of EV charging.
- Electrical heating in industry will increase by more than 2.5 times in 2030 from 2017 levels.
- Building energy efficiency improvements from an extensive retrofit programme will moderate the growth in electricity demand from new heat pumps in buildings.

[34] *http://www.bitpower.ie/images/Reports/2020_H2_Report.pdf*

Against this backdrop, the importance of wind energy as the main component of Ireland's renewable energy development is acknowledged, and wind energy is accepted as the main contributor to meeting the Country's national climate change and energy supply obligations. Notwithstanding this, it must also be acknowledged that not every part of Ireland is well endowed with wind resources and therefore, not all counties will be able to deliver wind-based renewable energy. Furthermore, whilst it is accepted that there are other renewable energy technologies in operation, for the foreseeable future many areas will be unable to deliver significant renewable energy output. This primarily applies to the more populous areas.

National and international renewable energy and climate change targets must be achieved, and it is crucial that these are appropriately translated and implemented at regional and local levels. Wind farm development and design involves balancing the sometimes-conflicting interests of constraints (e.g. natural and built heritage, human beings, ecological, ground conditions, hydrological, etc.) with visual amenity and the technological/economic requirements/realities of the specific project and turbines.

The wind farm layout for the Proposed Project takes account of all site constraints and the distances to be maintained between turbines and from houses, roads, etc. The layout is based on a combination of the results of all site investigations and surveys that have been carried out during the EIAR process, the community engagement process that began in 2024 and the scoping with statutory and non-statutory consultees.

1.4.4 Reduction of Carbon Emissions and Other Greenhouse Gases

The production of renewable energy from the Proposed Project will assist in achieving the Government's and EU's stated goals of ensuring safe and secure energy supplies, promoting an energy future that is sustainable and competitively priced to consumers whilst combating energy price volatility and the effects of climate change. The White Paper outlines an ambitious greenhouse gas reduction target of between 80% to 95% compared to 1990 levels out to 2050. Furthermore, if national carbon emissions targets are divided out amongst each county, each Local Authority may be responsible for meeting its own targets.

In addition to a reduced dependence on oil and other imported fuels, the generation of electricity from wind power by the Proposed Project site displace approximately 40,600 tonnes of carbon emissions per annum from the largely carbon-based traditional energy mix, the detail of which is presented in Section 11.5.3.2 in Chapter 11: Climate.

The World Health Organisation (WHO) in 2019 estimated that ambient (outdoor) air pollution caused 4.2 million deaths worldwide in 2019.[35] The Environmental Protection Agency (EPA) report '*Air Quality in Ireland 2023*[36] noted that in Ireland, the premature deaths attributable to poor air quality are estimated at 1,600 people per annum. The European Environmental Agency (EEA) Report, '*Air Quality in Europe – 2022 Report*'[37] highlights the negative effects of air pollution on human health. The report assessed that poor air quality in Europe accounted for premature deaths of approximately 238,000 people in the 27 EU Member States in 2021. The estimated impacts on the population in Europe of exposure to NO_2 and O_3 concentrations in 2021 were around 49,000 and 24,000 premature deaths per year, respectively. Of these numbers, 610 deaths due to poor air quality were estimated in Ireland in 2020 with 490 Irish deaths attributed to $PM_{2.5}$, 50 Irish deaths attributed to nitrogen oxides (NO_2) and 70 Irish deaths attributed to Ozone (O_3). These emissions, along with others, including sulphur oxides (SO_x), are produced during fossil fuel-based electricity generation in various amounts,

[35] https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health
[36] *Air Quality in Ireland Report 2023* <https://www.epa.ie/publications/monitoring-assessment/air/Air_Quality_Report_23_v14.pdf>
[37] *Air Quality in Europe 2022* <https://www.eea.europa.eu/publications/air-quality-in-europe-2022>

depending on the fuel and technology used, emissions from industry and power plants, vehicles emissions and transport fuels.

The EEA published a briefing on Europe's Air Quality Status[38] in May 2024 and presents the status of concentrations of pollutants in ambient air in 2021 and 2022 for regulated pollutants, in relation to both EU air quality standards and the 2021 WHO guideline levels. The assessment shows that, in spite of constant improvements, exceedances of air quality standards are common across the EU, with concentrations well above the latest WHO recommendations.

The EPA 2016 report '*Ireland's Environment – An Assessment*'[39] states that the pollutants of most concern are NOx, (the collective term for the gases nitric oxide and nitrogen dioxide, PM (particulate matter) and O_3 (ozone). The EPA 2016 report goes on to state that:

> *'Ireland has considerable renewable energy resources, only a fraction of which are utilised to address our energy requirements.*
>
> *Wind, ocean, solar, hydro and geothermal energy do not produce greenhouse gas emissions or emissions of air pollutants such as particulates, sulphur dioxide and nitrogen dioxide. Use of these renewable resources can have* ***considerable co-benefits for human health and ecosystems.*** *Meeting energy requirements from renewable resources can provide significant economic and employment benefits at local to national scales.'*

The Proposed Project therefore represents an opportunity to further harness Ireland's significant renewable energy resources, with valuable benefits to air quality and climate and in turn to human health. The consumption of fossil fuels for energy results in the release of particulates, sulphur dioxide and nitrogen dioxide to our air. The use of wind energy, by providing an alternative to electricity derived from coal, oil or gas-fired power stations, results in emission savings of carbon dioxide (CO_2), oxides of nitrogen (NOx), and sulphur dioxide SO_2, thereby resulting in cleaner air and associated positive health effects.

1.4.5 Economic Benefits

In addition to helping Ireland avoid significant fines and reducing environmentally damaging emissions, the Proposed Project will have significant economic benefits. At a national level, Ireland currently has one of the highest external dependencies on imported sources of energy, such as coal, oil and natural gas. As detailed in the SEAI Report '*Energy in Ireland 2025*, Ireland has a high import dependence on oil and gas and is essentially a price-taker on these commodities. Irelands import dependency increased slightly 78% in 2023 to 79.5% in 2024 due to increased primary energy requirement and decreased in primary energy production.[40] From October 2024 to September 2025, Ireland imported 79.5% of its gas supply and supplied 20.5% of its gas supply from indigenous sources.

The '*Energy in Ireland 2025 Report*'[41] stated that Ireland's national energy-related emissions in 2024 were at their lowest level in over 30 years with 14.6% of Irelands primary energy being sourced from renewables, the highest value to date. The SEAI estimates electricity emissions to be 6.9MtCO_2e in 2024, down 8.3% from 2023.

The 2014 report '*The Value of Wind Energy to Ireland*', published by Pőyry, stated that growth of the wind sector in Ireland could support 23,850 jobs (construction and operational phases) by 2030. If Ireland instead chooses to not develop any more wind, then by 2030 the country will be reliant on

[38] *EEA (2024) Europe's Air Quality Status 2023* <https://www.eea.europa.eu/publications/europes-air-quality-status-2023>
[39] *Ireland's Environment – An Assessment (2016)* <https://epawebapp.epa.ie/ebooks/soe2016/files/assets/basic-html/page-1.html#>
[40] *SEAI (2025) Energy in Ireland – 2025*
[41] *Ibid.*

natural gas for most of our electricity generation, at a cost of €671 million per annum in fuel import costs.

In April 2021, Wind Energy Ireland published a report produced by KPMG on the *'Economic Impact of Onshore Wind in Ireland'* stating that Irish wind farms are worth €400 million to the economy every year and it is expected to rise to €550 million by the end of the decade. If Ireland are to achieve the 8,200 MW target set in the Climate Action Plan 2021, the total industrial output across operating and capital activities would rise from 1.1bn in 2020 (from the 4,200 MW installed capacity) to 1.5bn in 2030

The Proposed Project will be capable of providing power to over 43,249 households every year assuming an installed capacity of 57.6MW, as presented in the calculations in Section 4.2.1 of this EIAR.

The Proposed Project will help to supply the rising demand for electricity, resulting from renewed economic growth. The EirGrid report *'All-Island Generation Capacity Statement 2022 – 2031'* (December 2022) notes that the median electricity demand forecast on the island of Ireland is expected to grow by 21% in 2030. Much of this growth is expected to come from new data centres in Ireland.

The Proposed Project will have both long-term and short-term benefits for the local economy including additional income to local landowners, job creation, work opportunities for local businesses and service providers, local authority commercial rate payments and Community Benefit Scheme.

Additional commercial rate payments from the Proposed Project will be provided to Clare County Council each year, which will be redirected to the provision of public services within Co. Clare. These services include provisions such as road upkeep, fire services, environmental protection, street lighting, footpath maintenance etc. along with other community and cultural support initiatives.

It is estimated that the Proposed Project will create approximately 90-120 jobs during the construction, operational and maintenance phases overall. During construction, additional employment will be created in the region through the supply of services and materials to the wind energy development. There will also be income generated by local employment from the purchase of local services i.e. travel, goods and lodgings.

There are substantial opportunities available for areas where wind farms and other types of renewable energy developments are located, in the form of Community Gain Funds. The value of this fund will be directly proportional to the level of installed MWs at the site and will support and facilitate projects and initiatives including youth, sport and community facilities, schools, educational and training initiatives, and wider amenity, heritage, and environmental projects. The Proposed Project has the potential to increase the generating capacity of the wind farm and therefore there will be greater community gain.

1.5 Purpose and Scope of the EIAR

The purpose of this EIAR is to document the current state of the environment on and in the vicinity of the Site and to quantify the likely significant effects of the Proposed Project on the environment. The compilation of this document served to highlight any areas where mitigation measures may be necessary in order to protect the surrounding environment from the possibility of any negative impacts arising from the Proposed Project.

It is important to distinguish the Environmental Impact Assessment (EIA) to be carried out by An Coimisiún Pleanála, from the EIAR accompanying the planning application. The EIA is the assessment carried out by the competent authority, which includes an examination that identifies, describes and assesses in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 11 of the Environmental Impact Assessment Directive, the direct and indirect significant effects of the project on the following:

i. *Population and human health*
ii. *Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC*
iii. *Land, soil, water, air and climate*
iv. *Material assets, cultural and the landscape*
v. *The interaction between the factors referred to in points 1 to 4 above.*

The EIAR submitted by the applicant provides the relevant environmental information to enable the EIA to be carried out by the competent authority. The information to be contained in the EIAR is prescribed in Article 5 of the revised EIA Directive described in Section 1.2.3 above.

1.6 Structure and Content of the EIAR

1.6.1 General Structure

This EIAR uses the grouped structure method to describe the existing environment, the potential impacts of the Proposed Project thereon and the proposed mitigation measures. Background information relating to the Proposed Project, scoping and consultation undertaken and a description of the Proposed Project are presented in separate sections. The grouped format sections describe the impacts of the Proposed Project in terms of population and human health, biodiversity, with specific attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EEC; land, soils and geology, water, air and climate, noise and vibration, landscape and visual, cultural heritage and material assets such as traffic and transportation, together with the interaction of the foregoing and schedule of mitigation and monitoring.

The chapters of this EIAR are as follows:

- Introduction
- Background to the Proposed Project
- Consideration of Reasonable Alternatives
- Description of the Proposed Project
- Population and Human Health
- Biodiversity (excluding Birds)
- Ornithology
- Land, Soils and Geology
- Water
- Air Quality
- Climate
- Noise and Vibration
- Cultural Heritage
- Landscape and Visual
- Material Assets (including Traffic and Transport, Telecommunications, Aviation and Utilities)
- Major Accidents and Natural Disasters
- Interactions of the Foregoing
- Schedule of Mitigation and Monitoring Measures

The EIAR also includes a Non-Technical Summary, which is a condensed and easily comprehensible version of the EIAR document. The non-technical summary is laid out in a similar format to the main EIAR document and comprises a description of the Proposed Project followed by the existing environment, impacts and mitigation measures presented in the grouped format.

1.6.2 Description of Likely Significant Effects and Impacts

As stated in the *'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'* (EPA, May 2022), an assessment of the likely impacts of a development is a statutory requirement of the EIA process. The statutory criteria for the presentation of the characteristics of potential impacts requires that potential significant impacts are described with reference to the extent, magnitude, complexity, probability, duration, frequency, reversibility and trans–boundary nature (if applicable) of the impact.

The classification of impacts in this EIAR follows the definitions provided in the Glossary of Impacts contained in the following guidance documents produced by the European Commission (EC) and the Environmental Protection Agency (EPA):

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA, May 2022)
- 'Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report' (EC, 2017).

The European Commission published a number of guidance documents in December 2017 in relation to Environmental Impact Assessment of Projects (Directive 2011/92/EU as amended by 2014/52/EU) including '*Guidance on Screening*', '*Guidance on Scoping*' and '*Guidance on the preparation of the Environmental Impact Assessment Report*', which have also been consulted.

Table 1-2 presents the glossary of impacts as published in the EPA guidance document (EPA, May 2022). Standard definitions are provided in this glossary, which allows the evaluation and classification of the quality, significance, duration and type of impacts associated with a Proposed Project on the receiving environment. The use of pre-existing standardised terms for the classification of impacts ensures that the EIA employs a systematic approach, which can be replicated across all disciplines covered in this EIAR. The consistent application of terminology throughout this EIAR facilitates the assessment of the Proposed Project on the receiving environment.

Table 1-2 Impact Classification Terminology (EPA, 2022)

Impact Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An effect capable of measurement but without significant consequences
	Not significant	An effect which causes noticeable changes in the character of the environment

Impact Characteristic	Term	Description
		but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends
	Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
	Profound	An effect which obliterates sensitive characteristics
Extent & Context	Extent	Describe the size of the area, number of sites and the proportion of a population affected by an effect
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions
Probability	Likely	Effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented
	Unlikely	Effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented

Impact Characteristic	Term	Description
Duration and Frequency	Momentary	Effects lasting from seconds to minutes
	Brief	Effects lasting less than a day
	Temporary	Effects lasting less than a year
	Short-term	Effects lasting one to seven years
	Medium-term	Effects lasting seven to fifteen years
	Long-term	Effects lasting fifteen to sixty years
	Permanent	Effect lasting over sixty years
	Reversible	Effects that can be undone, for example through remediation or restoration
	Frequency	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Type	Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	'Do Nothing'	The environment as it would be in the future should the subject project not be carried out
	'Worst Case'	The effects arising from a project in the case where mitigation measures substantially fail

Impact Characteristic	Term	Description
	Indeterminable	When the full consequences of a change in the environment cannot be described
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
	Residual	Degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic	Where the resultant effect is of greater significance than the sum of its constituents

Each impact is described in terms of its quality, significance, extent & context, probability, duration & frequency, and type, where possible. A 'Do-Nothing' impact is also predicted in respect of each environmental theme in the EIAR. Residual impacts are also presented following any impact for which mitigation measures are prescribed. The remaining impact types are presented as required or applicable throughout the EIAR. Any potential interactions between the various aspects of the environment assessed throughout this EIAR are presented in Chapter 17: Interaction of the Foregoing.

1.7 Project Team

1.7.1 Project Team Responsibilities

The companies and staff listed in Table 1-3 were responsible for completion of this EIAR for the Proposed Project. Further details regarding project team members are provided below.

The EIAR project team comprises a multidisciplinary team of experts with extensive experience in the assessment of wind energy developments and in their relevant area of expertise. The qualifications and experience of the principal staff from each company involved in the preparation of this EIAR are summarised in Section 1.7.2 below. Each chapter of this EIAR has been prepared by a competent expert in the subject matter.

Table 1-3 Companies and Staff Responsible for EIAR Completion

Consultants	Principal Staff Involved in Project	EIAR Input*
MKO Tuam Road, Galway, H91 VW84	Brian Keville (BK) Colm Ryan (CR) John Hynes (JH) Michael Watson (MW) Sean Creedon (SC) Eoin McCarthy (EMC) Natalia Stolarska (NS) Michéal Cahill (MC) Sean McCarthy (SMC) Alan Clancy (AC) Alan McBride (AMB) Adrian Moran (AM) Caroline Kelly (CK) Padraig Desmond (PD) Stephanie Corkery (StC) Deepali Mooloo (DM) Andrew McCarthy (AMC) Aoife Joyce (AJ) Clare Misfud (CM) Dervla O'Dowd (DoD) Padraig Cregg (PC) Patrick Manley (PM) Jack Workman (JW) Dija Mazonaite (DiM) Daniel Mulpeter (DaM) Killian Devereux (KD) Joseph O'Brien (JOB)	Project Managers, Scoping and Consultation, EIAR Report Chapters & Appendices: 1. Introduction (MC, EMC) 2. Background to the Proposed Project (AM, AMB, AC, SMC) 3. Considerations of Reasonable Alternatives (MC, EMC) 4. Description of the Proposed Project (MC, EMC) 5. Population & Human Health (MC, EMC) *6. Biodiversity (CK, PD, StC, DM, AMC, AJ, CM) 7. Ornithology (DoD, PC, PM,) 10. Air (MC, NS, EMC) 11. Climate (MC, NS, EMC) 14. Landscape & Visual (DaM, DiM, JW) 15. Material Assets (non-Traffic) (MC, EMC) 16. Major Accidents and Natural Disasters (MC, EMC) 17. Interaction of the Foregoing (MC, EMC) 18. Schedule of Mitigation (JA, MC, EMC) *MKO were similarly responsible for the preparation of the Natura Impact Statement
Triturus Environmental Ltd Unit 5, Anchor Business Park, Courtstown, Little Island, Co. Cork	Ross Macklin	Aquatic Report – Appendix 6-3 of the EIAR
Hydro Environmental Services 22 Lower Main Street Dungarvan Co. Waterford	Michael Gill David Broderick	Preparation of EIAR Sections: 8. Land, Soils & Geology 9. Water
Fehily Timoney & Company The Grainstore Singletons Lane Bagnelstown Co. Carlow	Ian Higgins	Preparation of Peat Stability Risk Assessment & Peat & Spoil Management Plan

Consultants	Principal Staff Involved in Project	EIAR Input*
AWN Consulting The Tecpro Building Clonshaugh Business & Technology Park Dublin 17	Dermot Blunnie Mike Simms	Preparation of EIAR Section 12. Noise and Vibration
Irish Arcaheological Consultancy Network Enterprise Park Kilcoole, Co. Wiclow	Faith Bailey	Preparation of EIAR Section 13. Cultural Heritage
Alan Lipscombe Traffic and Transport Consultants Claran, Headford, Co. Galway	Alan Lipscombe	Preparation of EIAR Section 15. Material Assets - Traffic and Transport

A Statement of Authority is included in each chapter of this EIAR detailing the experts who contributed to the preparation of this report, identifying for each such expert the part or parts of the report which he or she is responsible for or to which he or she contributed, his or her competence and experience, including relevant qualifications in relation to such parts, and such additional information in relation to his or her expertise that demonstrates the expert's competence in the preparation of the report and ensures its completeness and quality.

1.7.2 Project Team Members

1.7.2.1 MKO

Brian Keville B.Sc. Env.)

Brian Keville has over 20 years' professional experience as an environmental consultant having graduated from the National University of Ireland, Galway with a first-class honours degree in Environmental Science. Brian was one of the founding directors of environmental consultancy, Keville & O'Sullivan Associates Ltd., prior to the company merging in 2008 to form McCarthy Keville O'Sullivan Ltd. Brian's professional experience has focused on project and environmental management, and environmental impact assessments. Brian has acted as project manager and lead-consultant on numerous environmental impact assessments, across various Irish counties and planning authority areas. These projects have included large infrastructural projects such as roads, ports and municipal services projects, through to commercial, mixed-use, industrial and renewable energy projects. The majority of this work has required liaison and co-ordination with government agencies and bodies, technical project teams, sub-consultants and clients.

Colm Ryan (BA, MA)

Colm Ryan is the Planning Director of MKO, Planning & Environmental Consultants, with over 16 years of experience as a planner in both private practice and public sector combined. Prior to joining MKO, Colm worked as a planner with a UK and Ireland based Renewable Energy developer. Colm has also spent part of his career in local authority as a planner with Laois County Council. Colm has significant experience in a wide range of projects and extensive experience in large scale residential, renewables and marine based developments. Colm currently heads up the Planning Division in MKO with responsibility for Planning, Project Management, Health & Safety and Project Communications. Colm holds BA (Hons) in Geography & Irish and Masters in Civic Design Town & Regional Planning. Prior to taking up his position with MKO in May 2017, Colm worked as a Senior Planner with Lightsource Renewable Energy Ltd. and held previous posts with Partnerships for Renewables, South Kesteven District Council, Planning Aid, Frank O Gallachoir & Associates in Bray and Laois County Council. Colm is a chartered town planner with specialist knowledge in renewable energy, mixed use development and residential. Colm's key strengths and areas of expertise are in large scale renewable energy development particularly in the ground mounted solar, delivery of local community engagement processes on contentious planning applications, management of community and developers interest through the planning process and post or pre-planning due diligence. Since joining MKO as a Senior Planner Colm has been overseeing and managing a wide range of development projects such as large scale solar applications, site feasibility work for potential wind energy projects, large scale housing and mixed use schemes. Within MKO Colm plays a large role in the management of staff members including several aspects of business development. Colm has proven negotiation skills and stakeholder relationship building across numerous development projects in Ireland and the UK and is a corporate member of the Irish Planning Institute.

John Hynes (B.Sc., M.Sc)

John Hynes is the Ecology Director at MKO, with over 12 years' professional experience in the public and private sector. John oversees MKO's Ecology, Ornithology, Forestry, Bats, and GIS teams. John holds a B.Sc. in Environmental Science and a M.Sc. in Applied Ecology.

John's key strengths and areas of expertise are in Appropriate Assessment of plans and projects, Ecological Impact Assessment, Flora and Fauna survey methods and design, project management and project strategy. John is experienced as a coordinator or large multi-disciplinary teams on complex ecological projects. John has been involved as a lead Ecologist on a range of energy infrastructure, commercial, transport, housing, forestry, biodiversity net gain and nature restoration projects. John is a Full member of the Chartered Institute of Ecology and Environmental Management, a member of Galway County Council Climate and Biodiversity Special Policy Committee (SPC) and a contributor to the Wind Energy Ireland (WEI) Biodiversity and Sustainability Working Group.

Michael Watson (BA. MA. CEnv. PGeo)

Michael Watson is a Director of Environment in MKO. Michael has over 20 years' experience in the environmental sector. Following the completion of his master's degree in environmental resource management, Geography, from National University of Ireland, Maynooth he worked for the Geological Survey of Ireland and then a prominent private environmental & hydrogeological consultancy prior to joining MKO in 2014. Michael's professional experience includes managing Environmental Impact Assessments, EPA License applications, hydrogeological assessments, environmental due diligence and general environmental assessment on behalf of clients in the wind farm, waste management, public sector, commercial and industrial sectors nationally. Michaels key strengths include project strategy advice for a wide range and scale of projects, project management and liaising with the relevant local authorities, Environmental Protection Agency (EPA) and statutory consultees as well as coordinating the project teams and sub-contractors. Michael is a key member of the MKO senior management team and as head of the Environment Team has responsibilities to mentor various grades of team members, foster a positive and promote continuous professional development for employees. Michael also has a

Bachelor of Arts Degree in Geography and Economics from NUI Maynooth, is a Member of IEMA, a Chartered Environmentalist (CEnv) and Professional Geologist (PGeo).

Sean Creedon (BSc. MSc)

Sean Creedon is an Associate Director in the Environment Team at MKO. He leads a team of highly skilled environmental professionals working on EIAR for large-and medium scale Renewable Energy infrastructure. Sean has directed and overseen multiple renewable energy projects across wind, solar, battery and hydrogen as well as a range of thermal and other energy related developments. He has worked on the planning and environmental impact elements within all stages of wind farm project delivery. Sean's professional experience includes the development and management of a portfolio of wind farm developments to the consenting decision. He is a member of the MKO senior management team. Sean has over 22 years' experience in program and project development, holds an MSc from NUI Galway and a Diploma in Project Management from Institute of Project Management Ireland.

Eoin McCarthy (BSc)

Eoin is a Project Director with McCarthy O'Sullivan Ltd. with over 13 years of environmental consultancy experience. Eoin holds B.Sc. (Hons) in Environmental Science from NUI, Galway. Eoin's key strengths and areas of expertise are in project management, environmental impact assessment, wind energy site selection and feasibility assessment. Since joining MKO in 2011, Eoin has been involved as a Graduate, Assistant and Project Environmental Scientist on a significant range of energy infrastructure, tourism, waste permit, flood relief scheme and quarrying projects. He has overseen some of the largest SID wind energy in Ireland in in that time. In his role as project manager, Eoin works with and co-ordinates large multidisciplinary teams including members from MKO's Environmental, Planning, Ecological and Ornithological departments as well as sub-contractors from various fields in the preparation and production of EIARs. Eoin is also involved in the development of project strategy for the projects that he manages. He has held the role of project manager on over 550MW worth of wind energy projects. Within MKO Eoin plays a large role in the management of and sharing of knowledge with junior members of staff and works as part of a large multi-disciplinary team to produce EIA Reports.

Natalia Stolarska (BSc, Msc)

Natalia Stolarska is a Project Environmental Scientist with MKO. Natalia holds a BSc in Earth and Ocean Science and an MSc in Environmental Leadership. Natalia's key strengths and areas of expertise are in drafting EIAR report chapters, wind farm feasibility studies and QGIS mapping. Since joining MKO Natalia has been involved in coordinating environmental site work for a wide range of developments, assisting in stakeholder engagement, scoping exercises, organising and attending pre-application meetings with local authorities and An Bord Pleanála. Within MKO, Natalia has been assisting managers in the coordination and production of EIARs for largescale SID wind energy developments. Natalia also holds a membership with the Institute of Environmental Management and Assessment (IEMA).

Michéal Cahill (BSc. Env)

Michéal Cahill is an Environmental Scientist with MKO. Michéal holds a first-class honours degree in Environmental Science at University of Galway and was awarded the Professor Emer Colleran Medal for his academic achievements. Prior to taking up his position with MKO in June 2024, Michéal previously worked as an environmental sustainability intern with RPS Group. Michéal has experience in the preparation and review of Environmental Impact Assessment Reports for both offshore and onshore wind farm projects. Michéals key strengths and areas of expertise are in environmental impact assessment, the preparation and writing of environmental impact assessment reports, proficiency in geographic information systems, ecological assessment and risk assessment. As an environmental scientist within MKOs environmental renewables team, Michéal is involved in the preparation and

revision of a variety of reports for a range of energy infrastructure projects, as well as the preparation of fee proposals for large scale wind farm projects.

Sophie O'Rourke (B.Sc, M.Sc)

Sophie O'Rourke is a Graduate Environmental Scientist with MKO. Sophie holds a first-class honours master's degree in environmental science at Trinity College Dublin. As part of MKOs Renewables team Sophie is involved with the production of EIARs for a variety of wind energy projects. Sophie's areas of expertise include environmental policy, high quality report writing, and geographic information systems.

Sean McCarthy

Sean McCarthy is a Project Director in the Planning Team at MKO with over 10 years of experience in both private practice and local authorities. Sean holds a BSc. (Hons) in Property Studies from ATU and a Masters in Regional & Urban Planning for Heriot Watt University in Edinburgh. Prior to taking up his position with McCarthy Keville O'Sullivan in September 2015, Sean worked as a Planning Officer with the Western Isles Council in Scotland in the UK and prior to that worked as a Graduate Planner with Tipperary County Council. Sean is a chartered member of the Royal Town Planning Institute with extensive experience in residential, commercial, industrial, quarries and healthcare development projects.

Sean has been involved in complex and large-scale development projects from inception through to planning permission both as a project manager and working as part of wider design teams. Sean has extensive experience in working on Strategic Housing Development Projects/Large Scale Residential Development Projects and EIAR projects. Within MKO, Sean plays a large role in the management and confidence building of junior members of staff and works as part of a large multi-disciplinary team to produce planning applications.

Alan Clancy (BA, MA)

Alan Clancy is a Project Planner with MKO with over 9 years of experience in private practice. Alan holds a BA in Geography & History from University of Galway and a Master's in Planning and Sustainable Development from University College Cork. Alan has experience across a range of sectors including in the commercial, residential, industrial and renewables sectors, Alan's key strengths and areas of expertise are in development management, provision of planning advice, and project management. Since joining MKO, Alan has assisted with various projects including Strategic Infrastructure Developments, lodgement and management of Planning Applications, Development Plan Submissions and preparing Development Potential Reports. Alan is a member of the Irish Planning Institute.

Alan McBride (BA, PgDip)

Alan is a Project Planner within the Industrial and Commercial team at MKO with over 9 years of experience in both private practice and local authorities in Ireland and the UK. Alan holds BA (Hons) in Geography & History and Postgraduate Diploma in Urban and Regional Planning. Prior to taking up his position with MKO in November 2024, Alan worked as a Planner with Gravis Planning in Dublin and held previous posts with the London Borough of Bexley and the London Borough of Newham in England.

Alan has experience in strategic planning, development management, environmental assessment, and research and analysis. Within MKO, Alan project manages and provides planning support on a variety of development management projects including for large-scale residential developments, infrastructure developments, and renewable energy projects. Alan also works as part of large, multidisciplinary teams

preparing planning applications and is responsible for the preparation of the planning policy elements of the Environmental Impact Statements.

Adrian Moran (BA)

Adrian Moran is a Planner with MKO having joined the company in April 2024. Adrian holds a BA (Hons) in History and Archaeology from University of Galway and an MSc (Hons) in Planning and Development from University of Galway. Since joining MKO, Adrian has been involved in a range of renewable energy projects including onshore and offshore wind, solar and grid infrastructure developments. His main responsibilities include preparing planning application documents and reports, preparing inputs for Environmental Impact Assessment Reports and liaising with multidisciplinary project teams.

Caroline Kelly (MSc. BSc)

Caroline is a Senior Ecologist with MKO with over nine years' experience in ecological consultancy and is a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Caroline holds a BSc in Environmental Biology from University College Dublin (UCD) and an MSc in Applied Ecological Assessment from University College Cork (UCC). In addition, Caroline has completed an Advanced Diploma in Planning and Environmental Law from Kings Inns Dublin. Prior to taking up her position with MKO in June 2025, Caroline worked as a Principal Ecologist with Scott Cawley Ltd. Caroline has strong generalist field ecology skills and has undertaken a range of ecological surveys including habitat, bird (both breeding and wintering), invasive species and protected fauna surveys. She has strong technical reporting skills and has extensive experience in a range of ecological assessments including Appropriate Assessment and Ecological Impact Assessment. She has undertaken ecological assessments and surveys on a variety of project types (e.g. linear infrastructure projects, industrial, commercial, residential, recreational, tourism and renewable energy developments).

Padraig Desmond (BSc)

Pádraig is a Project Ecologist with MKO with 6 years post graduate ecological experience, over 5 years of which have been in ecological consultancy. Pádraig holds a BSc (Hons) in Ecology and Environmental Biology from University College Cork. Pádraig took up his position with MKO in December 2021, prior to which he worked as a Junior Ecologist with Envirico. Through these consultancy roles Pádraig has gained excellent experience in producing ecological reports such as Natura Impact Statements, Ecological Impact Assessments, Biodiversity chapters, Invasive Species Management Plans, and Constraints Reports for a wide range of projects including small private developments to housing developments and renewable energy projects such as solar and wind farms. Prior to the above roles, Pádraig worked as a field ecologist for the Department of Conservation in New Zealand, where he developed a strong field-based skill set.

Pádraig's key strengths and areas of expertise are in terrestrial ecology, including vegetation surveys, habitat identification, invasive species surveys, mammal surveys, and project managing developments requiring Appropriate Assessment and Ecological Impact Assessment.

Stephanie Corkery (MSc, BSc)

Stephanie is an Ecologist with MKO with over 3 years of experience in professional ecological consultancy. Stephanie holds a BSc. in Ecology and Environmental Biology, an MSc. in Marine Biology, and a HDip in Sustainability in Enterprise, all from University College Cork. Since joining MKO as a graduate in March 2022, Stephanie has worked on a wide variety of projects including wind farms, large scale residential developments, and County Council projects. Stephanie's key strengths include organising and carrying out both terrestrial and marine mammal surveys, as well as general ecological walkover surveys and bat surveys. She is also experienced in GIS, acoustic data analysis for

bat species, and in preparing Appropriate Assessment Screening Reports (AASR), Natura Impact Statements (NIS), Ecological Impact Assessments (EcIA), Biodiversity Chapters, and Bat Reports. Stephanie is also a JNCC Certified Marine Mammal Observer and has completed the ACCOBAMS Course for Highly Qualified Marine Mammal Observers (MMO) and Passive Acoustic Monitoring operators (PAM).

Deepali Mooloo (MSc, BSc)

Deepali is an Ecologist at MKO with over two years of experience in ecological consultancy, specialising in terrestrial ecology and conservation. She holds an M.Sc. in Applied Coastal and Marine Management from University College Cork, where she focused on spatial ecology and drone photogrammetry.

Since joining MKO, Deepali has contributed extensively to renewable energy and infrastructure projects, providing comprehensive ecological support from early-stage feasibility through to detailed impact assessment. Her expertise encompasses multidisciplinary ecological walkover surveys, habitat identification and classification in accordance with Fossitt's Guide to Habitats in Ireland, and detailed habitat assessments using the ERICA database. She has undertaken a wide range of specialist field surveys, including marsh fritillary larval web and habitat condition assessments, wintering bird, bat, mammal, and botanical surveys, as well as Annex I habitat condition assessments and surveys for rare and protected plant species. She is experienced in conducting detailed vegetation relevés and ecological constraints mapping.

Deepali has prepared a broad suite of ecological reports, including Appropriate Assessment Screening Reports (AASR), Natura Impact Statements (NIS), Ecological Impact Assessments (EcIA), EIAR Biodiversity Chapters, Feasibility Studies, and Biodiversity Management and Enhancement Plans. She is highly proficient in GIS-based mapping and spatial analysis using QGIS and ArcGIS, supporting detailed habitat and constraints mapping. She also has experience in bat data analysis using Kaleidoscope software.

In 2024, Deepali completed the Marine Mammal Observer Course with the Irish Whale and Dolphin Group (IWDG), further strengthening her multidisciplinary ecological skillset.

Andrew McCarthy

Andrew McCarthy is a Graduate ecologist with MKO with previous experience with the company as an ecology intern during the summer of 2024. Andrew holds BA (Hons) in Ecology and Environmental Biology.

Prior to taking up his position with MKO in September 2025, Andrew worked as an education officer in Fota Wildlife Park during the summer of 2023.

Andrew's key strengths and areas of expertise are in bird identification and communication.

Since joining MKO Andrew has been involved as a student and graduate ecologist on a significant range of projects such as rhododendron mapping in killarney national park, eDNA surveys for white clawed cray fish and freshwater pearl mussel, biodiversity net gain surveys, multidisciplinary site walkovers and a wide range of bat and bird survey

Aoife Joyce (MSc, BSc)

Aoife Joyce is a Project Director (Ecology) with 6 years' professional experience in ecological assessments and has completed CIEEM and BCI courses in Bat Impacts and Mitigation, Bat Tree Roost Identification and Endoscope training, Bat ID, Trapping and Handling and Kaleidoscope Pro Analysis. She is a graduate of Environmental Science (Hons.) at University of Galway, complemented by a first-

class honours MSc in Agribioscience. Prior to taking up her position with MKO in 2019, Aoife held previous posts with Inland Fisheries Ireland and Treemetrics Ltd. She has a wide range of experience from bat roost identification, acoustic sampling, sound analysis, electrofishing, mammal and habitat surveying to GIS, soil and water sampling, Waste Acceptability Criteria testing, Environmental Impact Assessments (EIAs) and mapping techniques. Since joining MKO, Aoife has been involved in managing bat survey requirements for a variety of renewables planning applications, as well as commercial, residential and infrastructure projects. This includes scope development, project coordination, roost assessments, remote bat detector deployment, dawn and dusk bat detection surveys, bat handling, sonogram analyses, mapping, impact assessment, mitigation design inputs and report writing. Within MKO, she oversees the bat team and works as part of a wider multidisciplinary team to help in the production of ecological reports and assessments. Aoife is a member of Bat Conservation Ireland and CIEEM and holds current Bat Roost Disturbance and bat photography licenses.

Clare Misfud (PhD)

Clare Mifsud (PhD) is a Project Bat Ecologist at MKO with over 15 years' experience in bat research and conservation. Clare completed her PhD in Bat Conservation Biology at the University of Malta, where her research focused on bat genetics, ecology and bioacoustics, with a particular specialism in island bat ecology, providing relevant insight into bat population dynamics, species assemblages and habitat use in island contexts such as Ireland. She has since specialised in the design and delivery of bat surveys for wind farm and infrastructure projects, including static detector surveys (ground-level and at-height), transects, emergence and re-entry surveys, as well as acoustic analysis and reporting. Clare has prepared numerous EIARs and specialist bat reports, advises on mitigation design, and contributes to biodiversity management planning. Prior to joining MKO in February 2025, she worked as a Biological Expert and Consultant on an EU-funded marine conservation project between Malta and Sicily, and as a Lecturer at the University of Malta. She remains actively engaged with conferences and professional networks to stay at the forefront of bat research and applied conservation practice.

Padraig Cregg (M.Sc. B.Sc.)

Padraig Cregg is employed as a Principal Ornithologist for MKO and has over 12 years' experience of working in environmental consultancies. In his role with MKO, he acts as technical advisor for the ornithology team helping to take projects through their full lifecycle, from site selection through survey design, constraints studies, impact assessment and lodgement of the planning application. He is responsible for training the ornithology team and undertakes to keep up-to-date and keep his colleagues updated on all emerging guidance, legislation, policies, initiatives, industry best practice and emerging trends and market opportunities. Padraig joined MKO in 2018.

Patrick Manley (BSc)

Patrick Manley is a Senior Ornithologist at MKO. He attended University College Dublin where he completed a BSc (Hons) in Geology. Patrick has over 8 years' experience working with MKO in designing and executing ornithological surveys, primarily within the renewables sector. Patrick also prepares the ornithological chapters of Environmental Impact Assessment Reports (EIAR) to accompany planning applications. Within his role as Senior Ornithologist, Patrick is responsible for managing bird survey works at multiple wind farm sites, including preparing scope of works for surveys, coordinating surveys and access, liaising with clients and preparing reports.

Jack Workman (B.Sc, M.Sc)

Jack Workman MSc., TMLI. is the Landscape & Visual Project Director at MKO and is chartered as a Technician Member of the British Landscape Institute. Jack is an environmental scientist and an LVIA specialist with an academic background in the field of Environmental Science and Geography. Jack's primary role at MKO is scoping and writing LVIA for EIARs with over 5 years' experience managing

all aspects of LVIA for a broad range of commercial infrastructure developments. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policy & Practice). Jack is an active participant in the National Landscape Forum, presenting in 2023, 2024 and 2025 on the topic of LVIA, he also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland including University of Galway, Trinity College Dublin, University College Dublin and University College Cork. Jack holds a membership with the Chartered Institute of Water and Environmental Management and is also a member of the Landscape Research Group.

Dija Mazonaite (BSc)

Dija Mazonaite is a Project Environmental Scientist and LVIA Specialist at MKO. Dija has a BSc (Hons) in Geography & Geosystems and was recognised as a University Scholar at the University of Galway. Dija was also a finalist in Undergraduate of the Year for Innovative Sustainable Thinking. Dija's primary role at MKO is producing the LVIA chapter of EIA reports accompanying planning applications for large-scale infrastructure developments. Since joining MKO, Dija has conducted and project managed all aspects of LVIA for a broad range of commercial infrastructure developments including large-scale wind and solar energy projects, grid infrastructure, extraction industry and Strategic Housing Developments. Dija assists and attends the National Landscape Forum, and also delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland, such as University of Ireland. Dija's key strengths include proficiency in GIS tools such as ArcGIS and QGIS, conducting landscape and visual impact assessments and capturing image data through drone surveys and photomontages. Dija is an affiliate member with the Landscape Institute and is also a member with IEMA, with qualifications to fly drones in the A1/A3 subcategories.

Daniel Mulpeter (BSc, MSc)

Daniel Mulpeter is an Environmental Scientist and LVIA Specialist at MKO, with over two years of experience in Landscape and Visual Impact Assessments (LVIA) across wind energy, solar energy, residential, and public infrastructure projects. His key strengths include proficiency in GIS tools such as QGIS, conducting landscape and visual impact assessments, and capturing data through drone surveys and photomontages. Daniel is an affiliate member of the Landscape Institute and holds drone qualifications in the A1/A3 subcategories.

Daniel holds an MSc in Environmental Science from Trinity College Dublin, where he completed his thesis titled "Estimating Peat Depth using Gamma-ray Spectrometry and Photogrammetry." He also holds a BSc (Hons) in General Science, specialising in Applied Mathematics and Biology.

Killian Devereux (BSc)

Killian is currently the Project CAD Technician at MKO he has over 8 years of drafting experience in various sectors of the building industry. He holds BSc (Hons) in Architectural Technology from Galway Mayo Institute of Technology. Prior to taking up his position with MKO in October 2022, Killian worked as a Structural CAD/BIM Technician for Tobin Consulting Engineers and as an Architectural Technician for some smaller-scale Engineering Consultants. He was primarily involved in a variety of Commercial / Residential projects where he was responsible for the structural drawing packages but also has experience working in RC concrete Drawings, Architectural and Civil drawings, FSC's /DAC's and one-off housing planning applications. His key strengths and areas of expertise are in Auto CAD, Revit, Cads RC and Google Sketch up. Since Joining MKO Killian has been the Lead CAD technician on multiple Renewable Energy Planning Applications..

Joseph O'Brien (BA)

Joseph O'Brien is a CAD Technician with MKO with over 9 years of experience. Joseph holds a BA Honours Level 8 Modelmaking, Design and Digital Effect, Institute of Art Design and Technology

(IADT), Dun Laoghaire & City & Guilds Level 3 2D &3D AutoCAD certificates. Prior to taking up his position with MKO in June 2016, Joseph worked as worked as a free-lance Modelmaker and CAD Technician. His previous experience included designing various models and props through CAD and then making them for various conventions such as Dublin Comic Con and Arcade Con. Joseph's key strengths and areas of expertise are skills such as mapping, aerial registration and detailed design drawings for projects. Since joining MKO Joseph has been role of producing planning application drawings through CAD for various projects such as renewable energy such as wind and solar.

1.7.2.2 Triturus Environmental Ltd

Ross Macklin

Ross Macklin BSc (Hons) Applied Ecology HDip GIS Dip IPM MCIEEM IFM is an environmental scientist specialising in freshwater and fisheries ecology. He studied a bachelor's degree in applied Ecology at UCC and later completed a higher diploma in Geographical Information Systems at UCC and a diploma in Integrated Pest Management at UCD. He is currently completing his PhD at UCC in fisheries ecology. Ross has an in-depth knowledge of all freshwater ecosystems and riparian corridors. He has undertaken river habitat, lake habitat, canal habitat and fisheries assessments in professional work for 20 years. His specialist freshwater experience lies in biological and physicochemical water quality analysis, fisheries ecology, riparian habitat assessments, habitat mapping, protected species, mammal surveys, geographical information systems, ecological design and invasive species. Ross has expert experience in identifying and assessing macrophyte plant, aquatic bryophytes, fish and macroinvertebrates from a variety of aquatic habitats. He routinely undertakes fisheries assessments, protected species surveys, invasive species surveys, river hydromorphology surveys, surface water management plans, CEMP, EcIA , EIAR and NIS reporting. He holds full national licences for freshwater pearl mussel (Margaritifera margaritifera), white-clawed crayfish (Austropotamobius pallipes) and amphibians inclusive of an open photography licence for numerous protected species. He has held over 300 section 14 licences for fisheries surveys spanning the breadth of Ireland.

Bill Brazier

Bill Brazier BSc (Hons)Applied Freshwater & Marine Biology, MIFM) is an aquatic, fisheries and mammalian ecologist with over 14 year's professional experience in Ireland. He is a senior ecologist at Triturus Environmental Ltd. and is completing a PhD in fish genetics at UCC. He has extensive experience in a wide range of ecological and environmental projects including EIAR, EcIA and AA/NIS reporting, as well as the areas of renewable energy developments, flood relief schemes, road schemes, invasive species management blueways/greenways, biodiversity projects and non-volant mammal monitoring. He specialises in aquatic ecology and fisheries ecology, inclusive of fisheries assessments, macrophytes, water quality, otter, freshwater pearl mussel, white-clawed crayfish and amphibians, holding full national licences for all of these species. Bill is one of Ireland's most experienced fisheries scientists having held over 250 section 14 authorisation licences for fisheries related work.

1.7.2.3 Hydro Environmental Ltd

Michael Gill

Michael Gill (P. Geo., B.A.I., MSc, Dip. Geol., MIEI) is an Environmental Engineer/Hydrologist with over 23 years' environmental consultancy experience in Ireland. Michael has completed numerous hydrological and hydrogeological impact assessments of wind farms in Ireland. He has also managed EIAR assessments for infrastructure projects and private residential and commercial developments. In addition, he has substantial experience in wastewater engineering and site suitability assessments, contaminated land investigation and assessment, wetland hydrology/hydrogeology, water resource

assessments, surface water drainage design and SUDs design, and surface water/groundwater interactions. For example, Michael has worked on the EIS/EIARs for Slievecallan Wind Farm, Cahermurphy (Phase I & II) Wind Farm, and Carrownagowan Wind Farm, and over 100 other wind farm related projects across the country.

David Broderick

David Broderick is a hydrogeologist with over thirteen years' experience in both the public and private sectors. Having spent two years working in the Geological Survey of Ireland working mainly on groundwater and source protection studies David moved into the private sector working with consultancies such as HES and O'Neill Ground Water Engineering. David has a strong background in groundwater resource assessment development and hydrogeological investigations. David has a good knowledge of GIS software such as Mapinfo and ArcGIS.

1.7.2.4 Fehily Timoney & Company

Fehily Timoney and Company (FT) is an Irish engineering, environmental science and planning consultancy with offices in Cork, Dublin and Carlow. The practice was established in 1990 and currently has c.100 members of staff, including engineers, scientists, planners and technical support staff. We deliver projects in Ireland and internationally in our core competency areas of Waste Management, Environment and Energy, Civils Infrastructure, Planning and GIS and Data Management. They provide specialist geotechnical engineering and engineering geology advice to local authorities, contractors and consultants, particularly for infrastructure projects forming part of the National Development Plan and also for private commercial and residential developments as they move on to sites with more complex ground conditions.

Ian Higgins

Ian is a geotechnical engineer with over 25 years' experience in the design and supervision of construction of bulk earthworks, geotechnical foundation design, geotechnical monitoring and reviewing, reinforced earth design and 3rd party checking of piling and ground improvement designs. Ian holds a BSc (Hons) Engineering Geology from University of Sunderland, and a MSc in Geotechnical Engineering from the Heriot-Watt University. Ian's experience also includes the design, supervision and interpretation of ground investigations, including desk studies, walkover surveys, hazard mapping of rock excavations and slopes.

Ian has experience in many areas of civil engineering including highways, railways, energy projects and commercial developments. Ian's responsibilities include managing junior engineers, reviewing work carried out for ground investigation, reporting and design. Ian has also experience in using a number of geotechnical software packages including slope stability, finite element, pile design and retaining wall design.

1.7.2.5 AWN Consulting

Dermot Blunnie

Dermot Blunnie (Principal Acoustic Consultant) holds a BEng (Hons) in Sound Engineering, MSc in Applied Acoustics and has completed the Institute of Acoustics (IOA) Diploma in Acoustics and Noise Control. He has been working in the field of acoustics since 2008 and is a member of the Institute of Engineers Ireland (MIEI) and the Institute of Acoustics (MIOA). He has extensive knowledge and experience in relation to commissioning noise monitoring and impact assessment of wind farms as well as a detailed knowledge of acoustic standards and proprietary noise modelling software packages. He has commissioned noise surveys and completed noise impact assessments for numerous wind farm projects within Ireland.

Mike Simms

Mike Simms (Principal Acoustic Consultant) holds a BE and MEngSc in Mechanical Engineering and is a member of the Institute of Acoustics (MIOA) and of the Institution of Engineering and Technology (MIET). Mike has worked in the field of acoustics for over 20 years. He has extensive experience in all aspects of environmental surveying, noise modelling and impact assessment for various sectors including, wind energy, industrial, commercial and residential.

1.7.2.6 IAC Archaeology

Faith Bailey

Faith (MA Cultural Landscape Management, BA (Hons) Archaeology, MIAI, MCIfA) is a licenced eligible archaeologist, a member of the Chartered Institute of Field Archaeologists, a member of the Institute of Archaeologists of Ireland and has over 22 years' experience working in the commercial cultural heritage sector. She has been responsible for the production and delivery of multiple archaeological, architectural and cultural heritage assessments and EIAR for renewable energy projects, including The Yellow River Wind Farm (Co. Offaly), Derrysallagh Wind Farm (Co. Sligo), Derreenacrinnig Wind Farm (Co. Cork) and the Robertstown Wind Farm (Co. Waterford).

Johnnie Gallacher

Johnnie Gallacher is a member of the Institute of Archaeologists of Ireland and has over 5 years' experience working in the commercial cultural heritage sector.

1.7.2.7 Alan Lipscombe Traffic and Transport Consultants

Alan Lipscombe

Alan Lipscombe is a competent expert in traffic and transport assessments. In 2007 Alan set up a traffic and transportation consultancy providing advice for a range of clients in the private and public sectors. Prior to this Alan was a founding member of Colin Buchanan's Galway office having moved there as the senior transportation engineer for the Galway Land Use and Transportation Study. Since the completion of that study in 1999, Alan has worked throughout Ireland on a range of projects including: major development schemes, the Galway City Outer Bypass, Limerick Planning Land-Use and Transportation Study, Limerick Southern Ring Road Phase II, cost benefit analyses (COBA) and various studies for the University of Galway. Before moving to Galway in 1997, Alan was involved in a wide variety of traffic and transport studies for CBP throughout the UK, Malta and Indonesia. He has particular expertise in the assessment of development related traffic, including many wind farm developments including the following; Ardderroo, Derrinlough, Knocknamork, Shehy More, Cloncreen, Derrykillew, Ballyhorgan, Lettergull, Barnadivane, Cleanrath, Knockalough, Sheskin South and Borrisbeg.

Alan has a BEng (hons) Degree in Transportation Engineering (Napier University, Edinburgh, 1989), is a member of Engineers Ireland and of the Institute of Highways and Transportation and is a TII accredited Road Safety Audit Team Member.

1.8 Viewing and Purchasing of the EIAR

Copies of this EIAR will be available online for the planning application, including the Non-Technical Summary (NTS), on the Planning Section of the An Coimisiúin Pleanála website, under the relevant Planning Reference Number (to be assigned on lodgement of the application).

An Coimisiúin Pleanála: http://www.pleanala.ie/

This EIAR and all associated documentation will also be available for viewing at the offices of An Coimisiún Pleanála, and Clare County Council. The EIAR may be inspected free of charge or purchased by any member of the public during normal office hours at the following address:

An Coimisiún Pleanála,
64 Marlborough Street,
St. Rotunda,
Dublin 1
D01 V902

Clare County Council
Áras Contae an Chláir
New Road
Ennis
Co. Clare
V95 DXP2

The EIAR will also be available to view online via the Department of Planning, Housing and Local Government's EIA Portal, which will provide a link to the planning authority's website on which the application details are contained. This EIA Portal was recently set up by the Department as an electronic notification to the public of requests for development consent which are accompanied by an EIAR. (https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal)

The EIAR will also be available to view online on its dedicated SID websites:

www.cahermurphywestplanning.ie

www.cahermurphywestgridplanning.ie