

Environmental Impact Assessment Report (EIAR)

Crumhach Wind Farm, Co.
Sligo

Chapter 1 Introduction



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GLOSSARY OF TERMS

Term	Definitions
DoEHLG 2006 Guidelines	The 2006 Wind Energy Development Guidelines. The current published wind energy development guidelines which address a variety of aspects relating to wind energy developments inclusive of noise, shadow flicker, setback distances and community obligations
Natura Impact Statement	A report prepared to assess the potential for a project to impact EU designated sites (i.e. Natura 2000 sites)
Renewable Energy Directive	An EU Directive which aims to accelerate the EU's renewable energy transition and promote energy independence
The Applicant	SSE Renewables (Ireland) Ltd.

GLOSSARY OF ACRONYMS

Acronym	Definition
ACP	An Coimisiún Pleanála
AR	Assessment Report
CAP	Climate Action Plan
CO ₂	Carbon Dioxide
COP	Conference of the Parties
CRM	Collision Risk Modelling
DCENR	Department of Communications, Energy and Natural Resources
DECC	Department of the Environment, Climate and Communications
DHPLG	Department of Housing, Planning and Local Government
DoEHLG	Department of the Environment, Heritage, and Local Government
DPER	Department of Public Expenditure and Reform
EEA	European Environmental Agency
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ESR	Effort Sharing Regulation
ETS	Emission Trading Scheme
GFC	Gross Final Consumption
GW	Gigawatts
GWL	Global Warming Levels
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
kV	Kilovolt
LULUCF	Land Use, Land Use Change and Forestry
LVIA	Landscape and Visual Impact Assessment
MtCO ₂ eq	Million Tonnes Carbon Dioxide Equivalent
MW	Megawatt
NECP	National Energy and Climate Plan
NESF	National Energy Security Framework
NIS	Natura Impact Statement
NO ₂	Nitrogen Oxides
NREAP	National Renewable Energy Action Plan
NTS	Non-Technical Summary

O ₃	Ozone
PM	Particulate Matter
RED	Renewable Energy Directive
RESE	Renewable Energy Share - Electricity
RES-H	Renewable Energy Share - Heat
RESS	Renewable Energy Support Scheme
RES-T	Renewable Energy Share - Transport
SCC	Sligo County Council
SEAI	Sustainable Energy Authority of Ireland
SID	Strategic Infrastructure Development
SO _x	Sulphur Oxides
UAE	United Arab Emirates
UNFCCC	United Nations Framework Convention on Climate Change
WAM	With Additional Measures
WEM	With Existing Measures
WHO	World Health Organisation

1. INTRODUCTION

1.1 Introduction

This Environmental Impact Assessment Report (EIAR) has been prepared by MKO on behalf of SSE Renewables (Ireland) Ltd. (the Applicant), who intend to apply to An Commission Pleanála (ACP) for planning permission to remove the existing 23 no. turbines on the Dunneill (13 no. turbines) and Kingsmountain (10 no. turbines) Wind Farm sites, replace them with 17 no. wind turbines across both existing wind farm sites and additional greenfield sites in the townlands of Crowagh or Dunneill Mountain, Tawnadremira, and Ballyglass, Doonbeakin, Dunowla, Kingsmountain and Ballygreighan Barr in Co. Sligo. The proposed renewable energy development complies with the definition as listed in the Seventh Schedule of the Planning and Development Act 2000, as amended and is therefore subject to the requirements of the Renewable Energy Directive (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 proposed renewable energy development is being brought forward as a new renewable energy development with repowering elements and is therefore considered a 'new wind farm' within the context of the RED III Directive.

The proposed renewable energy development will have a potential generating capacity greater than 50 megawatts (MW) and will make use of existing cable connections from the Dunneill and Kingsmountain Wind Farms to the existing Cughill 110kV substation and a new underground cable connection from a proposed new onsite 110kV substation to the existing Srananagh 220kV substation to connect to the National Grid. There will be minor upgrades to the existing onsite control buildings to ensure that it is in line with current electrical standards.

As outlined further in Section 1.1.1 below, the site of proposed renewable energy development incorporates the existing Dunneill and Kingsmountain Wind Farm sites which have 23 no. turbines, all of which are to be decommissioned as part of the proposed renewable energy development. The existing Dunneill and Kingsmountain Wind Farms have a joint current generating capacity of approx. 36.1MW. The repowering element of the proposed renewable energy development has many advantages, which are outlined and assessed in further detail throughout this EIAR. The repowering of the existing Dunneill and Kingsmountain Wind Farms, in addition to the provision of additional wind turbines in greenfield sites, will ensure the supply of renewable energy to the national grid for an additional 35 years. For context, the location of the existing Dunneill and Kingsmountain Wind Farms is shown in Figure 1-1 below.

The planning application which will be submitted to ACP, will seek to remove the existing 23 no. turbines and to construct 17 no. new turbines in their place. The 17 no. turbines will meet the potential generation capacity of greater than 50MW. The application meets the threshold for wind energy set out in the Seventh Schedule of the Planning and Development Act 2000, as amended (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 Planning and Development Act, 2000 as amended. This approach has been confirmed following consultations with ACP under the provisions of Section 37B of the Planning and Development Act 2000 as amended (Case Reference ABP-320934-24). This EIAR accompanies the planning application for the proposed 17 no. turbines, onsite substation and associated infrastructure submitted to ACP. The planning application is also accompanied by a Natura Impact Statement (NIS). The proposed grid connection to Srananagh 220kV substation and associated works will be subject to a separate, future planning application under Section 182A of the Planning and Development Act 2000, as amended, however, it is assessed in this EIAR.

The application for the proposed renewable energy development includes a design flexibility opinion issued by ACP under Section 37CD of the Planning and Development Act 2000, as amended (Case Reference ACP-323811-25), allowing for permission for a range of turbine dimensions to be sought.

Full details of the pre-application consultation undertaken with regards to the planning application can be found in Section 2.7 in Chapter 2 of this EIAR.

1.1.1

References to the Proposed Project

For the purposes of this EIAR:

- › Where the ‘Proposed Project’ is referred to this encompasses the entirety of the project for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of this EIAR.
- › 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 1-2 and encompasses an area of approx. 1,546ha.
- › Where the ‘Proposed Wind Farm’ is referred to, this refers to turbines and associated foundations and hard-standing areas, access tracks, temporary construction compounds, onsite 110kV substation, internal underground cabling, onsite LiDAR compounds, peat and spoil management, site drainage, biodiversity enhancement, turbine delivery route (TDR) accommodation works and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4 of this EIAR.
 - The ‘Proposed Turbines’ refers to the 17 no. turbines associated with the Proposed Wind Farm as outlined above.
- › Where the ‘Proposed Grid Connection Route’ is referred to this encompasses the 110Kilovolt (kV) underground cabling connecting the proposed onsite 110kV substation to the existing Srananagh 220kV substation, and all ancillary works and apparatus. The Proposed Grid Connection Route is described in detail in Chapter 4 of this EIAR.
- › Where the ‘Existing Wind Farm’ is referred to, this relates to all components of the existing Dunneill and Kingsmountain Wind Farm developments as outlined in Section 1.1.1 below.
 - Where differentiation is required between the Dunneill and Kingsmountain Wind Farms within the EIAR these are called out as necessary.
- › Where the ‘Existing Grid Connection’ is referred to, this relates the existing underground cabling connecting the existing onsite control buildings for the Existing Wind Farm to the existing Cunghill 110kV substation.

In addition:

- › Where the construction phase is detailed and assessed within the EIAR, this includes for the removal of the existing 23 no. turbines and the construction of the proposed 17 no. turbines and associated infrastructure on site.
- › Where the operational phase is detailed and assessed within the EIAR, this includes for the operation of the proposed 17 no. turbines on site.
- › Where the decommissioning phase is detailed and assessed within the EIAR, this includes for the decommissioning of the proposed 17 no. turbines on site.

This EIAR, along with a NIS will accompany the planning application for the Proposed Project which will be made to ACP. Both the EIAR and NIS contain the information necessary for ACP to complete the Appropriate Assessment and Environmental Impact Assessment (EIA) as required for this planning permission application.

The Proposed Grid Connection Route is an integral part of the Proposed Project and is assessed in this EIAR, however, it will be subject to a separate, future application. The future application for consent for the Proposed Grid Connection Route will be made to ACP in accordance with the provisions of 182A of the Planning and Development Act 2000, as amended.

Both the EIAR and NIS take into account the combined impacts of the above 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 plans and projects to aid the competent authority in carrying out an EIA.

The EIAR Site Boundary identifies the primary EIAR study area for the Proposed Project, however, each individual topic, i.e., chapter, has its own study area for assessment purposes relevant to that topic which will be clearly identified in the relevant chapters. The actual planning application site outline (Red Line Boundary) for the purposes of this planning application occupies a smaller area within the primary EIAR Site Boundary. The EIAR Site Boundary encompasses an area of approx. 1,546 ha. The permanent footprint of the Proposed Project measures approx. 27.6 ha, which represents approx. 1.8% of the Site.

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

1.1.2 Context of the Proposed Project

As detailed further in Section 1.1.3 below, there are various planning permissions for the Existing Wind Farm within the Site. Some of these permissions have expiry dates, in which the wind turbines need to be decommissioned, while some do not. The existing Dunneill Wind Farm received a grant of permission consisting of a fifteen-year continuation of the operational life of the existing wind farm from the date of expiration (March 2024) (PL Ref: 22/291). There is no expiration date on the existing Kingsmountain Wind Farm grant of permission (PL Ref: 97/469).

In order to maximise the potential of the Site and increase efficiency, the Applicant plans to develop the full site of the Existing Wind Farm, as well 225ha of greenfield site to the west of the Existing Wind Farm. This will mean that all 23 no. turbines will be removed from site, regardless of current planning permissions.

With advancements in technology, the Applicant has designed a development that reduces the overall footprint on the site while simultaneously supplying a greater energy output to the national electricity grid. By removing all 23 turbines, the Proposed Project has been designed in a way that utilises the majority of the Existing Wind Farm infrastructure. The Existing Wind Farm is shown in Figure 1-1.

1.1.3 Planning History

The Existing Wind Farm encompasses a total of 23 no. turbines that are currently in operation, which comprises 2 no. distinct wind farm projects, each with their own separate planning permissions.

Dunneill Wind Farm

As part of the existing Dunneill Wind Farm site, permission was granted for the construction of 13 no. turbines under the following planning references:

- › 03/619 & ABP Pl. Ref. 21.204790 – permission to construct 13 no. turbines and associated structures.
- › 10/371 - retention of a Control Building of 97sqm with adjacent fenced compound and associated services on a site area of 0.07ha. This application for retention of planning will operate for the duration of the original planning permission granted under PL 03/619.

- › 10/388 - retention and operation of the existing temporary meteorological mast with associated site works.
- › 22/291 - development consisting of a fifteen (15) year continuation of the operational life of the existing wind farm Sligo County Council (SCC) Reg. Ref. PL03/619 & ABP Pl. Ref. 21.204790, as amended by SCC Reg. Ref PL10/371 and PL10/388) from the date of expiration (March 2024) of the current permissions. No modifications are proposed to the existing windfarm.

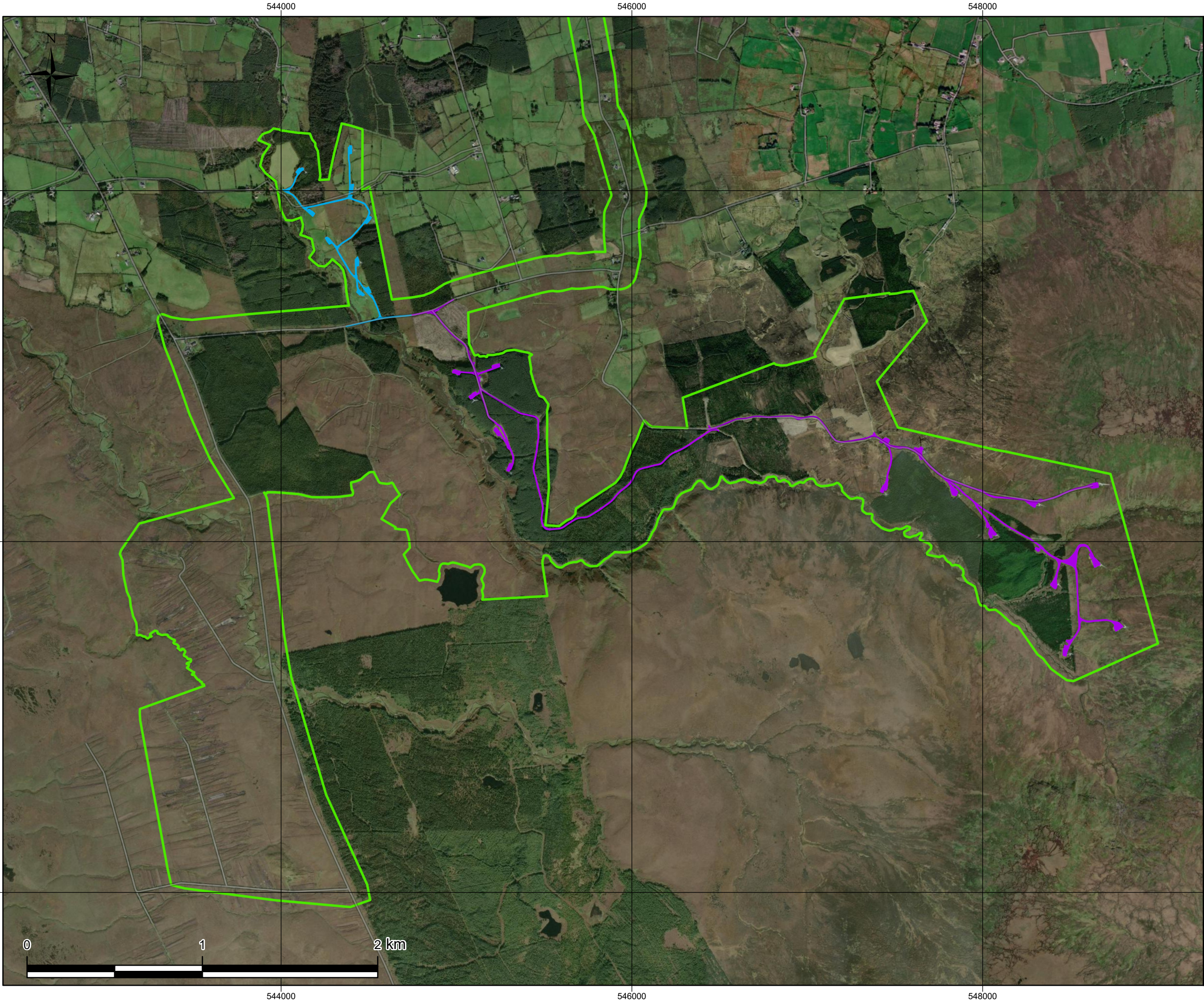
The consented turbines have been constructed and consists of Vestas V52 turbines with a total installed capacity of 11.1 MW. The Dunneill Wind Farm was fully commissioned in 2010 and in 2023, Dunneill Wind Farm received planning permission to extend its operational life by a further 15 years to 2039.

Kingsmountain Wind Farm

As part of the Kingsmountain Wind Farm site, permission was granted for the construction of 10 no. turbines under the following planning references:

- › 97/469 - The erection of a wind farm including 10 wind turbines (1.5mw/each) with 3.75m wide access road and electrical sub-station on revised site.
- › 02/846 - Alterations to previously permitted development under PL 97/469 involving an amendment to Condition No. 1(c) of this permission to locate transformers external to the 10 no. permitted turbines.

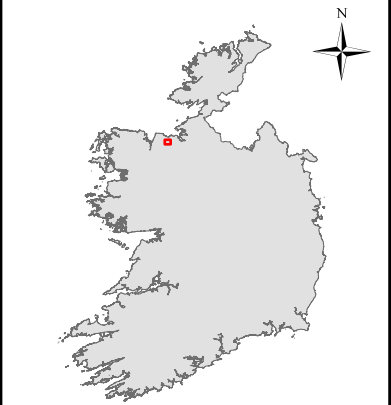
The consented turbines have been constructed and these consist of Nordex N18 alpha turbines with a total installed capacity of 25 MW. The Kingsmountain Wind Farm was fully commissioned in 2003 and does not have a planning condition specifying an expiry date for its operational life.



Map Legend

- █ EIAR Site Boundary
- █ Existing Dunneill Footprint
- █ Existing Kingsmountain Footprint

Spatial Reference
Name: IREN95 Irish Transverse Mercator
Datum: IREN95
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title

Existing Wind Farm

Project Title

Crumhach Wind Farm, Co. Sligo

Project No.	Drawing No.	Scale
230841	1-1	1:20,000
Drawn By	Checked By	Date
MVN	BT	31/07/2026



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1.1.4

Site Location

The Proposed Wind Farm is located on the northwest slopes of the Ox Mountains, located approx. 4.5km south of the village of Dromore West, and approx. 3km southwest of the village of Templeboy in Co. Sligo, at their nearest points. The Site location context is shown in Figure 1-2.

The Proposed Wind Farm is accessed via the L6309 and L2702 Local Roads off the N59 National Road, travelling in an east-west direction north of the site and the N17 National Road, which runs in a north-south direction to the southeast of the site. The current entrance to the Existing Wind Farm is proposed as the main site entrance, utilising the existing access roads and infrastructure. Upgrades to additional existing site entrances along the L6309 and L2702 Local Roads and the provision of a new site entrance on the L2702 are proposed to access the adjoining lands.

Wind energy is an established land-use in the area of the Site. The Proposed Wind Farm encompasses the Existing Wind Farm, which is owned and operated by SSE. The Proposed Project will include the decommissioning of the Existing Wind Farm turbines, and their replacement with newer, more efficient turbines on the Existing Wind Farm site and adjoining lands, in order to optimise the windtake resource of this area.

In addition to the Existing Wind Farm, land-use on the Proposed Wind Farm primarily comprises peat bog, with coniferous forest to the north-west, east and south of the site. South of the Proposed Wind Farm comprises largely of transitional wood scrub, while land-use in the northern end of the site comprises largely of pastoral agriculture and low-density residential.

Current land-use along the Proposed Grid Connection Route comprise public road corridor, pastures, low density residential, industry, commercial forestry and land principally used for agriculture with significant areas of natural vegetation.

The EIAR Site Boundary is shown overlain on aerial imagery in Figure 1-3.

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 Project is located within areas designated in the Sligo County Development Plan, 2024-2030 as a 'Sensitive Rural Landscape' and 'Normal Rural Landscape'.

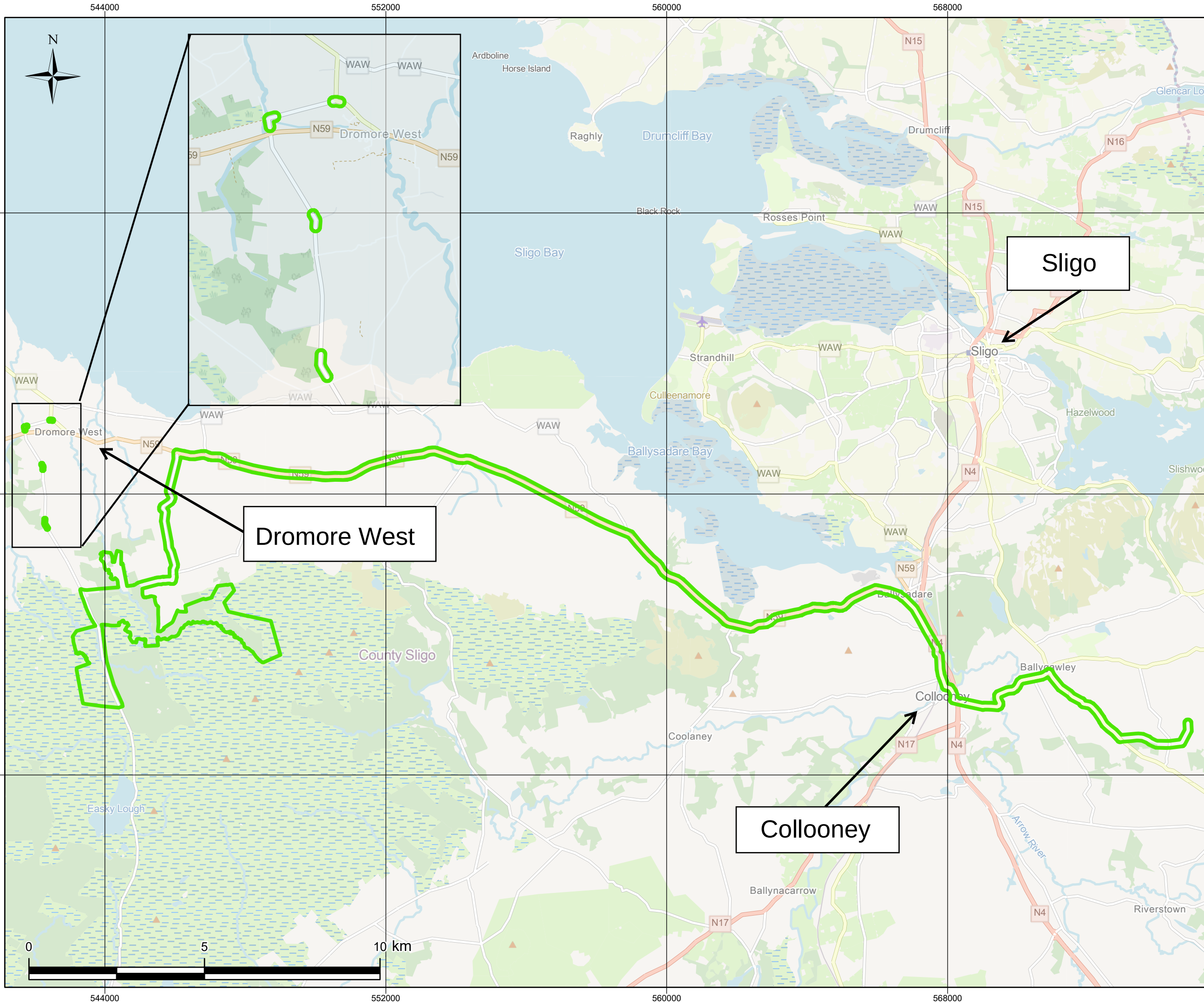
The townlands in which the Proposed Project is located are listed in Table 1-2. Figure 1-4 includes the planning application boundary for the Proposed Project.

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

Development Works	Townland
Proposed Project	
Turbine Removal, Proposed Turbines and associated Foundations and Hardstanding Areas, Public Road Upgrade Works, Upgrades to Existing Access Tracks, New Access Tracks, Turbine Component Delivery Accommodation Works, Proposed Onsite 110kV Substation, Upgrades to Existing Onsite Control Buildings, Internal Underground Cabling, Temporary Construction Compounds, Borrow Pits, Peat and Spoil Management, Biodiversity Enhancement, Tree Felling Site Drainage, Operational Stage	Crowagh or Dunneill Mountain, Ballyglass, Tawnadremira, Doonbeakin, Dunowla, Kingsmountain, Ballygreighan Barr, Corhawnagh, Abbeytown, Knockaculleen, Rathgoonaun, Leecarrow, Dromore.

Site Signage and all ancillary works and apparatus.	
Proposed Grid Connection Route	
Underground cable connection from proposed onsite 110kV substation to Srananagh 220kV substation	*Ballysumaghan, *Ardleegbeg, *Killala, *Gaddan, Doonally, *Tully Beg, Lavinscarton, *Ballydawley, *Ballygrania, *Rathrippin, *Collooney, *Rinn, *Bleachgreen, *Carricknagat, *Knoxspark, *Kilboglasy, *Halfquarter, *Stonehall or Carrownageeragh, *Cooney, *Lugawarry, *Lisduff, *Lugnadeffa, *Mullanashee, *Crockacullion, *Larkhill, *Tanrego East or Carrowmore, *Barnabrack, *Tanrego west, *Carrownacreedy, *Lisnarawer, *Ballard, *Carrowgilpatrick, *Bunnafedia, *Caltragh, Halfquarter, *Carrownaboll, *Carrownree, *Gerrib Big, *Gerrib Little, *Leekfield, *Masreagh, *Skreen More, *Glebe, *Farranyharpy, *Doonflin Lower, *Grange Beg, *Ballinphull, *Ballygreighan, *Rathurlisk, *Lugdoon, *Doonycoy, *Ardkill, *Carrownacrorry, *Ballyeeskeen, *Barnacoghil, Dunowla, Doonbeakin, Ballyglass, Crowagh or Dunneill Mountain.

**Townlands located within EIAR boundary, but not within planning application boundary*



Map Legend

EIAR Site Boundary

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator

SITE LOCATION - NOT TO SCALE

EIAR Site Location Context

Project Title
Crumhach Wind Farm, Co. Sligo

Project No. 230841	Drawing No. 1-2	Scale 1:100,000
Drawn By MVN	Checked By BT	Date 04/08/2026

Email: info@mkoireland.ie / Website: www.mkoireland.ie



Map Legend

EIAR Site Boundary

Spatial Reference
Name: IREN95 Irish Transverse Mercator
Datum: IREN95
Projection: Transverse Mercator

SITE LOCATION - NOT TO SCALE

Drawing Title

EIAR Site Boundary

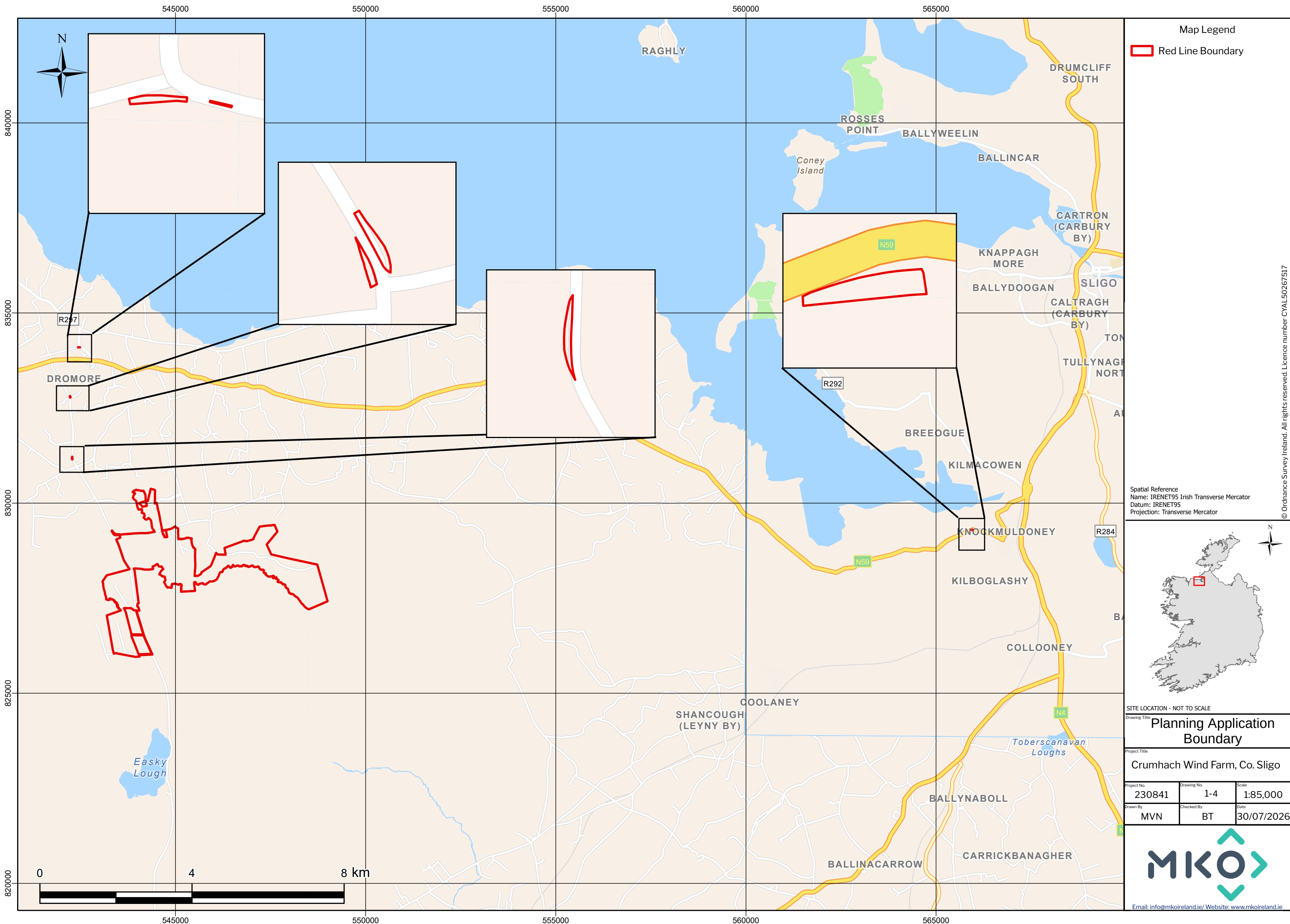
Project Title

Crumhach Wind Farm, Co. Sligo

Project No.	Drawing No.	Scale
230841	1-3	1:100,000
Drawn By	Checked By	Date
MVN	BT	31/07/2026

Email: info@mkofireland.ie / Website: www.mkofireland.ie

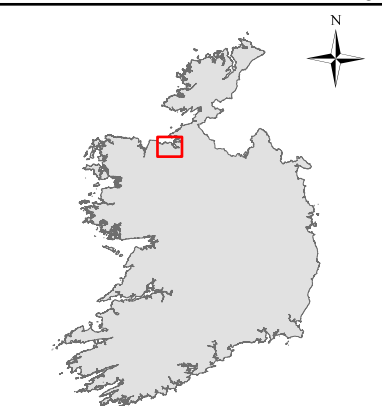
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Map Legend

Red Line Boundary

Spatial Reference
Name: IRENET95 Irish Transverse Mercator
Datum: IRENET95
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Planning Application Boundary

Project Title
Crumhach Wind Farm, Co. Sligo

Project No.	Drawing No.	Scale
230841	1-4	1:85,000
Drawn By	Checked By	Date
MVN	BT	30/07/2026

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1.2

Legislative Context of 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 (the ‘EIA Directive’), has been transposed into Irish planning legislation by the Planning and Development Act 2000 as amended and the Planning and Development Regulations 2001. Directive 2011/92/EU was amended by Directive 2014/52/EU which has been transposed into Irish law with the recent European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018), amending the Planning and Development Act, 2000 and the Planning and Development Regulations 2001.

This EIAR complies with the EIA Directive as amended by Directive 2014/52/EU, the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations (as amended).

The EIA of the Proposed Project will be undertaken by ACP, as the competent authority.

Article 5 of the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU provides where an EIA is required, the developer shall prepare and submit an EIAR. 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, Annex IV of the EIA Directive provides further detail on the information to be included in an EIAR. These requirements are transposed under Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (as amended), 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.

The relevant classes/scales of development that normally require EIA are set out in Schedule 5 of the Planning and Development Regulations 2001 to 2019. 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”, per Item 3(i) of the Schedule. The Proposed Project exceeds 5 turbines and 5 megawatts in scale and therefore is subject to EIA.

The EIAR describes the receiving environment, assesses the likely significant effects of the Proposed Project on the receiving environment and proposes mitigation measures to avoid or reduce these effects as well as appropriate monitoring to ensure the efficacy of such mitigation measures. 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 have been assessed as part of this EIAR.

1.2.1

EIAR Guidance

The Environmental Protection Agency (EPA) published its '*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*' in May 2022,¹ which is intended to guide practitioners preparing an EIAR in line with the requirements set out in the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

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*',² published by the Department of Housing, Planning and Local Government (DHPLG) in August 2018 to the extent these guidelines are relevant having regard to the enactment of the revised EIA Directive.

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.

1.2.2

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)³ have been taken into account during the preparation of this EIAR.

The '*Wind Energy Development Guidelines for Planning Authorities*' (DoEHLG, 2006) (hereafter referred to as the 'DoEHLG 2006 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 Draft Wind Energy Development Guidelines (December 2019)⁴ (hereafter referred to as the 'Draft DoHPLG 2019 Guidelines'). A consultation process in relation to the Draft DoHPLG 2019 Guidelines closed on 19th February 2020. The proposed changes presented in the Draft DoHPLG 2019 Guidelines give certain focus on the recommended setback distance from residential properties (four times the proposed maximum tip height), along with shadow flicker and noise requirements relative to sensitive receptors.

At time of writing, the Draft DoHPLG 2019 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 those issued in 2006. 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)⁵ to develop revised wind energy development guidelines for onshore wind in Q1 2025⁶, it is possible that the Draft DoHPLG 2019 Guidelines are adopted during the consideration period for the current planning application. Should the Draft DoHPLG 2019 Guidelines be adopted in advance of a planning decision being made on this application, the Proposed Project will be capable adhering to the relevant 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. The Proposed Project achieves the recommended

¹ https://www.epa.ie/publications/monitoring-assessment/assessment/EIAR_Guidelines_2022_Web.pdf

² <https://assets.gov.ie/static/documents/guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying-out-environmental.pdf>

³ <https://assets.gov.ie/static/documents/wind-energy-development-guidelines-2006.pdf>

⁴ <https://assets.gov.ie/static/documents/draft-revised-wind-energy-development-guidelines-december-2019-385c92c2-16f9-4511-80bf.pdf>

⁵ https://assets.gov.ie/static/documents/c491032e/DECC_Climate_Action_Plan_2025_Main_Report_-_Final_Web.pdf

⁶ Department of the Environment, Climate and Communications (April 2025) Climate Action Plan 2025 Annex of Actions (EL/24/5)

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 DoHPLG 2019 Guidelines.

1.3 The Applicant

The Applicant for the Proposed Project is SSE Renewables (Ireland) Ltd. SSE Renewables is a leading developer and operator of renewable energy generation, focusing on onshore and offshore wind farms, hydro-electric power and flexible battery storage technologies. It is part of electricity infrastructure company SSE plc, a FTSE100 company with operations across the UK and Ireland, and a presence in carefully selected international markets. SSE Renewables delivers clean power assets to increase SSE's operational renewable generation capacity as part of the company's five-year investment plan to 2030. This includes delivery of the world's largest offshore wind farm in construction, the 3.6GW Dogger Bank Wind Farm. SSE Renewables operates some of the leading onshore wind farms in Ireland including the 174MW Galway Wind Park in Connemara and the 73MW Slieve Kirk Wind Park outside Derry City.

1.4 Brief Description of the Proposed Project

The Proposed Project will comprise the removal of 23 no. existing turbines and the construction of 17 no. new turbines and all associated works. The Proposed Project will utilise the Existing Grid Connection and involve the construction of a new underground cable connection the existing Srananagh 220kV substation to connect the Proposed Project to the National Grid, subject to subject to a separate, future planning application under Section 182A of the Planning and Development Act 2000, as amended, however, it is assessed in this EIAR.

The full description of the Proposed Project is detailed in Chapter 4 of this EIAR. The current planning application, relating to the Proposed Project is being made to ACP under Section 37E of the Planning and Development Act, as amended.

The development description for the current planning application as appears in the public notices is as follows:

The Proposed Project will consist of the provision of the following:

- › *Removal of 23 no. existing turbines permitted under Sligo County Council Ref. No. 97/469, 02/846, 03/619 (the latter granted on appeal by An Coimisiún Pleanála PL21.204790) and 22/291;*
- › *Erection of 17 no. wind turbines within the following parameters:*
 - *a turbine tip height range of 176.6 metres to 180 metres;*
 - *a rotor diameter range of 133.2 metres to 150 metres; and*
 - *a hub height range of 105 metres to 110 metres.*
- › *Permanent turbine foundations, hard-standing and assembly areas;*
- › *A new permanent 110kV electrical substation compound including control buildings (with a combined floor area of 654sq.m) incorporating welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, lightning protection poles, an underground wastewater holding tank, drainage and all ancillary works;*
- › *Upgrade of and permanent continued use of 2 no. existing onsite control buildings comprising: 1 no. control building located in the townland of Tawnadremira (with a floor area of c. 118.4sqm), permitted under Sligo County Council Planning References 03/619 (granted on appeal by An Coimisiún Pleanála PL21.204790), 10/371, and 22/291; and 1 no. control building located in the townland of Kingsmountain (with a floor area of c.71sqm), permitted under Sligo County Council Planning References 97/469 and 03/382.*

- > *Underground electrical and communications cabling connecting the proposed wind turbines to the existing onsite control buildings and the proposed 110kV on-site electrical substation;*
- > *4 no. temporary construction compounds with site offices and welfare facilities (with a combined floor area of 324 sqm);*
- > *Upgrade of 1 no. existing site entrance off the L6309 in the townlands of Ballyglass and Crowagh or Dunneill Mountain;*
- > *1 no. new site entrance off the L6309 in the townlands of Ballyglass and Crowagh or Dunneill Mountain;*
- > *Upgrade of 1 no. existing site entrance off the L2702 in the townland of Crowagh or Dunneill Mountain;*
- > *2 no. new site entrances off the L2702 in the townland of Crowagh or Dunneill Mountain;*
- > *Upgrade of existing site tracks and provision of new site access tracks, clear span crossings, junctions and hard-standing areas;*
- > *Accommodation works along the N59 in the townlands of Corhawnagh and Abbeytown, along the R297 in the townland of Knockaculleen, along the L2702 in the townland of Lecarrow and Dromore, along the L2702 in the townland of Rathgoonaun and along the L2702 and L6309 in the townland of Crowagh or Dunneill Mountain, to facilitate the delivery of turbine components and other abnormal sized loads to site;*
- > *A new temporary access road off the L2702 to the L6309 in the townlands of Crowagh or Dunneill Mountain;*
- > *3 no. temporary borrow pits;*
- > *2 permanent LiDAR compounds;*
- > *Peat and Spoil Management areas;*
- > *Tree felling and hedgerow removal;*
- > *Biodiversity Management and Enhancement measures (inclusive of peatland restoration and management);*
- > *Site Drainage;*
- > *Operational stage site signage; and*
- > *All ancillary apparatus and site development works above and below ground, including soft and hard landscaping and drainage infrastructure.*

The application is seeking a ten-year planning permission for a thirty five-year operational life from the date of full commissioning of the wind turbines and subsequent decommissioning.

Modern wind turbine generators currently have a typical generating capacity in the 4 to 8MW range, with the generating capacity continuing to evolve upwards as technology improvements are achieved by the turbine manufacturers. For the purposes of this application, it is assumed that the 17 no. Proposed Turbines installed as part of the Proposed Project will have a generating capacity of 102 MW. The actual turbine procured as part of a competitive tender process may have a generating potential that is lower or greater than the turbines described in the EIAR. Irrespective of the power output of the actual turbine procured, the conclusions of the EIAR will not be materially affected.

The layout of the Proposed Project has been led by consideration of constraints and facilitators, thereby avoiding the environmentally sensitive parts of the site (refer to Chapter 3, Section 3.2.3.2.1, of this EIAR). The Proposed Project also aimed to make use of as much of the existing infrastructure from the Existing Wind Farm (i.e., access tracks, areas of hardstanding, electrical infrastructure) as possible in order to reduce the environmental impact. It is proposed to upgrade 8.2km of the Existing Wind Farm access tracks, 4.3km of existing public road corridor. There will be 5.1km of new access tracks to be constructed as part of the Proposed Project.

The Proposed Project has also been designed in line with the setback distance from sensitive receptors outlined in the Draft DoHPLG 2019 Guidelines.

The Proposed Wind Farm will be accessed via 5 no. site entrances. 2 no. existing site entrances will be upgraded and 3 no. new entrances will be constructed for the Proposed Wind Farm, all of which will be used during the operational phase of the Proposed Project. The Existing Wind Farm site entrance off the L6309 Local Road will be upgraded and used as the main site entrance of the Proposed Wind Farm. Upgrades to 1 no. additional existing access point is proposed as a site entrance for general construction traffic and the delivery of large turbine components and other abnormal sized loads throughout the construction phase. 2 no. new site entrances are also proposed off the Local Road network which will be used as additional entrances for construction traffic and the delivery of large turbine components and other abnormal sized loads throughout the construction phase, and 1 no. new site entrance to access the proposed onsite 110kV substation. Appropriate sightlines will be established at all proposed site entrances for the safe egress of traffic during the construction phase.

All elements of the Proposed Project have been assessed as part of this EIAR.

1.5 Need for the Proposed Project

1.5.1 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 National Climate Action Plan 2025 (CAP25)⁷ 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.

In July 2025 the EPA published ‘Ireland’s Provisional Greenhouse Gas Emissions 1990-2024’⁸ which stated a provisional total of national greenhouse gas emissions (excluding Land Use, Land Use Change and Forestry (LULUCF)) for 2024 to be 53.75 million tonnes carbon dioxide equivalent (MtCO₂eq) which is 2% lower than emissions in 2023 (55.01 MtCO₂eq). Ireland’s 2024 emissions were below the 1990 baseline for the second consecutive year.

In 2024, the energy industries, transport and agriculture sectors accounted for 73% of total greenhouse gas emissions. Agriculture is the single largest contributor to the overall emissions, at 38%. Transport, energy industries and the residential sector are the next largest contributors, at 21.7%, 13.3% and 10.4%, respectively. The report further states that renewables provided 1.3% more electricity in 2024 but, due to increasing demand, there was a decrease in the renewable share in electricity generation from 40.7% in 2023 to 39.6% in 2024, with wind accounting for 31.7% of electricity supply (down from 33.7%). Natural gas accounted for 42.1% of electricity generated in 2024, with coal and oil together accounting for 3.4% of electricity generated. The report highlights that whilst emissions are beginning to reduce, transformative measures will be needed to meet national climate ambitions.

The critical need for renewable energy is underscored by European legislation. The third Renewable Energy Directive (RED III)⁹ contains a presumption in favour of renewable projects being in the ‘*overriding public interest and serving public health and safety*’. This presumption was introduced prior to the enactment of RED III in the Council Regulation (EU) 2022/2577 (laying down a framework to accelerate the deployment of renewable energy) detailed below in Section 1.5.2.2. The prioritisation of renewable energy projects in European law has been acknowledged by the Irish judicial system, most recently in the Carrownagowan Wind Farm judgement ([2024] IEHC 549), the Toole II judgment

⁷ Department of Environment, Climate and Communications (2025) Climate Action Plan 2025

⁸ Ireland’s Provisional Greenhouse Gas Emissions (1990-2024) <<https://www.epa.ie/publications/monitoring-assessment/climate-change/air-emissions/EPA-Provisional-1990-2024-GHG-Report-1716.pdf>>

⁹ 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.

([2024] IEHC 610) and in particular the Coolglass Wind Farm judgement ([2025] IEHC 1) which emphasises the importance of national climate and renewable energy policy when assessing renewable energy projects. RED III was transposed into Irish Law in August 2025.¹⁰

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: :

1. *A legal commitment from Ireland to limit greenhouse gas emissions under the Kyoto protocol to reduce global warming;*
2. *A requirement to increase Ireland's national energy security as set out in Ireland's Transition to a Low Carbon Energy Future 2015-2030¹¹;*
3. *A requirement to diversify Ireland's energy sources, with a view to achievement of national renewable energy targets and an avoidance of significant fines from the EU (the EU Renewables Directive);*
4. *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;*
5. *Increasing energy price stability in Ireland through reducing an over reliance on imported fossil fuels;*
6. *Provision of cost-effective power production for Ireland which would deliver local benefits; and*
7. *To facilitate the Government in meeting its ambitious 80% renewable energy target by 2030.*

These factors are addressed in further detail below. Section 2.3 in Chapter 2 of this EIAR on Background to the Proposed Project, presents a full description of the international and national renewable energy policy context for the Proposed Project. Section 2.4 of Chapter 2 addresses climate change, including Ireland's current status with regard to meeting greenhouse gas emission reduction targets.

In November 2025, the World Meteorological Organisation (WMO) published the 'State of the Climate Update for COP30'.¹² The report provides a summary on the state of the climate indicators in 2025, between January and August, with sections on key climate indicators, extreme events and impacts. The key messages in the report include:

- › Greenhouse gases reached record observed levels in 2024 and continue to rise in 2025.
- › January – August 2025 global mean surface air temperature was 1.42 °C ± 0.12 °C above the pre-industrial average.
- › In the hydrological year 2023/2024, glaciers lost an observed record 1.3 metres water equivalent of ice. The hydrological year 2023/2024 was the third consecutive year that all monitored glaciated regions around the world recorded net mass loss.
- › Arctic sea-ice extent in March 2025 was the lowest annual maximum in the satellite record. Antarctic sea-ice extent has remained well below average throughout 2025 to date.
- › Weather- and climate-related extreme events to August 2025 had cascading impacts on lives, livelihoods and food systems, and contributed to displacement across multiple regions, undermining sustainable development.

¹⁰ https://admin.climatecasechart.com/wp-content/uploads/non-us-case-documents/2025/20250110_88777_judgment.pdf?password-protected=login&redirect_to=https%3A%2F%2Fadmin.climatecasechart.com%2Fwp-content%2Fuploads%2Fnon-us-case-documents%2F2025%2F20250110_88777_judgment.pdf

¹¹ <https://greenbusiness.ie/wp-content/uploads/2015/12/Energy-White-Paper-Dec-2015.pdf>

¹² World Meteorological Organisation (2025) State of the Climate Update for COP30 <<https://wmo.int/publication-series/state-of-climate-update-cop30>>

Following this in March 2026, the WMO published the ‘*State of the Global Climate 2025*’¹³ which contains the following key messages:

- › The period 2015-2025 was the warmest 11 years since observations started.
- › 2025 was the second or third warmest year (depending on the dataset) in the 176-year observational record, reflecting the shift to La Niña conditions that temporarily cool the planet. The annually averaged global near-surface temperature was about 1.43 ± 0.13 °C above the 1850–1900 pre-industrial average.
- › The Earth’s energy imbalance has increased since its observational record began in 1960, particularly over the last 20 years. It reached a new high in 2025.
- › The Earth’s oceans have been absorbing approximately eighteen times the annual human energy use each year for the past two decades. Despite La Niña conditions, around 90% of the ocean surface area experienced at least one marine heatwave in 2025. There is very high confidence that present-day ocean surface pH values are unprecedented for at least 26,000 years.
- › Extreme weather impacts millions globally and costs billions.

There has been a substantial worldwide energy transition, with renewable capacity additions increasing by nearly 60% from 2022, totalling 565 gigawatts (GW).¹⁴ 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 approx. 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 November 2025 update for COP30 identifies that 2025 is set to either be the second or third warmest year on record, with the global mean temperature for January 2025 to August 2025 being 1.42 ± 0.12 °C above pre-industrial levels, underscoring the accelerating pace of climate change.

The joint publication of WMO and International Renewable Energy Agency on Climate-driven Global Renewable Energy Potential Resources and Energy Demand in 2023¹⁵ 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

1.5.1.1 Climate Change and Greenhouse Gas Emissions

At the Paris climate conference (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. The 2023 climate conference (COP28) in December 2023 in Dubai resulted in the first agreement explicitly calling for the transition

¹³ World Meteorological Organisation (2026) *State of the Global Climate 2025*

<https://library.wmo.int/viewer/69807/download?file=WMO-1391-2025_en.pdf&type=pdf&navigator=1>

¹⁴ IEA (2024), *Renewables 2023*, IEA, Paris <<https://www.iea.org/reports/renewables-2023>>

¹⁵ 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>>

away from fossil fuels, the United Arab Emirates (UAE) Consensus. This text raised concerns over the achievement of limiting warming below 1.5°C, as the text to ‘phase out as soon as possible inefficient fossil fuel subsidies’ does not address energy poverty or the just transition. The UAE Consensus further calls for more explicit near-term goals in the lead up to 2050, calling for the world to cut greenhouse gas emissions by 43% as compared to 2019 levels. The most recent climate conference (COP30) held in Belém, Brazil in November 2025 adopted a comprehensive ‘Belém Package’, comprising 29 decisions by consensus, which underscored an emphasis on implementation and equity. The conference advanced land-use and mitigation governance through a proposed Forest and Climate Roadmap and operationalisation of the Tropical Forests Forever Facility, reflecting the essential role of deforestation reduction in maintaining a viable 1.5 °C pathway. On adaptation, Parties adopted 59 indicators for the Global Goal on Adaptation and agreed to triple adaptation finance by 2035, establishing the first internationally standardised framework for assessing resilience progress. At COP30, the EU renewed its commitment to the COP28 pledges to transition away from fossil fuels, triple renewable energy capacity and double energy efficiency by 2030, as agreed in Dubai. During the conference, a coalition of more than 80 willing countries, including the EU and its Member States, launched a partnership to transition away from fossil fuels under Brazil's leadership.

In March 2021 the government approved the Climate Action and Low Carbon Development (Amendment) Bill which provide plans to facilitate the ‘transition to a climate resilient and climate neutral economy by the end of year 2050’¹⁶ and includes for a 51% reduction in emissions by 2030. Furthermore, government approval was given in February 2021 to draft amendments to the Petroleum and Other Minerals Development Act 1960 which will give statutory effect to ending the issuing of new licences for the exploration and extraction of gas. The Bill, entitled an Act, was passed into law in July 2021 and will manage the implementation of a suite of policies to assist in achieving a 7% average yearly reduction in overall greenhouse gas emissions over the next decade.

The Climate Action and Low Carbon Development (Amendment) Act 2021 also outlines the obligations of An Coimisiún Pleanála (then An Bord Pleanála) and/or local authority in assisting the country reach these targets. Section 15 of the Act states as follows:

‘Section 15. F33 (1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—

- a) the most recent approved climate action plan,*
- b) the most recent approved national long term climate action strategy,*
- c) the most recent approved national adaptation framework and approved sectoral adaptation plans,*
- d) the furtherance of the national climate objective, and*
- e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.’*

A High Court judgment delivered by Mr Justice Humphreys on the 10th January 2025 (*Coolglass Wind Farm Limited v An Bord Pleanála [2025] IEHC 1*) concluded that the Commission was obliged, under Section 15 of the Climate Act, to depart from the terms of the County Development Plan in order to favour development which is more likely to enable Ireland to meet its climate objectives, unless it was impractical to do so.

In the judgement, Mr Justice Humphreys undertook a detailed consideration of the interpretation of section 15 of the Climate Act and concluded that:

“...all vectors of interpretation point strongly in the same direction – the need for an imperative reading of s. 15(1) in line with what it says, namely that the board and any other relevant body

¹⁶Rialtas na hÉireann 2021. Climate Action and Low Carbon Development (Amendment) Bill 2021
<https://www.gov.ie/en/publication/984d2-climate-action-and-low-carbon-development-amendment-bill-2020/>

is required to act in conformity with the climate plans and objectives set out in the subsection unless it is impracticable to do so....

That does not mean allowing an application which is prohibited by law. That wouldn't be practicable apart from anything else. But it does mean exercising discretionary and evaluative powers in whatever way is most likely to be consistent with the relevant plans and objectives.'

As part of Mr Justice Humphreys' consideration of the interpretation of section 15 of the Climate Act, he states in his judgement that "*an immediate end to business as usual is a precondition for planetary survival*". In summary, section 15 of the Climate Action and Low Carbon Development (Amendment) Act 2021 requires the relevant authority to engage in its own independent consideration of the impact of a proposed development on the State achieving its climate targets and to exercise its discretion in a manner which supports the achievement of those targets.¹⁷

The High Court judgment was appealed, and the Supreme Court gave judgement on the 4th of February 2026. While the Supreme upheld the High Court's decision to quash the refusal of permission, it did so on narrower grounds than those on which the High Court based its conclusions. The Supreme Court analysed the meaning of the wording of Section 15, focusing on the implications of the words 'functions', 'consistent with' and 'in so far as practicable'. It held that Section 15 does not create new functions for relevant bodies. It is the existing function, in this case the decision-making function of the Commission, which must be carried out in a manner consistent with section 15(1). The obligations under 'Consistent with' were interpreted by the Supreme Court as opposed to the High Court's interpretation as a strict 'comply with' obligation. The Supreme Court also noted that the obligation to perform a function "consistent with" the climate objectives is itself qualified by the phrase "in so far as practicable". Please see Section 2.2.2 of Chapter 2 for further information.

The Intergovernmental Panel on Climate Change (IPCC) put forward a clear assessment in its Fifth Assessment Report¹⁸, 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 to below 2 degrees and in accordance with the COP21 agreement 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 February 2022, the International Panel on Climate Change (IPCC) released the report 'Working Group II-Climate Change 2022: Impacts, Adaptation and Vulnerability'¹⁹ regarding the impacts of climate change on nature and human activity. The report states that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in Carbon Dioxide (CO₂) and other greenhouse gas emissions occur in the coming decades. the report identifies four key risks for Europe with most becoming more severe at 2 °C global warming levels (GWL) compared with 1.5 °C GWL. From 3 °C GWL, severe risks remain for many sectors in Europe. The four key risks identified are:

- 1) *Key Risk 1: Mortality and morbidity of people and changes in ecosystems due to heat*
- 2) *Key Risk 2: Heat and drought stress on crops*
- 3) *Key Risk 3: Water scarcity*
- 4) *Key Risk 4: Flooding and sea level rise*

In April 2022, the IPCC released the report 'Working Group-III – Climate Change 2022: Mitigation of Climate Change'²⁰, which assesses literature on the scientific, technological, environmental, economic and social aspects of mitigation of climate change. The report reflects new findings in the relevant literature and builds on previous IPCC reports, including the WGIII contribution to the IPCC's Fifth

¹⁷ Beauchamps [2025] <https://beauchamps.ie/publications/1327>

¹⁸ IPCC Fifth Assessment Synthesis Report, Intergovernmental Panel on Climate Change AR5 Report

¹⁹ Climate Change 2022: Impacts, Adaptation and Vulnerability. Working Group II Contribution to the IPCC Sixth Assessment Report. Available at: https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf

²⁰ https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf

Assessment Report (AR5), the WGI and WGII contributions to Sixth Assessment Report (AR6) and the three Special Reports in the Sixth Assessment cycle. This report outlines developments in emission reduction and mitigation efforts, assessing the impact of national climate pledges in relation to long-term emissions goals in a global context; and states that *'Unless there are immediate and deep emissions reductions across all sectors, limiting global warming to 1.5°C will be beyond reach.'*

In November 2023, the IPCC published the 'AR6 Synthesis Report: Climate Change 2023'²¹, and is the final product of the AR6 of the IPCC. 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 approx. 1.1°C above 1850-1900 levels. A substantial 'emissions gap' exists between global greenhouse gas emissions in 2030 associated with the implementation of NDCs announced prior to COP26, Parties to the Paris Agreement have two years to submit updated NDCs for the period up to 2035, ambition will need to be ratcheted up in order to limit warming to 1.5°C.

In May 2025, the EPA²² reported, for the 2023 year, that the energy sector contributed to 14.3% of Ireland's total emissions. The latest EPA projections show that currently implemented policies and measures, With Existing Measures (WEM) will result in Ireland achieving a total greenhouse gas emission reduction of 9.5% on 2005 levels by 2030, significantly short of Ireland's 2030 target under the EU Effort Sharing Regulation (ESR), i.e., 42% reduction of emissions compared to 2005 levels by 2030, and higher than the 9% reduction projected in the 2024 report.²³ If policies and measures in the higher ambition, With Additional Measures (WAM) scenario are implemented, EPA projections show that Ireland can achieve a reduction of 21.7% by 2030, still short of the 42% reduction target and also lower than the 25% reduction projected in last year's estimates. The EPA projections show that agriculture and transport emissions form the majority of ESR emissions. Decarbonisation of power generation is a key measure, not only in the energy sector, but for other energy intensive sectors, such as transport and agriculture, whose activities result in high levels of greenhouse gas emissions.

The 'National Energy Projections 2025'²⁴, 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.

CAP25²⁵ 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, and the reduction of 51% by 2030 mentioned above. CAP25 sets out an ambitious course of action over the coming years to address the impacts which climate may have on Ireland's environment, society, economic and natural resources. CAP25 clearly recognises that Ireland must significantly step up its commitments to tackle climate disruption. CAP25 reidentifies the need to increase the share of

²¹ IPCC Sixth Assessment Synthesis Report, Intergovernmental Panel on Climate Change AR6 Report: Climate Change 2023 https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf

²² Ireland's Greenhouse Gas Emission Projections 2024-2055 <<https://www.epa.ie/publications/monitoring-assessment/climate-change/air-emissions/07875-EPA-GHG-Projections-Report-FINAL.pdf>>

²³ Ireland's Greenhouse Gas Emission Projections 2022-2040 (June 2023) <https://www.epa.ie/publications/monitoring-assessment/climate-change/air-emissions/EPA-GHG-Projections-2022-2040_Finalv2.pdf>

²⁴ SEAI National Energy Projections 2025 Report. <<https://www.seai.ie/sites/default/files/publications/National-Energy-Projections-Report-2025.pdf>>

²⁵ 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/>>

electricity demand generated from renewable sources by to up to 80% where achievable and cost effective, without compromising security of electricity supply and a need for 9GW of onshore wind generation. In 2023, Ireland had 4.74GW of installed wind capacity, up 4.5% on the previous year; the Sustainable Energy Authority of Ireland (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.²⁶ As of April 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 Ireland²⁷. When all data from 2024 is recorded an updated carbon intensity factor for the Irish national grid will be published.

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.

It is estimated that the Proposed Project, with an estimated installed capacity of 102MW (based on a 6MW turbine model) will result in the net displacement of approx. 55,760 tonnes of carbon dioxide equivalent (CO₂e) per annum. The carbon offsets resulting from the Proposed Project are described in detail in Chapter 11: Climate.

1.5.2 Energy Security

At a national level, Ireland currently has one of the highest external dependencies on imported sources. In August 2025 the SEAI published *'Ireland's Energy Supply and Security of Supply in 2024'*²⁸, which identifies that in 2024, Ireland's national primary energy requirement remained heavily fossil dependent, with 81.4% of energy requirement satisfied by fossil fuels. Overall, Ireland's total primary energy requirement in 2024 was 2.3% higher than in 2023. Conversely, 2024 saw record high use of renewable energy in Ireland. The Department of the Environment, Climate and Communications (DECC) report *'Energy Security in Ireland to 2030'*²⁹ states that *'Ireland's 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.'* The DECC report proposes a package of a wide range 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 78.5% of its energy supply in 2023.³⁰

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

²⁶ SEAI (December 2024) *Energy in Ireland 2024 Report* <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

²⁷ EirGrid, <https://www.eirgrid.ie/grid/system-and-renewable-data-reports>

²⁸ SEAI (May 2025) *First Look Ireland's Energy Supply and Security of Supply in 2024* <<https://www.seai.ie/data-and-insights/seai-statistics/key-publications/energy-supply-security>>

²⁹ 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>>

³⁰ SEAI (July 2024) *Ireland's Energy Supply and Security of Supply in 2023* <<https://www.seai.ie/data-and-insights/seai-statistics/key-publications/energy-supply-security>>

energy security package. EirGrid in their ‘*All Island Generation Capacity Statement 2023 - 2032*’ (January 2024), states that new wind farms commissioned in Ireland in 2022 brought total wind installed capacity to over 4,500MW, contributing to the overall RES-E percentage of 36.8% with wind energy accounting for 32.9%. Prior to 2015, Ireland’s 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 its ‘*Energy in Ireland 2025 Report*’³¹, 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.

In 2024, Ireland generated 24.5 TWh of renewable energy, up 5.6% from the previous year. The largest source of renewable energy supply for electricity generation was wind generation. In 2024, Ireland had 4.94 GW of installed wind capacity, up 4.3% on the previous year. SEAI’s provisional estimate for installed wind capacity in 2025 is 5.4 GW, based on the WAM scenario. When all data from 2025 is recorded an updated carbon intensity factor for the Irish national grid will be published. Currently, the SEAI website has a published value of 229.9gCO₂/kWh for electricity generation and 254.8gCO₂/kWh for electricity consumption.³² These are the lowest carbon intensity values ever reached in Ireland.

In May 2025 the SEAI published the Interim Energy Balance for 2024.³³ The interim figures identify that 2024 had the lowest energy emissions that Ireland has experience in over 30 years. This marks an overall decrease of 11% since carbon emissions targets were introduced in 2021 and the third consecutive year with an emissions reduction. This drop in emissions comes, despite an increase in overall energy use – which grew by 2.3% last year. Increased use of bioenergy and technologies such as solar PV and heat-pumps meant that renewable energy supplied 14.5% of Ireland’s energy requirements last year, a slight increase on last year’s figure of 14%. It is important to note that although renewable generation capacity increased from 2023, renewables supplied a slightly lower share of Ireland’s electricity in 2024 than in 2023. This is explained by the increase in electricity demand outpacing the increase in renewable generation, as well as grid constraints and lower wind outputs. The top three sources of electricity in Ireland last year were natural gas (42.1%), wind (31.7%), and net-imports from interconnectors (14%).

Ireland continues to be hugely energy import-dependent leaving it exposed to large energy price fluctuations as 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*”³⁴.

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%. At a time when the energy system is under severe pressure to ensure security of supply, amid projections of rapid electricity demand growth over the coming decade, any steps to reduce Ireland’s dependence on imported fossil

³¹ Sustainable Energy Authority Ireland (2025) *Energy in Ireland – 2025 Report*
<<https://www.seai.ie/sites/default/files/publications/Energy-in-Ireland-2025.pdf>>

³² <https://www.seai.ie/data-and-insights/seai-statistics/conversion-factors/>

³³ <https://www.seai.ie/news-and-events/news/seai-interim-national-energy-balance-2024>

³⁴ Dr Eimear Cotter, Head of Low Carbon Technologies, SEAI - “*Energy Security in Ireland 2015*”

fuels will add to financial autonomy and stability in Ireland. The use of Ireland's indigenous energy resources, such as wind, will contribute to a reduction in energy imports.

The Energy White Paper 2015³⁵ (‘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”.

1.5.2.1 REPowerEU

In a Communication from the European Parliament on Joint European Action for more affordable, secure and sustainable energy³⁶, 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 Plan³⁷ 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)³⁸ 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.

The Proposed Project directly ties into the objectives in relation to the repowering of existing wind farms. As set out within the RePowerEU document, the repowering of renewable energy developments is an option for rapidly increasing renewable energy production with the least impact on the grid infrastructure and the environment. The repowering of existing renewable energy developments has a significant potential to rapidly increase renewable power generation, thus allowing to reduce gas consumption. Repowering enables the continued use of brownfield sites which have significant renewable energy potential, which reduces the need to designate new sites for renewable energy projects. The RePowerEU document also points out that the decommissioning of onshore wind farms instead of repowering them would lead to a substantial reduction of the currently installed renewable energy capacity, further complicating the situation in the energy situation. Immediate simplification and accelerated permitting for repowering are crucial for maintaining and increasing the renewable energy capacity in the Union.

The European Commission identified lengthy and complex administrative procedures as key obstacles hampering the speed and number of investments in renewables. To combat this, the proposed instrument sets out temporary and proportionate measures. The Commission proposes a maximum of six months for permitting processes applicable to the repowering of renewable energy projects. These

³⁵ Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Department of Communications, Energy & Natural Resources, 2015)

³⁶ 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

³⁷ https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131

³⁸ <https://assets.gov.ie/static/documents/national-energy-security-framework.pdf>

emergency measures have been proposed in order to accelerate the green transition towards renewable energy and increased energy efficiency.

1.5.2.2 Council Regulation (EU) 2022/2577 and 2024/223

Arising from REPowerEU, Council Regulation (EU) 2022/2577 laying down a framework to accelerate the deployment of renewable energy was adopted on the 22 December 2022. Regulation 2022/2577 came into effect on the 23 December 2022 until the 30 June 2024. The Regulation made provision for a review by the commission within 12 months. Following this review the Council introduced Regulation 2024/223 on the 22 December 2023 amending Regulation 2022/2577. Regulation 2022/2577 and 2024/223 recognises the relative importance of renewable energy deployment in the current difficult energy context and provides significant policy and legislative support to enabling renewable energy projects.

Article 2(2) of Regulation EU 2022/2577 requires priority to be given to projects that are recognised as being of overriding public interest whenever the balancing of legal interests is required in individual cases and where those projects introduce additional compensation requirements for species protection. An analogous provision is not present in Directive (EU) 2018/2001. The first sentence of Article 3(2) of Regulation (EU) 2022/2577 has the potential, in the current urgent and still unstable energy situation on the energy market which the Union is facing, to further accelerate renewable energy projects since it requires Member States to promote those renewable energy projects by giving them priority when dealing with different conflicting interests beyond environmental matters in the context of Member States' planning and the permit-granting process. The Commission's report demonstrated the value of the first sentence of Article 3(2) of Regulation (EU) 2022/2577 which beyond the specific objectives of the derogations foreseen in the Directives referred to in Article 3(1) of Regulation (EU) 2022/2577. (emphasis added).

Further detail is provided in Section 2.3.1 in Chapter 2 of this EIAR. As such, the Proposed Project, a renewable energy project, is critical to helping Ireland, and the EU in addressing energy security challenges as well as addressing the country's over-dependence on imported fossil fuels.

1.5.2.3 Competitiveness of Wind Energy

While Ireland has a range of renewable resources, as the White Paper³⁹ states '[Onshore Wind] is a proven technology and Ireland's abundant wind resource means that a wind generator in Ireland generates more electricity than similar installations in other countries. This results in a lower cost of support'.

In fact, the cost of support is more than offset by the fact that adding large quantities of wind to the wholesale market drives down auction prices in any half hour trading period when the wind is blowing, i.e., for 80% of the hours of the year. Wind has a capacity factor of approx. 35%, which is its average output throughout the year relative to its maximum output. However, wind is generating power at some level for 80% of the hours of the year. A Pöyry study from 2015 showed that reaching our targets in 2020 would reduce wholesale prices by more than costs of new grid infrastructure, backup and the subsidies paid to wind, resulting in a net saving of €43m per year in 2020. The EU has noted that Ireland has one of the lowest costs of supporting renewables mainly because onshore wind is on a par with the cost of power from conventional generation when a full cost-benefit analysis is undertaken.

³⁹ Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Department of Communications, Energy & Natural Resources, 2015)

1.5.3 European Renewable Energy Policy and Targets

1.5.3.1 Renewable Energy Directive

The burning of fossil fuels for energy creates greenhouse gases, which contribute significantly to climate change. These and other emissions also create acid rain and air pollution. Sources of renewable energy that are utilised locally with minimal impact on the environment are necessary to meet the challenges of the future. 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. To ensure that the mandatory national targets are achieved, Member States must follow an indicative trajectory towards the achievement of their target as outlined in Ireland's National Renewable Energy Action Plan (NREAP).

The first Renewable Energy Directive (RED)⁴⁰ 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),⁴¹ which continues to promote the growth of renewable energy out to 2030. 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, Renewable Energy Share – 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%. REDII introduced a binding EU-wide target for overall RES of 32% in 2030 and requires Member States to set their national contributions to the EU-wide target. 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 (2024), which will ensure that renewable electricity continues to form the backbone of Irish renewable energy use for the coming decade and beyond.

In November 2023, a revision of the Renewable Energy Directive (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 at least 42.5%, with an ambition to reach 45% by 2030⁴². Article 3(4a) of RED III requires Member States to establish a framework to enable the deployment of renewable energy to a level consistent with its national contribution to the European Union's target and at a pace that is consistent with the indicative trajectories in Climate Action Regulation 2018/1999.

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 greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels and to achieve climate neutrality in the European Union by 2050.

⁴⁰ Directive 2009/28/EC on the promotion of the use of energy from renewable sources. Available from: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:en:PDF>

⁴¹ 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>

⁴² European Commission 2023 Renewable Energy Directive < https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en >

1.5.3.2 National 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.

The EPA released a report on May 27th, 2026, entitled 'Ireland's Greenhouse Gas emissions Projections 2025-2030'. Key findings from the report state that Ireland is not on track to meet the 51% emissions reduction target by 2030 (compared to 2018). Even with the full implementation of a wide range of policies and plans across all sectors that deliver carbon savings, the projected reduction is only 25%. With carryover from the Carbon Budget period 1(2021-2025), Budget period 2 (2026-2030) of 200 Mt CO₂eq is expected to be exceeded by 53 to 81 Mt CO₂eq. Based on the latest GHG Inventory (1990-2024) Electricity emissions in 2018 were 10.2 Mt CO₂ eq. The Electricity sector has an emissions reduction target of 75% by 2030 compared to 2018. Emissions from the Electricity sector are projected to decrease by 54.5% from 10.2 to between 4.7 and 4.0 (54.5% - 61.1%) Mt CO₂eq over the period 2018 to 2030. These projections include greater electricity demand and delays in the delivery of both increased interconnection and offshore wind generation.⁴³

As detailed in Section 1.5.1.1 above, in April 2025, the Government published the most recent CAP 2025, reaffirming the renewable electricity target of 80% by 2030 for Ireland. This is in line with targets previously announced in the Climate Action Plan 2019, 2021, 2023 and 2024.

CAP 2025 states that in order to meet the required level of emissions reduction by 2030 and the 80% renewable electricity generation target by 2030, the installed generation capacity of onshore wind will need to reach 9GW and at least 5GW of offshore wind. 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.⁴⁴ Ireland's installed capacity for wind generation in January 2025 was 4.9GW.⁴⁵ As noted previously, Ireland missed its 2020 renewable energy target of 40% with a renewable share in electricity of 39.1%, and by the end of 2021, Ireland's renewable energy share for electricity generation was 32.5%. As highlighted by the EPA report released in May 2026, Ireland is not on track to meet its greenhouse gas emissions reductions targets, therefore reaffirming the need for renewable energy developments. 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 is noted in Chapter 2 Section 2.3.1.

1.5.4 Increasing Energy Consumption

As detailed above, CAP25 reaffirms the need for 9GW of onshore wind generation in order for Ireland to meet its 2030 targets. CAP25 further identified that the revised National Planning Framework⁴⁶

⁴³ <https://www.rte.ie/documents/news/2026/05/epa-report.pdf>

⁴⁴ SEAI (December 2024) *Energy in Ireland 2024 Report* <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

⁴⁵ EirGrid, <https://www.eirgrid.ie/grid/system-and-renewable-data-reports>

⁴⁶ Department of Housing, Local Government and Heritage (2025) *Draft Revision of National Planning Framework* <<https://www.gov.ie/en/department-of-housing-local-government-and-heritage/press-releases/draft-revision-of-national-planning-framework-open-for-public-consultation/>>

includes policy support for the development and upgrading of electricity grid infrastructure, the delivery of renewable electricity generation capacity, and the introduction of regional renewable electricity capacity allocations for each of the three Regional Assemblies by 2030. In accordance with the relevant National Policy Objectives, Regional Assemblies and Local Authorities must plan for sufficient wind and solar energy development in order to achieve the targeted regional renewable electricity capacity allocations outlined in the draft National Planning Framework, taking into account factors influencing delivery including attrition rates and changes to energised capacity levels, in addition to current installed energised capacity.⁴⁷

In their ‘*All Island Generation Capacity Statement 2023 - 2032*’ (January 2024), 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’⁴⁸ concluded that ‘*potential costs of purchasing non-Emission Trading Scheme (ETS) [greenhouse gas] 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 2016⁴⁹ 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 approx. 3.85 GW of wind would be built up to 2020. The SEAI has provided a provisional estimate of wind capacity in Ireland in 2024 to be 4.85GW.⁵⁰

It is noted that the key driver for electricity demand in Ireland for the next number of years is the connection of large new 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 analysis shows that demand from data centres could account for 28% of all demand by 2031 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 last year’s forecast for high demand, indicating the progression of many data centre projects.

In 2015, IWEA commissioned a study ‘*Data Centre Implications for Energy Use in Ireland*’ which concluded that an extra approx. 1 Gigawatt (GW) of electricity demand could materialise between 2015 and 2020 due to growth in data centres. More recently, data available from Bitpower⁵¹ 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 DECC 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,

⁴⁷ Ibid.

⁴⁸ <https://igees.gov.ie/wp-content/uploads/2013/10/Future-Expenditure-Risks-associated-with-Climate-Change-Climate-Finance1.pdf>

⁴⁹ <https://www.seai.ie/publications/Ireland's-Energy-Targets-Progress-Ambition-and-Impacts.pdf>

⁵⁰ Sustainable Energy Authority of Ireland (2024) *Energy in Ireland – 2023 Report*

⁵¹ https://bitpower.ie/images/Reports/2021_H1_Report.pdf

with a target of 9GW onshore wind installed generation capacity and a target of 5GW offshore wind installed generation capacity.

The Department of Communications, Energy & Natural Resources (DCENR) noted in their Draft Bioenergy Plan 2014,⁵² that achieving the anticipated renewable energy usage in the three energy sectors will be challenging, with the 12% for renewable heat being particularly so. SEAI estimate that the shortfall could be in the region of 2% to 4% of the 12% RES-H target. Given that individual member states 2030 targets are set at a more challenging level than 2020, fines could persist for an extended number of years, and so the total cost to Ireland could run to billions with one report recently published by the Irish Fiscal Advisory Council and the Climate Change Advisory Council stating that *‘[Ireland] may have to pay out €8 to €26 billion to its EU Partners if it does not step up on climate action it has agreed to’*⁵³. For comparison, the entire wholesale electricity market has an annual value of around €3bn.

In the medium-term, with the introduction of electric vehicles and uptake of smart demand such as storage heating and heat pumps, emissions in the heat and transport sector will be substantially reduced. A high renewables electricity system is the foundation of such a transformation.

The White Paper published by DCENR in December 2015 expanded on the vision set out above. It outlines a radical transition to a low carbon future which will involve amongst other things, *‘generating our electricity from renewable sources of which we have a plentiful indigenous supply’* and *‘Increasing our use of electricity and biogas to heat our homes and fuel our transport’*.

The DCENR confirmed in the publication of the White Paper *‘Ireland’s Transition to a Low Carbon Future’ 2015 – 2030*, that wind is the cheapest form of renewable energy:

“(Onshore wind) is a proven technology and Ireland’s abundant wind resource means that a wind generator in Ireland generates more electricity than similar installations in other countries. This results in a lower cost of support.”

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 32% for renewable energy by 2030 has been set by the EU 2030 Framework for Climate and Energy, with Ireland confirming its own targets for 2030 as detailed below.

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. As announced in December 2022, the Irish Government have pledged to generate 80% of the country’s electricity supply from renewable sources by 2030. 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, Section 2.3.2.

These sources of ‘flexible demand’ allow the system to match intermittent renewable energy resources with minimal extra cost. Additional interconnection is also planned with the UK and France, further assisting in the integration of wind (and in the future solar) on the power system.

A number of alternative energy types have been examined when considering how best to meet this renewable energy target.

⁵² https://teagasc.ie/wp-content/uploads/2025/05/October_2014_Draft_Bioenergy_Plan.pdf

⁵³ IFAC/CCAC (2025) *A Colossal Missed Opportunity* <<https://www.fiscalcouncil.ie/a-colossal-missed-opportunity/>>

In 2014, a report prepared by UK consultant BW Energy for the Rethink Pylons campaign group has suggested that converting Moneypoint generation station (which runs solely on coal) from coal to biomass would have enabled Ireland to meet 2020 renewable energy targets. Dr Brian Motherway, Chief Executive SEAI⁵⁴ refutes this claim. While Dr Motherway agrees that biomass offers benefits and is helping Ireland to move away from fossil fuels, he states that *‘the conversion of Moneypoint to biomass has been considered a number of times over the years, including actual trials of small amounts of biomass in the station. However, the technical and economic challenges have proven far greater than some would have us believe’*.

The reason being that the move of Moneypoint from coal to biomass would not entail a clean swap. In fact, *‘to allow for combustion of biomass, a full redesign and rebuild of much of the station would be required’*. In the UK where this has been done, energy generation stations have required significant financial support to make the process viable and with each unit of energy in the UK being worth approx. 13 cents, almost double that of Ireland which is approx. 7 cents, wind energy works out cheaper in Ireland. Also, the amount of biomass required to feed Moneypoint would require 300,000ha of land; an equivalent area of Counties Wexford and Carlow being planted with willow which is far more than Ireland currently produces which means we would need to import.

Importation raises the question; would this be cost effective? As prices are volatile and availability of biomass is difficult to predict Ireland would become dependent on the uncertainty of imported biomass. It is also noted that there will be emissions from transport and distribution. The further the biomass is transported, the greater the greenhouse gas emissions⁵⁵. So, while biomass is currently contributing to a move to renewable energy production, on its own it is not the sole answer to meeting Ireland’s renewable energy targets. Ireland has a legal obligation to diversify its energy sources requiring the development of renewable energy to avoid substantial fines. It should be noted that Moneypoint ceased burning of coal on the 20th of June 2025⁵⁶ and has converted to the use of Heavy Fuel Oil. It will be used as a back-up, out of market generator, that EirGrid can call on any time they need extra generation capacity to ensure a stable supply of electricity for the Irish market.

The Joint Committee on Climate Action published its cross-party report entitled, *‘Climate Change: A Cross-Party Consensus for Action’* (March 2019)⁵⁷. This report highlights the requirements for alternate energy production. More specifically, the report notes that it is currently planned to stop burning coal at Moneypoint by 2025 as well as peat at Bord na Mona and ESB stations by 2030. In April 2025, the DECC published CAP25 which is the fourth annual update to Ireland’s Climate Action Plan 2019 and the third to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021. CAP25 notes the need for renewable alternatives to coal and peat. Further information on the CAP25 can be seen in Chapter 2.

CAP25 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:

⁵⁴ http://www.seai.ie/News_Events/Press_Releases/2014/Biomass-is-a-big-part-of-the-solution-but-not-the-whole-solution.html

⁵⁵ *Sustainability Criteria Options and Impacts for Irish Bioenergy Resources* (SEAI 2019)

⁵⁶ <https://www.rte.ie/news/2025/0620/1519429-moneypoint-power-station/>

⁵⁷ https://data.oireachtas.ie/foi/oireachtas/committee/dail/32/joint_committee_on_climate_action/reports/2019/2019-03-28_report-climate-change-a-cross-party-consensus-for-action_en.pdf

- › 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 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

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.

1.5.5

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 Wind Farm will displace approx. 55,760 tonnes of carbon emissions per annum from the largely carbon-based traditional energy mix, the detail of which is presented in Section 11.4.3.2 in Chapter 11: Climate.

The World Health Organisation (WHO) in 2019 estimated that ambient (outdoor) air pollution caused 4.2 million deaths worldwide in 2019.⁵⁸ The Environmental Protection Agency (EPA) report '*Air Quality in Ireland 2023*⁵⁹ 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*⁶⁰ highlights the negative effects of air pollution on human health. The report assessed that poor air quality in Europe accounted for premature deaths of approx. 238,000 people in the 27 EU Member States in 2021. The estimated impacts on the population in Europe of exposure to nitrogen oxides (NO₂) and Ozone (O₃) 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

⁵⁸ [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

⁵⁹ *Air Quality in Ireland Report 2023* <https://www.epa.ie/publications/monitoring-assessment/air/Air_Quality_Report_23_v14.pdf>

⁶⁰ *Air Quality in Europe 2022* <<https://www.eea.europa.eu/publications/air-quality-in-europe-2022>>

nitrogen oxides (NO₂) and 70 Irish deaths attributed to Ozone (O₃). These emissions, along with others, including sulphur oxides (SO_x), are produced during fossil fuel-based electricity generation in various amounts, 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 Status⁶¹ 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 2020 report 'Ireland's Environment – An Assessment'⁶² states that the pollutants of most concern are NO_x, (the collective term for the gases nitric oxide and nitrogen dioxide, PM (particulate matter) and O₃ (ozone). The EPA 2020 report goes on to state that:

"Ireland has excellent indigenous renewable energy resources, and renewable energy is playing an increasing role in the domestic energy supply. Ireland has more onshore (land-based) and offshore energy potential than most other European countries.

Energy from non-combustion sources, such as hydropower, wind or solar energy, and use of hydrogen, do not give rise to combustion-related impacts."

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 (CO₂), oxides of nitrogen (NO_x), and sulphur dioxide SO₂, thereby resulting in cleaner air and associated positive health effects.

1.5.6

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 2024', Ireland has a high import dependence on oil and gas and is essentially a price-taker on these commodities. Ireland's import dependency decreased slightly from 80% in 2022 to 78% in 2023 due to reduced net imports, which were only partially offset by the reduction in primary energy requirement.⁶³ From September 2023 to September 2024, Ireland imported 78% of its gas supply and supplied 22% of its gas supply from indigenous sources.

The 'Energy in Ireland 2025 Report'⁶⁴ stated that Ireland's national energy-related emissions in 2024 were at their lowest level in over 30 years with 14.6% of Ireland primary energy being sourced from renewables, the highest value to date. The SEAI estimates electricity emissions to be 6.9MtCO₂e in 2024, down 8.3% from 2023.

In April 2021, Wind Energy Ireland published a report produced by KPMG on the 'Economic Impact of Onshore Wind in Ireland'⁶⁵ stating that Irish wind farms are worth €400 million to the economy

⁶¹ EEA (2024) Europe's Air Quality Status 2023 <<https://www.eea.europa.eu/publications/europes-air-quality-status-2023>>

⁶² Ireland's Environment – An Assessment (2020) <https://www.epa.ie/publications/monitoring-assessment/assessment/state-of-the-environment/EPA_Ireland's_Environment_2020.pdf>

⁶³ SEAI (2024) Energy in Ireland – 2024 <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

⁶⁴ Ibid.

⁶⁵ <https://windenergyireland.com/images/files/economic-impact-of-onshore-wind-in-ireland.pdf>

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 2021⁶⁶, 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.

In February 2025 Wind Energy Ireland identified that spending on gas for electricity in Ireland was cut by almost €1 billion as wind supplied approx. 32% of Ireland's electricity. Irish wind farms saved €748 million euro on gas, which would have been predominantly imported, and a further €268 million in carbon credits in Ireland. An additional €213 million euro was saved on gas and carbon credits in Northern Ireland, bringing total all-island savings to more than €1.2 billion.⁶⁷

The Proposed Project will be capable of providing electrical energy to approx. 74,460 Irish households with electricity per year, based on the average Irish household using 4.2 MWh of electricity⁶⁸, as presented in the calculations in Chapter 4 of this EIAR.

1.5.6.1 Employment potential

The 2014 report '*The Value of Wind Energy to Ireland*', published by Pöyry, stated that growth of the wind sector in Ireland could support 23,850 jobs (construction and operational phases) by 2030. As of 2020, the wind sector and its supply chain in Ireland supports over 5,000 jobs, with potential to grow to over 7,000 by 2030⁶⁹. The reduction in fuel imports not only benefits security of supply but also creates a net transfer to the Irish economy, potentiality allowing for a saving of almost €671m of expenditure on fuel imports per annum by the time we reach 2030.

A 2021 MaREI report⁷⁰ includes a prospective view of Ireland's energy sector in 2050 whereby an additional 25,000 jobs would be created in the development of onshore and offshore wind to meet the zero carbon targets as pledged in the Climate Action and Low Carbon Development Act 2021 discussed in Section 1.5.1 above.

Likewise, the Proposed Project will have several significant long-term and short-term benefits for the local economy including job creation, landowner payments, local authority commercial rate payments and a Community Benefit Scheme.

It is estimated that the Proposed Project has the potential to create up to 100 jobs during the construction phase and 3-4 jobs during operational and maintenance phases. During construction, additional indirect employment will be created in the region through the supply of services and materials. There will also be income generated by local employment from the purchase of local services i.e., travel, goods and lodgings. Further details on employment associated with the Proposed Project are presented in Chapter 5 of this EIAR, Population & Human Health.

Should the Proposed Project receive planning permission, there are substantial opportunities available for the local area in the form of Community Benefit Funds. Based on the current proposal, should the Proposed Project enter the Renewable Energy Support Scheme (RESS), the proposed Community Benefit Fund would attract a community contribution in the region of approx. €300,000/year for the first 15 years of operation, to be used by the local community over the lifetime of the Proposed Project. The

⁶⁶ <https://assets.gov.ie/static/documents/climate-action-plan-2021-833aad8a-2afa-4894-9c6e-f2ff1f076c98.pdf>

⁶⁷ WEI (2025) <https://windenergyireland.com/latest-news/7836-wind-energy-saved-ireland-over-1-2-billion-on-gas-in-2024>

⁶⁸ March 2017 CER (CRU) Review of Typical Consumption Figures Decision Paper https://www.cru.ie/document_group/review-of-typical-consumption-figures-decision-paper/

⁶⁹ Wind Energy Ireland (2021) *Economic Impact of Onshore Wind in Ireland* <
<https://windenergyireland.com/images/files/economic-impact-of-onshore-wind-in-ireland.pdf>>

⁷⁰ MaREI 2021 *Our Climate Neutral Future: Zero by 2050*. <https://www.marei.ie/wp-content/uploads/2021/03/Our-Climate-Neutral-Future-Zero-by-50-Skillnet-Report-March-2021-Final-2.pdf>

⁷⁰

value of this fund will be directly proportional to the energy produced by the Proposed Wind Farm and will support and facilitate projects and initiatives in the area.

Further details on the proposed Community Gain proposals are presented in Appendix 2-2 and Section 4.9 in Chapter 4 of this EIAR. Please see Appendix 2-2 'Community Engagement Report' for details.

1.5.6.2 Commercial Rates

Commercial rate payments will be provided to Sligo County Council each year which will be redirected to the provision of public services within the County. 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.

1.6 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 EIA, which will be carried out by ACP, from this EIAR, which accompanies the planning application; please note, this EIAR will inform the EIA to be carried out by ACP. 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 Proposed Project on the following:

- a) *population and human health*
- b) *biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC*
- c) *land, soil, water, air and climate*
- d) *material assets, cultural heritage and the landscape*
- e) *the interaction between the factors referred to in points (a) to (d)*

The EIAR 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 and Annex IV of the revised EIA Directive and Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (as amended) described in Section 1.2 above.

1.7 Structure and Content of the EIAR

1.7.1 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 quality, climate, noise and vibration, cultural heritage, landscape and visual, material assets such as traffic and transportation, vulnerability to major accidents and natural disasters, 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*
- > *Site Selection and Reasonable Alternatives*
- > *Description of the Proposed Project*
- > *Population and Human Health*
- > *Biodiversity (excluding Birds)*
- > *Birds*
- > *Land, Soils and Geology*
- > *Hydrology and Hydrogeology*
- > *Air Quality*
- > *Climate*
- > *Noise and Vibration*
- > *Landscape and Visual*
- > *Cultural Heritage*
- > *Material Assets (including Traffic and Transport, Telecommunications and Aviation)*
- > *Major Accidents and Natural Disasters*
- > *Interactions of the Foregoing*
- > *Schedule of Mitigation 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.

The photomontage booklet pertaining to Chapter 13: Landscape and Visual is included as Volume 2 of this EIAR. Appendices to the chapters listed above are included in Volume 3 of this EIAR.

1.7.2 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 EPA 2022 Guidelines document.

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 documents (EPA, 2022). Standard definitions are provided in this glossary, which permit 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 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
	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, duration 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.

1.7.3

Assessment of Turbine Parameter Range within the EIAR

As detailed in Section 1.4 above, and further detailed in Chapter 4 of this EIAR, the Proposed Project will comprise the construction of 17 no. wind turbines and associated hardstand areas with the following parameters:

- a) Tip height range of 176.9 meters to 180 meters
- b) Rotor diameter range of 133.2 meters to 150 meters,
- c) Hub height range of 105 meters to 110 meters

For the purposes of this EIAR, various types and sizes of wind turbines, within the proposed ranges outlined above, have been selected and considered in the relevant sections of the EIAR. This allows for a robust assessment of the proposed range of turbines. Turbine design parameters have a bearing on the assessment of shadow flicker, noise, visual impact, traffic and transport and ecology (specifically birds), and Table 1-3 below outlines the specific sections within the EIAR where turbine scenarios within the turbine parameter range are assessed.

It should also be noted that the assessment of the development footprint of the Site, within this EIAR, is based on the maximum potential footprint for all of the infrastructural elements. This precautionary approach is taken as the assessment of the maximum development footprint will, in the absence of mitigation measures, give rise to the greatest potential for significant effects. Should the development footprint be less than the maximum, the potential for significant effects will also be reduced.

Table 1-3 Assessment of Turbine Parameter Range within the EIAR

EIAR Chapter	EIAR Section	Assessment of Range of Turbine Parameters	Assessment Parameters Detail		
			Scenario 1: Maximum	Scenario 2	Scenario 3
Chapter 5: Population & Human Health	Section 5.9 Shadow Flicker Assessment	Three scenarios have been assessed for the Shadow Flicker Assessment, as part of the EIAR. Scenario 1: Maximum is the scenario that gives rise to the greatest modelled levels of shadow flicker. A Comparative Shadow Flicker Assessment is included as an Appendix to Chapter 5 which presents the modelling results of Scenario 2: Median and Scenario 3: Minimum, all of which are assessed within the EIAR.	Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m	Tip Height: 179.5m Rotor Diameter: 149m Hub Height: 105m	Tip Height: 176.6m Rotor Diameter: 133.2m Hub Height: 110m
Chapter 6: Biodiversity: Flora & Fauna	Section 5.1 of Appendix 6-2: Bat Report	It should also be noted that the assessment of the development footprint of the Site, within this EIAR, is based on the maximum potential footprint for all of the infrastructural elements. This precautionary approach is taken as the assessment of the maximum development footprint will, in the absence of mitigation measures, give rise to the greatest potential for significant effects. Should the development footprint be less than the maximum, the potential for significant effects will also be reduced. Scenario 1: Maximum is the scenario which gives rise to the largest felling radius for bat mitigation and is assessed within the EIAR. The bat buffer calculation takes into account theoretical precautionary conditions by using the longest blade on the lowest hub. The largest rotor diameter (150m) and the minimum hub height (105m), therefore providing the maximum tip height of 180m, and also	Scenario 1: Maximum		
			Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m		

		detailing the maximum forestry buffer that would be required. Any other combination could only be based on a shorter rotor diameter or higher hub height which would therefore result in a reduction in the buffer requirement. The precautionary scenario has therefore been considered in the bat impact assessment.			
Chapter 7: Birds	Section 7.5.4 Collision Risk Modelling (CRM)	Three scenarios have been analysed via the collision risk model, representing the minimum, maximum and median of the turbine range, the outputs of which are detailed in Table 7-6-1 in Appendix 7-6 of Chapter 7: Collision Risk Assessment and assessed within the EIAR.	Scenario 1: Maximum	Scenario 2	Scenario 3
			Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m	Tip Height: 179.5m Rotor Diameter: 149m Hub Height: 105m	Tip Height: 176.6m Rotor Diameter: 133.2m Hub Height: 110m
Chapter 8: Land, Soils & Geology		It should also be noted that the assessment of the development footprint of the Site, within this EIAR, is based on the maximum potential footprint for all of the infrastructural elements. This precautionary approach is taken as the assessment of the maximum development footprint will, in the absence of mitigation measures, give rise to the greatest potential for significant effects. Should the development footprint be less than the maximum, the potential for significant effects will also be reduced.	N/A	N/A	N/A
Chapter 9: Water					
Chapter 10: Air					
Chapter 11: Climate					
Chapter 12: Noise & Vibration	Section 12.4.1.3 Operational Wind Turbines Noise Methodology	The noise assessment of three turbine models that fall within the range of turbine dimensions proposed as part of the application. These candidate turbine models are considered representative of the type of turbine that could be installed. The modelling results presented within this Chapter are based on Scenario 2 (which utilises the sound power data of the Nordex N149)	Scenario 1: Maximum	Scenario 2	Scenario 3
			Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m	Tip Height: 179.5m Rotor Diameter: 149m Hub Height: 105m	Tip Height: 176.6m Rotor Diameter: 133.2m Hub Height: 110m

		as that is one of the loudest turbines at the key wind speed range. Prediction modelling results for two other turbine models within the range of turbine dimensions are included within Appendix 12-2.			
Chapter 13: Landscape & Visual	Section 13.1.5 Landscape and Visual Assessment	Scenario 1 has been identified as the most representative turbine configuration model for assessment on the basis that the greatest extent of the entire turbine structure (blades and tower) would potentially be visible from the official viewpoints assessed in this Landscape and Visual Impact Assessment (LVIA) (described in Section 13.5.9 “Photomontage Viewpoint Selection”). For the avoidance of doubt, Scenario 2 and Scenario 3 are presented for two selected viewpoints included in the <i>EIAR Volume 2: Photomontage Booklet</i>. The photomontage assessment tables for these viewpoints include a comment addressing the alternative turbine configurations and confirm that the turbine configuration ultimately installed on-site will not alter the assessment of residual visual effects.	Scenario 1: Maximum		
			Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m		
Chapter 14: Cultural Heritage	Section 14.1.10.3 Methodology of Visual Impact (Indirect Effects)	The Zone of Theoretical Visibility as presented in Chapter 13: Landscape & Visual is produced using Scenario 1: Maximum, as well as photomontages from specific cultural heritage assets or other general locations which are produces using all three scenarios. This is utilised in the Cultural Heritage assessment to identify impacts on visual setting relative to monuments and cultural heritage aspects, all of which is assessed in the EIAR.	Scenario 1: Maximum		
			Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m		

Chapter 15: Material Assets	Section 15.1.7 Construction Traffic Vehicles	Scenario 1: Maximum is the scenario which gives rise to the longest turbine blade for delivery and is assessed within the EIAR. This precautionary approach is taken as the assessment of the maximum blade length will give rise to the greatest potential for significant effects. Should the blade length be less than the maximum, the potential for significant effects will also be reduced.	Scenario 1: Maximum		
			Tip Height: 180m Rotor Diameter: 150m Hub Height: 105m		

1.8 Project Team

1.8.1 Project Team Responsibilities

The companies and staff listed in Table 1-4 were responsible for completion of this EIAR of 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 1.8.2 below. Each chapter of this EIAR has been prepared by a competent expert in the subject matter.

Table 1-4 Companies and Staff Responsible for EIAR Completion

Consultants	Principal Staff Involved in Project	EIAR Input*
MKO Tuam Road, Galway, H91 VW84	Brian Kevin Michael Watson Colm Ryan Sean Creedon Ellen Costello Brandon Taylor Edel Mulholland Muireann Van Nieuwenhove Sean McCarthy Alan Clancy Ciara Griffin John Hynes Pat Roberts Rachel Walsh Juliane Kohlstruck Sara Fissolo Aoife Joyce Molly O'Hare Dervla O'Dowd Pádraig Cregg Susan Doyle Louis de Vries Jack Workman Rachel Smith James Crean Brian O'Carroll Killian Devereux Gabriela Oliveria	Project Managers, Scoping and Consultation, Preparation of Natura Impact Statement, EIAR Report Sections: 1. Introduction 2. Background to the Proposed Project 3. Considerations of Reasonable Alternatives 4. Description of the Proposed Project 5. Population & Human Health 6. Biodiversity 7. Ornithology 10. Air Quality 11. Climate 14. Landscape & Visual 15. Material Assets (non-Traffic) 16. Major Accidents and Natural Disasters 17. Interaction of the Foregoing 18. Schedule of Mitigation and Monitoring
Fehily Timoney & Company The Grainstore Singletons Lane, Bagnelstown, Co. Carlow.	Ian Higgins	Preparation of Peat Stability Assessment and Peat and Spoil Management Plan
Hydro Environmental Services 22 Lower Main Street Dungarvan Co. Waterford	Michael Gill David Broderick	Flood Risk Assessment and Drainage Design, Preparation of EIAR Sections:

Consultants	Principal Staff Involved in Project	EIAR Input*
		8. Land, Soils & Geology 9. Water
TNEI Ireland Ltd. Unit S12, Synergy Centre TU Dublin Tallaght Campus, Tallaght, Dublin.	Jason Baldwin Mark Tideswell Faolán Ly	Baseline Noise Survey, Preparation of EIAR Section 12. Noise and Vibration
Tobar Archaeological Services Saleen Midleton Co. Cork	Miriam Carroll	Preparation of EIAR Section 14. Archaeological, Architectural and Cultural Heritage
Alan Lipscombe Traffic and Transport Consultants Claran, Headford, Co. Galway	Alan Lipscombe	Swept Path Analysis, Preparation of EIAR Section 15. Material Assets - Traffic and Transport
Triturus Environmental Ltd 42 Nordwood Court, Rochestown, Cork T12 ECF3	Ross Macklin Bill Brazier	Preparation of Aquatic Survey Report of the Proposed Project
TLI Group Beenreigh, Abbeydorney, Co. Kerry, V92 YE97	Tomas O'Callaghan Kevin Casey Aaron Kelly	Substation and grid connection design
Ai Bridges Ltd, Unit 9, Block B, Quin Rd. Business Park Ennis, Co. Clare	Kevin Hayes	Preparation of EIAR Appendices: › Telecommunications Impact Assessment Report › Aviation Review Statement

*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.

1.8.2 Project Team Members

1.8.2.1 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.

Michael Watson BA. MA. CEnv. PGeo

Michael Watson is Environmental Director at MKO, overseeing a team which comprises over 50 highly skilled environmental professionals. 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 renewables, waste management, public sector, commercial and industrial sectors nationally. Michael's 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. 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).

Colm Ryan

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.

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.

Ellen Costello M.Sc., B.Sc., PIEMA

Ellen Costello is a Senior Environmental Scientist with MKO with over 6 years' experience in private consultancy. Ellen holds a BSc (Hons) in Earth Science, and a MSc (Hons) in Climate Change: Integrated Environmental and Social Science Aspects where she focused her studies on renewable energy development in Europe and its implications on environment and society. Ellen's key strengths and expertise are Environmental Protection and Management, Environmental Impact Statements, Project Management, and GIS Mapping and Modelling. Since joining MKO, Ellen has been involved in a range of renewable energy infrastructure projects. In her role as a project manager, Ellen 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. Ellen is a Practitioner Member of the Institute of Environmental Management & Assessment.

Brandon Taylor

Brandon Taylor is an Environmental Scientist with over 3 years of private consultancy experience. Brandon holds a BSc (Hons) in Geography from McGill University, and a MSc (Hons) in Coastal & Marine Environments from the University of Galway. Brandon's key skills include scientific research and report writing, particularly in the context of local communities and their interactions with environmental stressors, and geospatial analysis and the application of GIS and remote sensing tools across fields of renewable energy development, coastal zone management and education and scientific communication. Since joining MKO, Brandon has been involved in the design and environmental impact assessment of multiple large-scale onshore wind energy developments across Ireland, contributing to and managing the production of EIA reports.

Edel Mulholland

Edel Mulholland is an Environmental Scientist with MKO with over 1 year experience. Edel holds BA (Hons) in Environmental Science from the University of Galway. Prior to taking up her position with MKO in September 2024, Edel worked as an Environmental Chemistry Analyst with Complete Laboratory Solutions, Co. Galway, where she assisted with water quality analysis. Since joining MKO, Edel has assisted in the submission of several renewable energy developments. Edel's key

strengths and areas of expertise are in environmental policy, drafting EIAR chapters, field work and QGIS mapping.

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 renewable energy, 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 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 (Hons), MPlan

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.

Ciara Griffin

Ciara Griffin is a Planner with MKO having joined the company in September 2024. Ciara holds a BA (Hons) in City Planning & Environmental Policy from University College Dublin. Since joining MKO, Ciara has been involved in a range of renewable energy projects including onshore wind and grid infrastructure. Ciara's main responsibilities include preparing planning application documents and reports, preparing inputs for Environmental Impact Assessment Reports and liaising with multidisciplinary team projects.

Pat Roberts B.Sc. (Env)

Pat Roberts is Principal Ecologist with MKO with over 20 years post graduate experience of providing ecological services in relation to a wide range of developments at the planning, construction and monitoring stages. Pat holds B.Sc. (Hons) in Environmental Science. Pat has extensive experience of providing ecological consultancy on large scale industrial and civil engineering projects. He is highly experienced in the completion of ecological baseline surveys and impact assessment at the planning stage. He has worked closely with construction personnel at the set-up stage of numerous construction sites to implement and monitor any prescribed best practice measures. He has designed numerous Environmental Operating Plans and prepared many environmental method statements in close conjunction with project teams and contractors. He has worked extensively on the identification, control and management of invasive species on numerous construction sites. Prior to taking up his position with MKO in June 2005, Pat worked in Ireland, USA and UK as a Tree Surgeon and as a nature

conservation warden with the National Trust (UK) and the US National Park Service. Pats key strengths include his depth of knowledge and experience of a wide range of ecological and biodiversity topics and also in his ability to understand the requirements of the client in a wide range of situations. He is currently responsible for staff development, training and ensuring that the outputs from the ecology team are of a very high standard and meet the requirements of the clients and relevant legislation and guidelines. He is a full member of the Chartered Institute of Ecologists and Environmental Managers (CIEEM)

John Hynes M.Sc (Ecology); B.Sc.

John Hynes is the Ecology Director at MKO, with over 13 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.

Pat Roberts B.Sc. (Env.)

Pat Roberts is Principal Ecologist with MKO with over 18 years post graduate experience of providing ecological services in relation to a wide range of developments at the planning, construction and monitoring stages. Pat holds B.Sc. (Hons) in Environmental Science. Pat has extensive experience of providing ecological consultancy on large scale industrial and civil engineering projects. He is highly experienced in the completion of ecological baseline surveys and impact assessment at the planning stage. He has worked closely with construction personnel at the set-up stage of numerous construction sites to implement and monitor any prescribed best practice measures. He has designed numerous Environmental Operating Plans and prepared many environmental method statements in close conjunction with project teams and contractors. He has worked extensively on the identification, control and management of invasive species on numerous construction sites. Prior to taking up his position with MKO in June 2005, Pat worked in Ireland, USA and UK as a Tree Surgeon and as a nature conservation warden with the National Trust (UK) and the US National Park Service. Pats key strengths include his depth of knowledge and experience of a wide range of ecological and biodiversity topics and also in his ability to understand the requirements of the client in a wide range of situations. He is currently responsible for staff development, training and ensuring that the outputs from the ecology team are of a very high standard and meet the requirements of the clients and relevant legislation and guidelines. He is a full member of the Chartered Institute of Ecologists and Environmental Managers (CIEEM).

Rachel Walsh

Rachel has worked as an Ecologist in MKO since June 2020. She currently holds a role as Senior Ecologist and manages a small team within the company. She holds a First-Class Honours BSc. degree in Environmental Science from NUI Galway. Rachel's key strengths are in botanical identification and habitats assessment, mammal surveying and report writing for the purposes of Ecological Impact Assessment and Appropriate Assessment.

Juliane Kohlstruck

Julie is a Project Ecologist with MKO with over five years of experience in professional ecological consultancy. Julie holds a BSc in Landscape Ecology from the University of Muenster, Germany and a MSc in Landscape Ecology from the University of Oldenburg, Germany. Prior to taking up her position with MKO in September 2025, Julie worked as a Senior Ecologist with Woodrow APEM Ltd. Julie has broad ecological field skills including habitat surveys, invasive species surveys, rare plant surveys, Annex 1 habitat assessments, mammal surveys, and bird surveys. Julie has strong technical reporting skills, with experience preparing ecological reports including Appropriate Assessment Screening Reports, Natura Impact Statements, Biodiversity Management and Enhancement Plans, Ecological Impact Assessments and biodiversity chapters of Environmental Impact Assessment Reports for a wide range of projects.

Sara Fissolo

Sara Fissolo is a Project Ecologist with MKO with over five years' experience in ecological consultancy. Sara holds a BSc. (Hons) in Ecology and Environmental Biology from University College Cork. Sara first joined MKO in 2019 and has since worked as a member of MKO's dedicated bat unit, where she scopes and manages bat survey requirements for a variety of projects, including wind-farms planning applications. She has specialised in carrying out bat survey requirements for developments and nature conservation projects, including habitat appraisals and roost assessments, manual/static activity surveys and data analysis, and produces bat report outputs to inform Ecological Impact Assessments, Environmental Impact Assessments and Appropriate Assessments. Sara's role includes keeping up to date with scientific literature and guiding her team and the rest of the ecology team on how to assess impacts on bats. She attended Wildlife Acoustics, Bat Conservation Ireland (BCI), Bat Conservation Trust (BCT) and CIEEM courses on surveying heritage buildings for bats, on performing advanced survey techniques and identification, on bats and lighting, on performing bat care, on assessing the impact of developments on bats and on the use of Kaleidoscope Pro Software. Sara is a member of BCI, for which she carries out volunteer surveys, is a qualifying member of CIEEM.

Aoife Joyce M.Sc. (Agribioscience), B.Sc.

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.

Molly O'Hare

Molly O'Hare is a Project Bat Ecologist with MKO with over 3 years of experience in ecological consultancy. Molly holds a BSc in Ecology and Environmental Biology and an MSc in Marine Biology from University College Cork. Prior to taking up her position with MKO in February 2025, Molly worked as Lead Bat Ecologist for Inis Environmental Consultants Ltd and held a previous post as

Research Assistant with African Bat Conservation in Malawi. Molly has specialist experience in bat field survey techniques including mist netting, harp trapping, hand netting, radio tagging and tracking, exclusion works, transect surveys, emergence surveys, re-entry surveys and roost assessments. Molly also has experience carrying out multidisciplinary field surveys such as habitat assessments, general mammal surveys, bird surveys and acting as an ecological clerk of works. Molly's key strengths and areas of expertise are in bat ecology, field survey techniques, project management and survey scope design, bioacoustics analysis and training and education. Since joining MKO Molly has been an integral part of the bat division of the ecology team. Within MKO she works as part of a multidisciplinary team, Molly is a qualifying member of CIEEM.

Dervla O'Dowd B.Sc. (Env)

Dervla O'Dowd is Associate Director with responsibility for MKO's dedicated Ornithology Team with nineteen years of experience in environmental consultancy as a Senior Ecologist and Project Manager. Dervla graduated with a first-class honours B.Sc. in Environmental Science from NUI, Galway in 2005 and joined Keville O'Sullivan Associates in the same year. Dervla has gained extensive experience in the project management and ecological assessment of the impacts of various infrastructural projects including wind energy projects, water supply schemes, road schemes and housing developments nationwide and has also been involved in the compilation of Environmental Impact Reports and acted as EIAR co-ordinator on many of these projects. Dervla has also extensive experience in the provision of ecological site supervision for infrastructural works within designated conservation areas, in particular within aquatic habitats, and has also been involved in the development of environmental/ecological educational resource materials. Currently, Dervla is responsible for the management of MKO's dedicated Ornithology Team coordinating MKO's portfolio of bird survey and assessment work required on major infrastructural projects, with emphasis on wind energy projects. Dervla's key strengths and areas of expertise are in project management, project strategy, business development and survey co-ordination to ensure the efficient operation of the Ornithology team's field survey schedule. Dervla holds full membership of the Chartered Institute of Ecology and Environmental Management and current Safe Pass card.

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.

Susan Doyle

Susan Doyle is a senior ornithologist at MKO. She completed her primary degree in Zoology (moderation in Natural Science) at Trinity College Dublin in 2013 and her master's degree in Ecological Assessment in University College Cork in 2014. Susan has seven years' experience in ecological consultancy and has worked on wind farm projects, solar farm projects, residential developments, data centres, county council projects and National Parks and Wildlife Service projects. She specialises in ornithological consulting, including Environmental Impact Assessments and operational monitoring. Prior to joining MKO in October 2020, Susan gained experience through her involvement in several bird conservation projects, including protected curlew, seabirds, waders and waterfowl, as well as research into breeding hen harrier, satellite telemetry in migrant birds and avian diseases in Ireland, providing her with extensive experience in a wide variety of bird survey methods, data management and reporting.

Louis de Vries

Louis is a Field ornithologist with MKO with over 3.5 years of experience in wildlife conservation. Louis holds a MSC in Ecology and Ethology. Prior to taking up his position with MKO in March 2023, Louis worked as a project manager on cetaceans' conservation for 2.5 years. Louis's strengths and areas of expertise are in ornithological and ecological field survey techniques, scientific data collection and management and report writing. Since joining MKO, Louis has been involved in carrying out ornithological surveys for a variety of projects such as wind farms. Within MKO Louis plays a role in conducting ornithological field surveys, collecting and managing scientific data from field surveys, writing interim and end of season reports.

Jack Workman 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.

Rachel Smith

Rachel is a Project Environmental Scientist – LVIA Specialist who has been working with MKO since October 2023. Rachel is an Earth & Environmental Science consultant with more than 12 years of professional experience in producing and editing technical scientific reports, and collecting, analysing and reporting environmental data for regulatory compliance in both the US and Ireland, including the utilisation of QGIS mapping, organisation of field work, management of environmental databases and training of environmental science staff. Rachel's primary role at MKO is producing and reviewing the LVIA chapter of EIA reports accompanying planning applications for multi-scale onshore renewable energy and non-energy developments, as well as conducting research and analysis in Irish landscape science and policy. Rachel is an affiliate of Landscape Alliance Ireland assisting with the Landscape Forum in 2025 and 2026 and has presented on topics related to LVIA at Irish universities since 2025. Rachel is a member of the Irish Geological Association as well as ProGeo, the International Association for the Conservation of Geological Heritage and a member of the 2026 ProGeo Geoconservation Glossary Thematic Working Group. Rachel holds an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice) and a BSc. in Geology specialised in Hydrogeology. .

James Crean

James Crean is an LVIA practitioner with MKO. James holds BA (Hons) in Geography & English and Masters in Applied Coastal and Marine Management. James took up his position with MKO in 2023. James' key strengths and areas of expertise are in GIS, remote sensing and report writing. His primary role at MKO is conducting LVIA's and writing the Landscape and Visual chapter of EIA reports. Since joining MKO, James has worked widely on renewable energy infrastructure, commercial, recreational, and residential projects. James is a qualified Unmanned Aerial Vehicle Operator and holds an A1/A3 and A2 drone licence.

Brian O'Carroll

Brian O'Carroll currently holds the position of Graphics Technician within MKO. Brian has obtained a second-class honours degree (level 8) in Design – Visual communications from the Limerick School of art and Design. Prior to taking up his position with MKO in June 2023, Brian worked for close to 20 years as a graphic designer and Pre Press Manager and former Senior graphic designer within the print industry. Brian has worked within the design department, as a graduate he joined Cube Printing Ltd, (Limerick) and worked his way from junior designer to senior and then lead designer for Cube. Brian then progressed to the design and Pre Press Manager of the well-established Davis printers (Limerick). His key skills are the implementation of the skills acquired over the years in the Adobe Suite, primarily but not limited to Indesign, Photoshop, Lightroom and Illustrator. Communication and planning for print are amongst Brians greatest attributes. Brian is now fully versed in WindPro Software and is a key part of the Graphics Pod within MKO, has recently completed training in Pano2VR and Website design.

Killian Devereux (Hons)

Killian is currently the Project CAD Technician at MKO, he has over 9 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.

Gabriela Oliveira

Gabriela is a CAD Technician at MKO with over 6 years of drafting experience in various sectors of the building industry. She holds BSc (Hons) in Architecture and Urbanism from University of Fortaleza, Ceara, Brazil. Prior to taking up her position with MKO in July 2023, Gabriela worked as an Architect for Fergal Bradley & Co. and as an Architect Assistant Graphic Design for an engineer company. She was primarily involved in a variety of Commercial / Residential / Landscape projects where she was responsible for the planning drawing packages but also has experience working in FSC's /DAC's and one-off housing planning applications. Her key strengths and areas of expertise are in Auto CAD, Revit and SketchUp (3D).

1.8.2.2 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.

Hydro Environmental Services 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.

1.8.2.3 TNEI Ireland Ltd.

Jason Baldwin

Jason is a Principal Technical Consultant with over 8 years' experience working on noise related assessments for renewable energy developments. He holds the Diploma in Acoustics and Noise Control, and is an Associate of the Institute of Acoustics.

For a given project, Jason will become involved during feasibility assessments, baseline surveys, impact assessments, in addition to compliance and complaints investigations. Since joining TNEI in 2013, he has primarily worked on wind farm noise projects (specifically site assessment, layout design, and noise and shadow flicker assessments); his role also involves the development of noise models, and the analysis of operational turbine data during compliance exercises (to understand better the conditions in which noise is an issue). Jason moved to the Republic of Ireland in 2020 to set up a team and further extend the services that TNEI offer.

Mark Tideswell

Mark is a Principal Consultant with over twelve years' experience working in the Environmental Consultancy sector. Mark's work focuses mainly on the technical aspects of renewable energy developments, including GIS services, assessment of shadow flicker and glint and glare effects, with a specialism in noise assessment. Mark is an experienced project manager who has worked on a large number of wind energy development projects from initial feasibility work on the sites, through to baseline assessment, impact assessment (drafting of Technical Reports and Chapters) and post submission support and compliance monitoring including complaints investigations. Although he works across multiple sectors, he is particularly experienced in wind farm noise assessment, having undertaken monitoring and analysis, as well as the modelling and assessment of a large number of wind farms, for both planning and compliance. Mark is a full Member of the Institute of Acoustics (MIOA).

Gemma Clark

Gemma is a Principal Consultant with over 18 years experience working in the Environmental Consultancy Sector. Gemma holds a BSc in Environmental Science and an MSc in Clean Technology. Since joining TNEI in 2007, Gemma has primarily worked on wind farm noise projects. She has been involved with all stages of development for initial feasibility assessments, baseline surveys, impact assessments through to assisting with collating information for Appeals and compliance monitoring. Gemma is an experienced Project Manager and has managed a range of projects from single turbine developments through to 300 MW+ applications in the UK and Ireland. Gemma is also proficient in the use of ArcGIS and provides GIS support across the business including site finding analysis, feasibility assessments and constraints mapping.

Moise Coulon

Moise is an experienced Project Manager and Acoustician, who provides technical support and assessment of proposed and operational developments. Moise specialises in undertaking noise assessments and has worked on projects associated with a variety of sectors including renewable energy, property development and industry. Moise has extensive experience in complex noise monitoring campaigns and noise modelling in specialist software such as CadnA and SoundPlan. Moise leads projects from the early phases to completion and has worked on a number of complex cumulative impact assessments. Moise has extensive experience in Wind Farm noise, as well in BS5228 construction noise assessments, BS4142 noise assessments, shadow flicker assessments, due diligence, wind resource assessments and preparing reports to support planning applications. Moise is a full member of the Institute of Acoustics and has experience of presenting papers at wind farm noise conferences.

1.8.2.4 Tobar Archaeological Services

Tobar Archaeological Services is a Cork-based company in its 16th year in business. They offer professional nationwide services ranging from pre-planning assessments to archaeological excavation, and cater for clients in state agencies, private and public sectors.

Miriam Carroll is licensed by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs to carry out excavations in Ireland and have carried out work directly for the National Monuments Services of the Department of the Environment, Heritage and Local Government. Tobar Archaeological Services has a proven track record and extensive experience in the wind farm industry from EIS/ELAR stage through to construction stage when archaeological monitoring is frequently required.

1.8.2.5 Alan Lipscombe Traffic and Transport Consultants

Alan Lipscombe

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.

1.8.2.6 Triturus

Ross Macklin

Ross Macklin (B.Sc. (Hons) Applied Ecology, HDip GIS, Dip IPM, MCIEEM, IFM) is a principal ecologist and Director at Triturus Environmental Ltd., 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 (B.Sc. (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 and Associate Director 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. Highly competent in GIS, he specialises in aquatic ecology and freshwater fish, inclusive of fisheries assessments, macrophytes, water quality, hydromorphology, riparian habitats, 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 in freshwater and transitional habitats.

1.8.2.7 TLI Group

Kevin Casey

Kevin Casey is an Electrical Team Lead with TLI Group and has over 10 years' experience working across HV and MV electrical infrastructure projects in Ireland. Holding a B.Eng in Mechanical and Electronic Engineering, he has developed experience in the design and coordination of grid connections, substations and underground cable systems associated with renewable energy and utility developments.

Key areas of experience include feasibility assessments, HV cable system design, cable rating calculations, joint bay siting, technical report writing, site surveys and multidisciplinary project coordination for projects from feasibility and planning stage through to design and construction. Since joining TLI Group, he has contributed to a number of large-scale renewable energy and grid infrastructure projects, including 110kV, and 220 kV grid connection developments. He also has previous experience in overhead line construction, MV/HV network upgrades and electrical design for heavy industrial applications.

Aaron Kelly

Aaron Kelly is a Project Manager in the renewables and energy department in TLI Group LTD with over 5 years' experience. Aaron holds a BSc (Hons) in Construction Management from Atlantic Technical University Galway (Previously known as GMIT Galway Campus), and a Postgraduate degree in Project Management from University College Dublin (UCD). Aaron's key skills include project co-ordination, managing project budgets, risk management, research and report writing. Aaron before joining TLI Group LTD was a senior civil engineer with John Sisk and Sons, various skills developed from this time was QA/QC, land surveying, structural design, task supervision, package management, AutoCAD design, and co-ordinating with the design team. Since joining TLI Group LTD Aaron has been involved in the design of multiple large scale onshore wind energy developments, and substation developments across the Republic of Ireland.

Tomas O'Callaghan

Tomás O'Callaghan is an Electrical Engineer with 2 years' experience working across HV and MV electrical infrastructure projects in Ireland. Tomás holds a BSc (Hons) in Electrical Engineering from Munster Technological University (MTU) Cork. Tomás has developed strong technical expertise in the production of detailed design deliverables, including cable routing layouts, trench and joint bay drawings, substation layouts, and planning and EIAR documentation. His skillset includes advanced use of AutoCAD and GIS tools to produce accurate and efficient design outputs, as well as coordination of multidisciplinary inputs to support project delivery. Since joining TLI Group, Tomás has contributed to a range of transmission and distribution projects from 38kV to 110kV, supporting both design development and client engagement processes, with a focus on quality, efficiency, and compliance with industry standards.

1.8.2.8 Ai Bridges

Ai Bridges has been supplying telecommunications and aviation assessment solutions to the wind farm industry throughout the Republic of Ireland, Northern Ireland and the rest of the UK since 2007. The Ai Bridges Engineering Department has in excess of 170-man years of experience in the delivery of Aviation, Telecommunications, Broadcast & Electromagnetic Interference projects.

Kevin Hayes

Kevin Hayes is the Engineering Director at Ai Bridges and takes the role of Client Relationship Manager responsible for oversight of project progress and deliverables for the Telecommunications and Aviation Impact Assessment Projects and acts as client liaison. Kevin also takes responsibility for day-to-day running of the project including co-ordination of project team, sub-contractors and achieving agreed milestones. All project works are managed by Kevin who is a qualified engineer with B.Eng Hons. Electronic & Communications Engineer, M. Eng. Hons in Communications & Software Engineering qualifications. Kevin has gained extensive experience in the areas of Telecommunications network design, deployment of telecommunications systems over a 32-year period. He has extensive working knowledge of software modelling and radio planning of telecommunications and aviation systems. Kevin has also taken the lead role in developing the Ai Bridges 3D modelling software techniques used to predict wind farm and solar park interference impacts on telecommunications, broadcast and aviation infrastructure networks.

1.9

Difficulties Encountered

There were no technical difficulties encountered during the preparation of this EIAR.

1.10

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 ACP website, under the relevant Planning Reference Number (to be assigned on lodgement of the application).

An Coimisiún Pleanála: <https://www.pleanala.ie/en-ie/home>

This EIAR and all associated documentation will also be available for viewing at the offices of An Coimisiún Pleanála and Sligo 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

Sligo County Council
County Hall,
Riverside
Co. Sligo

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 website:

<https://www.crumhachwfplanning.com>