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Environmental Impact Assessment Report

Gannow Renewable Energy
Development, Co. Galway

Chapter 1 - Introduction

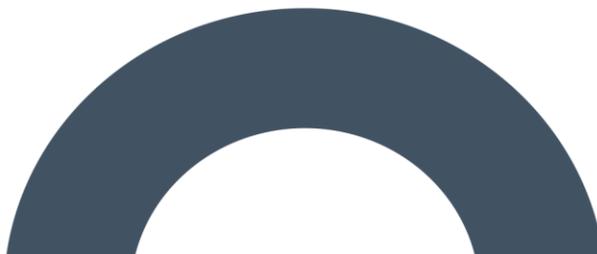


Table of Contents

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1.	INTRODUCTION	1-1
1.1	Introduction.....	1-1
1.1.1	References to the Proposed Project.....	1-1
1.1.2	Site Location.....	1-2
1.2	Legislative Context of Environmental Impact Assessment.....	1-6
1.2.1	EIAR Guidance.....	1-7
1.2.2	Wind Energy Development Guidelines for Planning Authorities.....	1-7
1.3	The Applicant.....	1-8
1.4	Brief Description of the Proposed Project.....	1-8
1.5	Need for the Proposed Project	1-9
1.5.1	Overview	1-9
1.5.2	Energy Security.....	1-15
1.5.3	Competitiveness of Wind Energy	1-17
1.5.4	European Renewable Energy Policy and Targets	1-18
1.5.5	National Renewable Energy Targets.....	1-19
1.5.6	Increasing Energy Consumption.....	1-19
1.5.7	Reduction of Carbon Emissions and Other Greenhouse Gases.....	1-23
1.5.8	Economic Benefits.....	1-24
1.6	Purpose and Scope of the EIAR.....	1-26
1.7	Structure and Content of the EIAR.....	1-26
1.7.1	General Structure.....	1-26
1.7.2	Description of Likely Significant Effects and Impacts	1-27
1.7.3	Assessment of Turbine Parameter Range within the EIAR.....	1-30
1.8	Project Team.....	1-34
1.8.1	Project Team Responsibilities	1-34
1.8.2	Project Team Members	1-35
1.9	Difficulties Encountered.....	1-45
1.10	Viewing and Purchasing of the EIAR.....	1-45

1. INTRODUCTION

1.1 Introduction

This Environmental Impact Assessment Report (EIAR) has been prepared by MKO on behalf of the Applicant, Gannow Ltd. who intends to apply to Galway County Council (GCC) for planning permission to construct a renewable energy development comprising 8 no. wind turbines, and associated infrastructure in the townlands of Gannow and adjacent townlands, near Athenry in Co. Galway, and a 38kV on-site substation and associated works, including underground 38kV cabling to connect to the national grid at Cashla 220kV substation, in the townland of Barrettspark, Co. Galway.

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

1.1.1 References to the Proposed Project

The Proposed Project, will be known as the ‘Gannow Renewable Energy Development’.

For the purposes of this EIAR:

- The ‘Proposed Project’ refers to the entirety of the project (‘Proposed Wind Farm’ and ‘Proposed Grid Connection’ as described below) 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.
- The ‘Proposed Wind Farm’ refers to the 8 no. turbines and associated foundations and hardstanding areas, including access roads, underground internal cabling, permanent meteorological mast, temporary construction compounds, peat and spoil management areas, biodiversity enhancement, tree felling and vegetation removal, site drainage, operational stage signage, 38kV onsite substation, and all ancillary works and apparatus.
 - The ‘proposed turbines’ refers to the 8 no. turbines associated with the Proposed Wind Farm as outlined above.
- The ‘Proposed Grid Connection’ refers to the 38kV underground cabling connection from the proposed onsite 38kV substation to the existing Cashla 220kV substation, and all ancillary works and apparatus.
- The ‘Site’ refers to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of the EIAR and encompasses an area of approximately 884 hectares.
- The ‘Proposed Wind Farm site’ refers to the portion of the Site containing the proposed turbines and ancillary infrastructure but excluding the portion of the Site surrounding the Proposed Grid Connection.

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

Both the EIAR and NIS take into account the combined impacts identified across the various EIAR disciplines of the Proposed Project.

For clarity in this EIAR, all elements of the Proposed Project will be assessed cumulatively and in combination with other projects to aid the competent authority in carrying out an EIA.

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The Site identifies the primary EIAR study area for the Proposed Project and was defined in consideration to appropriate buffers and natural onsite features. 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 planning application boundary) occupies a smaller area within the EIAR Site Boundary. The EIAR Site Boundary encompasses an area of approximately 884 hectares (ha). The permanent infrastructure footprint of the Proposed Project measures approximately 7.6ha, which represents approximately 0.9% of the Site.

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

1.1.2 Site Location

As defined in Section 1.1.1, the Site is made up of two distinct elements, the Proposed Wind Farm and the Proposed Grid Connection. The Proposed Wind Farm site is located within a rural, agricultural setting in eastern Galway, approximately 9.7km east of Athenry Co. Galway and 13km north of Loughrea Co. Galway. The village of Attymon is located approximately 1km north of the nearest proposed turbine (T01), and the village of New Inn is located approximately 4.6km southeast of the nearest proposed turbine (T07). The Site location context is shown in Figure 1-1.

The Proposed Grid Connection includes for 38kV underground cabling from the proposed onsite 38kV substation, in the townland of Attimonmore South, Co. Galway, to the existing Cashla 220kV substation in the townland of Barrettspark, Co. Galway. The Proposed Grid Connection measures approximately 21.8km in length and is located primarily within the curtilage of the public road corridor with three sections (approximately 0.2km, 0.6km and 1.5km) being located within private land.

The Site measures approximately 884ha and comprises a mix of agri-pastoral land and cutover bog. The L3115 Local Road runs in north-south orientation along the western boundary of the Proposed Wind Farm site and in an east-west orientation along the northern boundary of the Site. Existing access is via an existing agricultural entrance off the L3115 local road. The site is also served by a number of existing agricultural roads and tracks. The Grid Reference co-ordinates for the approximate centre of the Proposed Wind Farm site are X 561556 Y 729624 (ITM). The townlands within which the Proposed Project is located are listed in Table 1-1. All townlands are located in Co. Galway.

Current land-use on the Proposed Wind Farm site is predominantly comprised of peat cutting activities, commercial forestry, and pastoral agriculture land. Current land-use along the Proposed Grid Connection comprises of public road corridor, public open space, private track, and private land principally used by agriculture. Land-use on the wider landscape comprises a mix of pastoral agriculture, peatlands, low-density residential, and small-scale commercial properties.

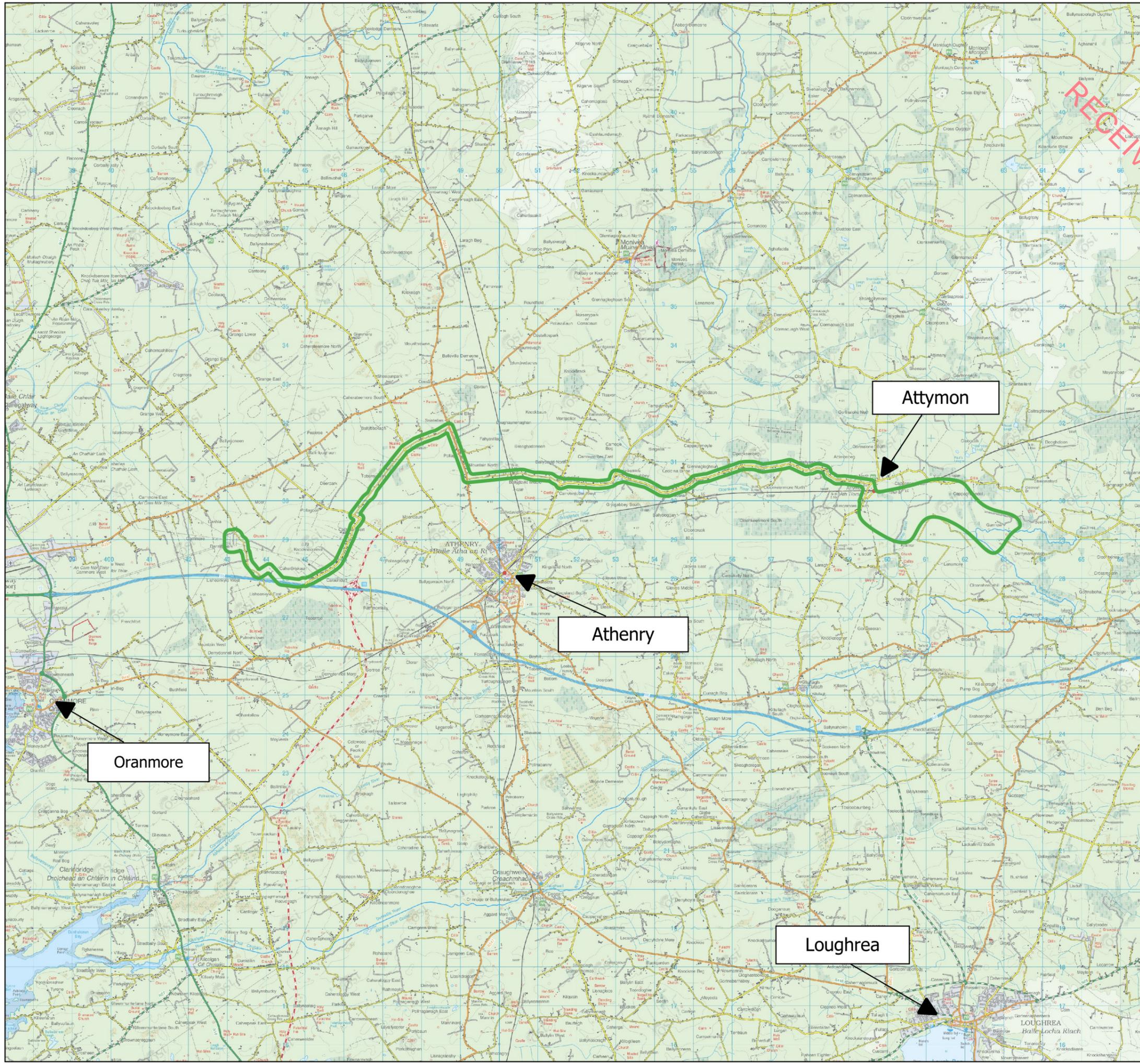
The Proposed Wind Farm is located within an area designated in the Galway County Development Plan 2022-2028 as 'Open for Consideration' for wind energy development; it is noted that a small portion of the Proposed Grid Connection is located within an area 'Generally to be Discouraged', however, this is not relevant in the policy context.

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

	Site Component	Townlands within the Site
Proposed Project	Proposed Wind Farm	Killimor, Cappanaruhaun, Cappaghanool, Attimonmore South, Gannow, Derrynamanagh, Beech Hill*, Cloonsheecahill*, Lenamore*, Lisduff*
	Proposed Grid Connection	Attimonmore South, Attinmonbeg, Attimonmore North, Ballynanulty, Cloonkeenmore North, Cloonkeenbeg, Toorkeel, Glennagloghuan*, Lisdoran, Ballybogan*, Binn, Bingarra, Graigabbey, Graigabbey South*, Carrowntober East, Carrowntober West, Ballydavid North, Ballydavid Middle, Skeagherreen, Mountain North, Park, Fahysvillage, Castle Ellen, Pollagh, Saintellen, Carnaun, Tobernavean, Castleambert, Caranduff, Knocknacreeva, Caherbriskaun, Lisheenkyle East, Moor*, Barrettspark, and Cashla

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



Map Legend

 EIAR Site Boundary

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Attymon

Athenry

Oranmore

Loughrea



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Drawing Title
Site Location Context

Project Title
Gannow Renewable Energy Development

Drawn By
EM

Checked By
EC

Project No.
240323

Drawing No.
Figure 1-1

Scale
1:95,000

Date
2025-02-26



MKO
Planning and Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: www.mkofireland.ie



Map Legend

 EIAR Site Boundary

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Drawing Title
EIAR Site Boundary

Project Title
Gannow Renewable Energy Development

Drawn By
EM

Checked By
EC

Project No.
240323

Drawing No.
Figure 1-2

Scale
1:75,000

Date
2025-02-26



MKO
Planning and Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email:info@mkoireland.ie
Website: www.mkoireland.ie

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 as amended. 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. Most of the provisions of the new regulations came into operation on the 1st of September 2018 with a number of other provisions coming into operation on the 1st of January 2019.

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 Environmental Impact Assessment (EIA) will be undertaken by Galway County Council, 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 environmental impact assessment report (EIAR). The information to be provided by the developer shall include at least:

1. a description of the project comprising information on the site, design, size and other relevant features of the project;
2. a description of the likely significant effects of the project on the environment;
3. 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;
4. 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;
5. a non-technical summary of the information referred to in points (a) to (d); and
6. 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 2011/92/EU as amended by Directive 2014/52/EU.

Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended, identifies classes and scales of development that require Environmental Impact Assessment (EIA). The relevant class of development in this case relates to "installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts", as per Item 3(i) of the Schedule. The Proposed Project exceeds 5 Megawatts in scale and proposes more than 5 turbines and therefore is subject to EIA.

The EIAR provides information on the receiving environment and assesses the likely significant effects of the Proposed Project on it and proposes mitigation measures to avoid or reduce these effects. The

function of the EIAR is to provide information to allow the competent authority to conduct the EIA of the Proposed Project.

All elements of the Proposed Project, i.e. the Proposed Wind Farm and Proposed Grid Connection 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'* (EPA, 2022) (hereafter referred to as 'EPA 2022') in May 2022, 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'*, 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) (hereafter referred to as the Guidelines (DoEHLG, 2006)) have been taken into account during the preparation of this EIAR.

The Guidelines (DoEHLG, 2006) 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) (hereafter referred to as the Draft Guidelines (DoHPLG, 2019)). A consultation process in relation to the Draft Guidelines (DoHPLG, 2019) closed on 19th February 2020. The proposed changes presented in the Draft Guidelines (DoHPLG, 2019) give certain focus on shadow flicker and noise requirements relative to sensitive receptors.

At time of writing, the Draft Guidelines (DoHPLG, 2019) have not yet been adopted, and the relevant guidelines for the purposes of Section 28 of the Planning and Development Act 2000, as amended, remain to be the Guidelines (DoEHLG, 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) Annex of Actions to develop revised wind energy development guidelines for onshore wind in Q1 2025¹, it is possible that the Draft Guidelines (DoHPLG, 2019) may be adopted during the consideration period for the current planning application. Should the Draft Guidelines (DoHPLG, 2019) be adopted in advance of a planning decision being made on this application, the proposed turbines will be capable adhering to any revised noise and shadow flicker standards. While the final updated guidelines have not yet been published it should be noted that Noise

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

and Shadow Flicker are entirely controllable and are discussed further in Chapter 12 Noise and Vibration and Chapter 5 Population Human Health, respectively.

1.3 The Applicant

The Applicant for the Proposed Project, Gannow Ltd., is an associated company of Enerco Energy Ltd., which is an Irish-owned, Cork-based company with extensive experience in the design, construction and operation of wind energy developments throughout Ireland, with projects currently operating or in construction in Counties Cork, Kerry, Limerick, Clare, Galway, Mayo and Donegal.

By Q2 2025, Enerco associated companies had over 925 Megawatts (MW) of wind generating capacity in commercial operation or in construction, with a further c.500MW of projects at various stages in its portfolio to assist in meeting Ireland's renewable energy targets.

1.4 Brief Description of the Proposed Project

The Proposed Project will comprise the construction of 8 No. wind turbines with a blade tip height range of between 178 and 185 metres and all associated works, and an onsite 38kV substation, underground cabling (20kV/33kV & 38kV), and all associated works and apparatus. The full description of the Proposed Project is detailed in Chapter 4 of this EIAR.

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

- i. 8 no. wind turbines with an overall turbine total tip height range of 178m - 185m, a rotor diameter range of 149m - 163m, and turbine hub height range of 101m - 104m, and associated foundations and hardstanding areas;*
- ii. A permanent 38kV substation compound (including a control building (157.6 sq. m) with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, storage containers, wastewater holding tank, site drainage and all ancillary works);*
- iii. Permanent underground electrical (38kV) and communications cabling to the existing Cashla Substation in the townland of Barrettspark (including joint bays, communication and earth sheath link chambers and all ancillary works along the route). This cabling route is primarily located within the public road corridor which includes protected structures (RPS No. 3747, RPS No. 146).*
- iv. Underground electrical (20/33kV) and communications cabling connecting the wind turbines and meteorological mast to the proposed on-site substation;*
- v. 2 no. temporary construction compounds (including site offices and welfare facilities (with a combined floor area of 202.5 sq.m));*
- vi. A meteorological mast with a height of 30 metres, security fencing and associated foundation and hard-standing area;*
- vii. Upgrade of existing site tracks/roads and provision of new site access roads, junctions and hardstand areas, including a new site entrance off the L3115;*
- viii. Peat and Spoil Management Areas;*
- ix. Tree felling and vegetation removal;*
- x. Biodiversity enhancement measures (including peatland habitat enhancement, Marsh Fritillary habitat enhancement and management, establishment of hedgerows and native woodland planting);*
- xi. Site drainage;*
- xii. Operational stage site signage; and*
- xiii. All ancillary works and apparatus.*

The application is seeking a 10-year planning permission. Current and future wind turbine generator technology will ensure that the wind turbine model, chosen for the Proposed Project, will have an

operational lifespan greater than the 35-year operational life that is being sought as part of the planning application.

Modern wind turbine generators currently have a potential generating capacity in the 4 to 7 MW range, with the generating capacity continuing to evolve upwards as technology improvements are achieved by the turbine manufacturers. For the purposes of this EIAR it is assumed that the wind turbine model installed as part of the Proposed Project will have a generating capacity of 6.1MW. Therefore, on this basis, the proposed 8 no. wind turbines would have a combined generating capacity of 48.8MW. The actual turbine procured as part of a competitive tender process may have a generating potential that is marginally lower or greater than the 6.1MW turbine described in the EIAR. Irrespective of the power output of the actual turbine procured, the conclusions of the EIAR will not be materially affected.

As detailed in Section 3.2.5.2 in Chapter 3: Consideration of Reasonable Alternatives, the layout of the Proposed Wind Farm has been led by consideration of constraints and facilitators, thereby avoiding the environmentally sensitive parts of the Site. The roads layout for the Proposed Project makes use of existing onsite access roads and tracks where possible, with approximately 2.4 kilometres (km) of existing roadway/ tracks requiring upgrading and approximately 6.6km of new access road to be constructed.

A new site entrance along the L3115 Local Road, located on the western boundary of the Proposed Wind Farm site, will facilitate general construction access and delivery of abnormal loads to the Site. The new site entrance was subject to autotrack assessment to identify the turning area required, as described in Chapter 15 Material Assets, Section 15.1.10 of the Traffic and Transport Assessment. Appropriate sightlines will be established to the north and south of the entrance for the safe egress of traffic. On completion of the construction phase, this Site entrance will be reduced in size and gated for security and will be used for maintenance and monitoring activities during the operational phase, as well as the delivery of an abnormal load on an as needed basis. Please see Section 4.5.1 for further detail on site entrances.

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)² reaffirming the renewable electricity target of 80% by 2030, without compromising security of energy supply. The Proposed Project is expected to be operational before 2030 and would therefore contribute to this 2030 target.

In July 2025 the EPA published 'Ireland's Provisional Greenhouse Gas Emissions 1990-2024'³ 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

² Department of Environment, Climate and Communications (2025) Climate Action Plan 2025

³ 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>>

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.

Despite the progress in 2024 noted above, Ireland continues to face highly complex climate challenges, as detailed in a more recent EPA publication from July 2024 titled ‘*Ireland’s State of the Environment Report 2024*’⁴. This report states that “*Ireland has set a national objective to transition by 2050 to a climate-resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy. Achieving this multifaceted objective will be the most complex and interconnected societal challenge for the next 25 years, and each step towards its achievement will present opportunities and challenges. Efficiencies will not get us there. Incrementalism will not get us there. Collectively we must shift our society to a sustainable trajectory.*” The report further notes that the overall current assessment for climate in Ireland is ‘poor’ and “*largely not on track to meet policy objectives and targets*” and urges the full implementation of actions set out in the CAP25, in addition to various other actions, for Ireland to have any chance of meeting its 2030 and 2050 climate targets. According to a SEAI report⁵ published in November 2024, there are significant projected gaps to all legally binding targets in Ireland, including national carbon budgets and sectoral emissions ceilings, and EU obligations on renewable energy, energy efficiency and greenhouse gas emissions. The report highlights the risks faced over the delayed achievement of the majority of CAP targets, including renewable electricity, and that “*actions to address these risks are critically important*”.

The critical need for renewable energy is underscored by European legislation. RED III⁶ 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 Carrowmagowan Wind Farm judgement ([2024] IEHC 549), the Toole II judgment ([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.

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 2015-2030;*
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;*

⁴ <https://www.epa.ie/publications/monitoring-assessment/assessment/state-of-the-environment/EPA-SOE-Report-2024-BOOK-LOWRES-FINALfor-WEB.pdf>

⁵ <https://www.seai.ie/sites/default/files/publications/National-Energy-Projections-Report-2024.pdf>

⁶ 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.

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 March 2025, the World Meteorological Organisation (WMO) published the State of the Global Climate 2024 Report.⁷ The report provides a summary on the state of the climate indicators in 2024 with sections on key climate indicators, extreme events and impacts. The key messages in the report include:

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

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

⁷ World Meteorological Organisation (2025) State of the Global Climate 2024 <<https://library.wmo.int/records/item/69455-state-of-the-global-climate-2024>>

⁸ IEA (2024), Renewables 2023, IEA, Paris <<https://www.iea.org/reports/renewables-2023>>

The joint publication of WMO and International Renewable Energy Agency on Climate-driven Global Renewable Energy Potential Resources and Energy Demand in 2023⁹ 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 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 (COP29) took place in Azerbaijan in November 2024 and focused on accelerating global efforts to address climate change, in particular global efforts related to climate finance. The New Collective Quantified Goal on Climate Finance (NCQG) was agreed in the final days of COP29 with developed nations agreeing to triple finance to developing countries, with commitments increasing from USD 100 billion annually to USD 300 billion annually by 2035. Significant progress was made in the discussions surrounding carbon markets, with nearly 200 nations agreeing on critical rules under Article 6 of the Paris Agreement. The adoption of these rules is seen as a crucial step towards operationalising a robust and credible carbon market.

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 2050’¹⁰ 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*

⁹ International Renewable Energy Agency + WMO (2024) 2023 Year in Review: Climate-driven Global Renewable Energy Potential Resources and Energy Demand <<https://wmo.int/publication-series/2023-year-review-climate-driven-global-renewable-energy-potential-resources-and-energy-demand>>

¹⁰ Rialtas 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/>

- e) *the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.'*

In February 2022, the International Panel on Climate Change (IPCC) released the report 'Working Group II-Climate Change 2022: Impacts, Adaptation and Vulnerability'¹¹ 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 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', 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 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 2023'¹², 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 approximately 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 EPA¹³ 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 (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.¹⁴ If policies and measures in the higher ambition (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.

¹¹ *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

¹² *IPCC Sixth Assessment Synthesis Report, Intergovernmental Panel on Climate Change AR6 Report: Climate Change 2023*

¹³ *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>>

¹⁴ *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>

The ‘*National Energy Projections 2024*¹⁵, published annually by the Sustainable Energy Authority of Ireland (SEAI), state that in 2022, 87% of all energy used in Ireland was from fossil fuels, 12% from renewable sources and the remainder from others such as waste and electricity imports. By 2030, fossil fuels could still provide most of Ireland’s energy, ranging from 70% in the WEM scenario to 62% in the most ambitious WAM scenario. The deployment of renewables needs to outpace the growth of energy demand for the absolute reductions in greenhouse gas emissions that are required to be met. The SEAI National Energy Projections state that there was a notable reduction in greenhouse gas emissions from the electricity sector in 2023. This reduction in fossil fuel use was primarily driven by an increase in electricity imports with 2023 seeing a record level of electricity net imports. This trend has increased further in 2024, where the level of net imports in the first half of 2024 has already exceeded all of 2023. Consequently, the sectoral emissions ceiling for electricity for the first carbon budget period will be much closer to being achieved than previously projected. However, it is still projected that by the end of the second budget period, the total exceedance in the electricity sector is projected to be 6.8MtCO₂eq, or 11%, and 5.2MtCO₂eq, or 9%, in the WEM and WAM scenarios, respectively.

CAP25¹⁶ 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 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.¹⁷ 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 Ireland.¹⁸ 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.

¹⁵ SEAI National Energy Projections 2024 Report. <<https://www.seai.ie/sites/default/files/publications/National-Energy-Projections-Report-2024.pdf>>

¹⁶ 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/>>

¹⁷ SEAI (December 2024) Energy in Ireland 2024 Report <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

¹⁸ EirGrid, <https://www.eirgrid.ie/grid/system-and-renewable-data-reports>

It is estimated that the Proposed Project, with an estimated installed capacity of 48.8MW (based on a 6.1MW turbine model) will result in the net displacement of approximately 30,568 tonnes of carbon dioxide equivalent (CO_{2e}) 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 July 2024 the SEAI published 'Ireland's Energy Supply and Security of Supply in 2023'¹⁹, which identifies that in 2023, Ireland's national primary energy requirement remained heavily fossil dependent, with 82.8% of energy requirement satisfied by fossil fuels. Ireland's use of fossil fuels reached its lowest level in 2023 for over 20 years, outside the exceptional year of 2020, when COVID-related travel restrictions significantly reduced demand for petrol, diesel, and jet kerosene. Conversely, 2023 saw record high use of renewable energy in Ireland.²⁰ The Department of the Environment, Climate and Communications (DECC) report 'Energy Security in Ireland to 2030'²¹ 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 2023.²²

The 'Energy Security in Ireland to 2030' report provides a roadmap to energy security in Ireland, on the basis of current energy policies and project and to implement the measures proposed as part of the energy security package. EirGrid in their 'All Island Generation Capacity Statement 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 2024 the SEAI published their 'Energy in Ireland 2024 Report'²³, stating that energy related emissions in 2023 were at their lowest level in over 30 years energy related emissions in 2023 were 31.4MtCO_{2e}, down 8.3% on 2022 levels and lower even than emissions observed during the height of COVID in 2020. In 2023, electricity accounted for almost a quarter (24.1%) of energy-related emissions, with transport accounting for a further 37.6%. Heat emissions accounted for the remaining 38.3%. Overall, energy-related emissions in 2023 were down by 2.8 MtCO_{2e} on the previous year. This net reduction came from a 2.1 MtCO_{2e} drop in electricity emissions, a 0.7 MtCO_{2e} drop in heat emissions, and a 0.03 MtCO_{2e} increase in transport emissions. In 2023, Ireland generated 11.7 TWh of renewable energy from wind generation, exceeding the previous record of 11.6 TWh set in 2020 by 0.1 TWh. Currently, the SEAI website has a published value of 229.9gCO₂/kWh for electricity generation and 254.8gCO₂/kWh for electricity consumption.²⁴ These are the lowest carbon intensity values ever reached in Ireland. When all data from 2024 is recorded, an updated carbon intensity factor for the Irish national grid will be published.

¹⁹ 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>>

²⁰ Ibid.

²¹ 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>>

²² 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>>

²³ Sustainable Energy Authority Ireland (2024) Energy in Ireland – 2024 Report <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

²⁴ <https://www.seai.ie/data-and-insights/seai-statistics/conversion-factors/>

Electricity demand in Ireland rose by 1.24 TWh in 2023. This net-increase was strongly led by a 1.15 TWh increase in demand from the commercial services sector, which includes data centres. The Energy in Ireland 2024 Report states: *‘Ireland must rapidly transform its economy and society to one based on sustainable energy technologies, like wind and solar farms, bioenergy, district heating schemes, electric vehicles, and heat-pumps.’*

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”*²⁵.

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 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 2015²⁶ (‘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 energy²⁷, 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 Plan²⁸ 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.

²⁵ Dr Eimear Cotter, Head of Low Carbon Technologies, SEAI - "Energy Security in Ireland 2015"

²⁶ Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Department of Communications, Energy & Natural Resources, 2015)

²⁷ 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

²⁸ https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131

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

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 and has effect 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.

1.5.3 Competitiveness of Wind Energy

While Ireland has a range of renewable resources, as the White Paper²⁹ 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.

²⁹ Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Department of Communications, Energy & Natural Resources, 2015)

1.5.4 European Renewable Energy Policy and Targets

1.5.4.1 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)³⁰ 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),³¹ 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 (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. As per the National Energy and Climate Plan (NECP) 2021-2030, Ireland's overall RES target is 34.1% in 2030.

Under RED, the RES-E target was for 40% of gross electricity consumption to come from renewable sources in 2020. The actual RES-E achieved in 2020 by Ireland was 39.1%, falling just short of the national target. Under REDII, Ireland's National Energy and Climate Plan 2021-2030 included a planned RES-E of 70% in 2030, which has been replaced by the 80% by 2030 RES-E target as detailed in the more recent Climate Action Plan (2024), which will ensure that renewable electricity continues to form the backbone of Irish renewable energy use for the coming decade and beyond.

Given the need to ratchet up the EU's clean energy transition, RED was revised in 2023, and the amending Directive EU/2023/2413 (REDIII)³² entered into force on 20 November 2023 and transposed into Irish law in August 2025. REDIII amended the EU-wide overall 2030 RES target from 32% to at least 42.5%, with an ambition to reach 45% by 2030³³. 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 Union's target and at a pace that is consistent with the indicative trajectories in Climate Action Regulation 2018/1999.

³⁰ 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>

³¹ Directive (EU) 2018/2001 on the promotion of the use of energy from renewable resources (recast). Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L2001>

³² Directive (EU) 2023/2413 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources and repealing Council Directive (EU) 2015/652. Available from: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302413

³³ European Commission 2023 Renewable Energy Directive < https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en >

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..

1.5.5

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

In April 2025, the Government published the most recent Climate Action Plan (CAP25), reaffirming the renewable electricity target of 80% by 2030 for Ireland. This is in line with targets previously announced in the Climate Action Plan 2021, 2023 and 2024.

CAP25 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.³⁴ Please note, Ireland's installed capacity for wind generation in January 2025 was 4.9GW.³⁵ 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%. 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 2.4.

1.5.6

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 Framework³⁶ 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.³⁷

³⁴ SEAI (December 2024) Energy in Ireland 2024 Report <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

³⁵ EirGrid, <https://www.eirgrid.ie/grid/system-and-renewable-data-reports>

³⁶ 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/>>

³⁷ Ibid.

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'³⁸ 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 2016³⁹ the SEAI estimated the historic build rate for wind energy deployment as 180 MW per year since 2005. If this average build rate over the remaining period between 2018 and 2020 is assumed, then approximately 3.85 GW of wind would be built up to 2020. The SEAI has provided a provisional estimate of wind capacity in Ireland in 2024 to be 4.85GW.⁴⁰

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 Bitpower⁴¹ 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, 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, 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

³⁸ <https://igees.gov.ie/wp-content/uploads/2013/10/Future-Expenditure-Risks-associated-with-Climate-Change-Climate-Finance1.pdf>

³⁹ <https://www.seai.ie/publications/Ireland's-Energy-Targets-Progress-Ambition-and-Impacts.pdf>

⁴⁰ Sustainable Energy Authority of Ireland (2024) Energy in Ireland - 2023 Report

⁴¹ https://bitpower.ie/images/Reports/2021_H1_Report.pdf

*'[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'*⁴². 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 2.3.1.

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.

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 SEAI⁴³ 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'*.

⁴² IFAC/CCAC (2025) *A Colossal Missed Opportunity* <<https://www.fiscalcouncil.ie/a-colossal-missed-opportunity/>>

⁴³ http://www.seai.ie/News/Events/Press_Releases/2014/Biomass-is-a-big-part-of-the-solution-but-not-the-whole-solution.html

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 emissions⁴⁴. 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 2025⁴⁵ 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). 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:

- 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

⁴⁴ Sustainability Criteria Options and Impacts for Irish Bioenergy Resources (SEAI 2019)

⁴⁵ <https://www.rte.ie/news/2025/06/20/1519429-moneypoint-power-station/>

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. As detailed in Section 1.5.2.2 above, EU Regulation 2022/2577 as amended by Regulation 2024/223⁴⁶ identifies the priority that should be afforded renewable energy development whenever the balancing of legal interests is required in individual cases and where those projects introduce additional compensation requirements for species protection. While Article 3(1) of the Regulation is mirrored in Article 16(f) of REDIII, the wider obligation placed on competent authorities engaged in the consenting of renewable energy projects under Article 3(2) of Regulation 2022/2577 is not and as explained in Recital 14 of Regulation 2024/223, is an appropriate additional temporary measure given the particular difficulties which the European Union is currently facing in the supply of energy. In considering applications for the development of such projects planning authorities are obliged to give effect to this legislative imperative.

1.5.7

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 approximately 30,568 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 2019.⁴⁷ The Environmental Protection Agency (EPA) report 'Air Quality in Ireland 2023'⁴⁸ 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'⁴⁹ highlights the negative effects of air pollution on human health. The report assessed that poor air quality in Europe accounted for premature deaths of approximately 238,000 people in the 27 EU Member States in 2021. The estimated impacts on the population in Europe of exposure to NO₂ and 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 nitrogen oxides

⁴⁶ European Union 2024 Council Regulation (EU) 2024/223 of 22 December 2023 amending Regulation (EU) 2022/2577 laying down a framework to accelerate the deployment of renewable energy <<https://eur-lex.europa.eu/eli/reg/2024/223/oj/eng>>

⁴⁷ [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)

⁴⁸ Air Quality in Ireland Report 2023 <https://www.epa.ie/publications/monitoring-assessment/air/Air_Quality_Report_23_v14.pdf>

⁴⁹ Air Quality in Europe 2022 <<https://www.eea.europa.eu/publications/air-quality-in-europe-2022>>

(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 Status⁵⁰ 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'⁵¹ 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.

1.5.8 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.⁵² 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 2024 Report'⁵³ stated that Ireland's national energy-related emissions in 2023 were at their lowest level in over 30 years with 14.1% of Ireland primary energy being sourced from renewables, the highest value to date. The SEAI estimates electricity emissions to be 7.6MtCO_{2e} in 2023, down 22% from 2022. Current predictions for 2024 electricity emissions are estimated to be 6.9 MtCO_{2e}. The 5-year 2021-2025 sectoral emission ceiling for electricity is 40MtCO_{2e}; therefore, if the SEAI estimate for 2024 electricity emissions are accurate, there will only be 5.9MtCO_{2e} of emissions available for the electricity sector in 2025.

⁵⁰ EEA (2024) Europe's Air Quality Status 2023 <<https://www.eea.europa.eu/publications/europes-air-quality-status-2023>>

⁵¹ Ireland's Environment – An Assessment (2020) <https://www.epa.ie/publications/monitoring-assessment/assessment/state-of-the-environment/EPA_Irelands_Environment_2020.pdf>

⁵² SEAI (2024) Energy in Ireland – 2024 <<https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf>>

⁵³ Ibid.

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

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.⁵⁴

The Proposed Project will be capable of providing electrical energy to approximately 35,624 Irish households with electricity per year, based on the average Irish household using 4.2 MWh of electricity⁵⁵, as presented in the calculations in Section 4.3.1.1.7 of this EIAR.

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

1.5.8.1 Employment Potential

The 2014 report ‘*The Value of Wind Energy to Ireland*’, published by Póry, stated that growth of the wind sector in Ireland could support 23,850 jobs (construction and operational phases) by 2030. 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 2030.

A 2021 MaREI report⁵⁶ 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 2-3 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.

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 approximately €300,000/year for

⁵⁴ WEI (2025) <https://windenergyireland.com/latest-news/7836-wind-energy-saved-ireland-over-1-2-billion-on-gas-in-2024>

⁵⁵ March 2017 CER (CRU) Review of Typical Consumption Figures Decision Paper https://www.cru.ie/document_group/review-of-typical-consumption-figures-decision-paper/

⁵⁶ 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>

the first 15 years of operation, to be used by the local community over the lifetime of the Proposed Project (based on the current RESS T&C's). The 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 Benefit Fund 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.

1.5.8.2 Commercial Rates

Commercial rate payments will be provided to Galway 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 to be carried out by Galway County Council, from the EIAR accompanying the planning application. The EIA is the assessment carried out by the competent authority, i.e., Galway County Council, 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 EIA Directive, the direct and indirect significant effects of the 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 quality, and climate*
- d) *material assets, cultural heritage and the landscape*
- e) *the interaction between the factors referred to in points (a) to (d)*

This 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 of the revised EIA Directive 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
- > Considerations of Reasonable Alternatives
- > Description of the Proposed Project
- > Population and Human Health
- > Biodiversity (excluding Birds)
- > Birds
- > Land, Soils and Geology
- > Water
- > Air Quality
- > Climate
- > Noise and Vibration
- > Landscape and Visual
- > Archaeology, Architectural and Cultural Heritage
- > Material Assets (including Traffic and Transport, Telecommunications and Aviation)
- > Major Accidents and Natural Disasters
- > Interactions of the Foregoing
- > Schedule of Mitigation Measures

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

1.7.2

Description of Likely Significant Effects and Impacts

As stated in EPA 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 EPA 2022.

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 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

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Impact Characteristic	Term	Description
		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
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

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Impact Characteristic	Term	Description
	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

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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 8 No. wind turbines, with associated foundations and hardstand areas, with the following parameters:

- Total tip height range of 178m – 185m,
- Rotor diameter range of 149m – 163m,
- Hub height range of 101m to 104m

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. Please see the proposed scenarios outlined below:

- Scenario 1: Nordex N163 at hub height (HH) of 103.5 m and tip height (TH) of 185m;
- Scenario 2: Vestas V162 at a HH of 104m and TH of 185m;
- Scenario 3: General Electric GE158 at HH of 101 m and TH of 180m;
- Scenario 4: Nordex N149 at HH of 103.5 m and TH of 178m.

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 Proposed Project, 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.

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

EIAR Chapter	EIAR Section	Assessment of Range of Turbine Parameters	Assessment Parameters Detail
			Relevant Scenario
Chapter 5: Population & Human Health	Section 5.9 Shadow Flicker Assessment	Four scenarios have been assessed for the Shadow Flicker Assessment, as part of the EIAR. Scenario 1 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, Scenario 3, and Scenario 4, all of which are assessed within the EIAR.	Scenario 1 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m
Chapter 6: Biodiversity: Flora & Fauna	Section 6.5.3.2.1 Bat Mitigation: Turbine Felling Buffer (Section 6.1.3 of Appendix 6-2: Bat Report)	<p>It should also be noted that the assessment of the development footprint of the Proposed Project, 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, in the absence of mitigation measures, will 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.</p> <p>Scenario 1 is the scenario which gives rise to the largest bat buffer radius for bat mitigation and is assessed within the EIAR. The bat buffer calculations were performed on all potential scenarios. The scenario which yielded the largest bat buffer was Scenario 1. Scenario 1 yielded a bat buffer of 97.5 metres. Scenario 2, Scenario 3, and Scenario 4 would result in a reduction in the buffer requirement. The precautionary scenario has therefore been considered in the bat impact assessment.</p>	Scenario 1 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m
Chapter 7: Biodiversity: Birds	Section 7.2.5.4 Collision Risk Modelling (CRM)	Scenario 1 is the scenario which gives rise to the lowest turbine swept path for collision risk modelling and is assessed within the EIAR. Four scenarios have been analysed via the collision risk model, representing the full scale of the turbine range, the outputs of which are detailed in Appendix 7-6: Collision Risk Assessment and assessed within the EIAR. Scenario 2, Scenario 3, and Scenario 4 would result in a lower overall collision risk assessment and	Scenario 1 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m

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		therefore the precautionary scenario has therefore been considered in the collision risk assessment.	
<p>Chapter 8: Land, Soils & Geology</p> <p>Chapter 9: Water</p> <p>Chapter 10: Air</p> <p>Chapter 11: Climate</p>		It should also be noted that the assessment of the development footprint of the Proposed Project, 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.	<p>Scenario 1 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m</p>
<p>Chapter 12: Noise & Vibration</p>	<p>Section 12.5.3 Operational Noise Modelling</p>	<p>The noise assessment considers four turbine models which fall within the range of turbine dimensions proposed as part of the application. Predicted noise levels for the four candidate turbines and associated scenarios have been predicted for each NSL and windspeed. The highest predicted levels among the scenarios are used in the assessment against wind turbine noise criteria.</p> <p>Prediction modelling results are included within Appendix 12-2.</p>	<p>The combination of the highest predicted noise levels arising from Scenario 1 to Scenario 4.</p>
<p>Chapter 13: Landscape & Visual</p>	<p>Section 13.1.5 Landscape and Visual Assessment</p>	<p>Four scenarios are assessed for the Landscape and Visual Assessment, as part of the EIAR, utilising Zone of Theoretical Visibility analysis which identifies areas where the proposed turbines are theoretically visible within a 20km radius of the turbines. Scenario 1 is the turbine presented in all photomontages in the Photomontage Booklet. Scenario 2, Scenario 3, and Scenario 4 are also presented for two selected</p> <p>Please note, with respect to the scenario outlined above, due to the similarities between the turbine dimensions for Scenario 1 and the Scenario 2, it is not warranted to conduct a specific assessment on Scenario 2 within this EIAR when assessing the identified turbine parameter range.</p>	<p>Scenario 1 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m</p>

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		Please refer to Photmontage Booklet VP12 and VP13 for a comparison of all scenarios.	
Chapter 14: Archaeology, Architectural and Cultural Heritage	Section 14.4.3 Operational Phase (indirect)	The Zone of Theoretical Visibility as presented in Chapter 13: Landscape & Visual is produced using Scenario 1, as well as photomontage / photowires from specific cultural heritage assets or other general locations which have been produced using all four 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 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m
Chapter 15: Material Assets	Section 15.1 Traffic Assessment	Scenario 1 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 Tip Height: 185m Rotor Diameter: 163m Hub Height: 103.5m

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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 Keville Michael Watson Sean Creedon Ellen Costello Catherine Johnson Brandon Taylor Edel Mulholland Colm Ryan Meabhann Crowe Sean McCarthy Alan Clancy Ciara Griffin Pat Roberts John Hynes Aoife Joyce Rachel Walsh Pdraig Cregg Patrick Manley Kathryn Sheridan Ryan Connors Jack Workman Rachel Smith Brian O'Carroll Killian Devereux Gabriel Oliveira	Project Managers, Scoping and Consultation, Preparation of Natura Impact Statement, EIAR 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. Birds 10. Air Quality 11. Climate 13. Landscape & Visual 15. Material Assets (non-Traffic) 16. Major Accidents and Natural Disasters 17. Interaction of the Foregoing 18. Schedule of Mitigation and Monitoring
Hydro Environmental Services 22 Lower Main Street Dungarvan Co. Waterford	Michael Gill Conor McGettigan Nitesh Dalal	Drainage Design, Preparation of EIAR Sections: 8. Land, Soils & Geology 9. Hydrology and Hydrogeology
Fluvio R&D Limited Fifth Floor, 5 Lapps Quay Cork, Ireland	Dr. Igor Kerin Dr. Eamon McKeogh	Preparation of the Flood Risk Assessment

Consultants	Principal Staff Involved in Project	EIAR Input
Fehily Timoney & Company The Grainstore Singletons Lane, Bagnelstown, Co. Carlow.	Ian Higgins Emily Archer	Preparation of Peat Stability Assessment and Peat and Spoil Management Plan
AWN The Tecpro Building, Clonshaugh Business & Technology Park, Dublin 17	Dermot Blunnie Mike Simms	Baseline Noise Survey, Preparation of EIAR Chapter 12. Noise and Vibration
IAC Archaeology Unit G1, Network Enterprise Park, Kilcoole, Co. Wicklow A63 KT32	Faith Bailey Jonny Small	Preparation of EIAR Chapter 14. Archaeology, Architectural and Cultural Heritage
Alan Lipscombe Traffic and Transport Consultants Claran, Headford, Co. Galway	Alan Lipscombe	Swept Path Analysis, Preparation of EIAR Chapter 15. Material Assets - Traffic and Transport

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*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).

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 5 years of 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.

Catherine Johnson BSc. LLM

Catherine is an Environmental Scientist and Climate Practitioner with MKO with over 3 years of private consultancy experience and expertise in climate and sustainability matters. Catherine holds a BSc in Earth and Ocean Science and a LLM in Global Environment and Climate Change Law. Prior to joining MKO in 2022, Catherine worked as an Environmental Social Governance (ESG) analyst for Acasta in Edinburgh. Catherine has expertise regarding international climate law and policy, earth processes, ocean science, and sustainability/ESG. Catherine has been involved in a myriad of environmental service offerings at MKO including EIA Screenings and Reports, climate and sustainability related work and renewable energy infrastructure projects

Brandon Taylor

Brandon Taylor is an Environmental Scientist with over 2 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 a Graduate Environmental Scientist with MKO. Edel holds BA (Hons) in Environmental Science from the University of Galway. Prior to taking up her position with MKO, Edel worked as an Environmental Chemistry Analyst with Complete Laboratory Solutions, Co. Galway, where she assisted with water quality analysis. Edel's key strengths and areas of expertise are in environmental policy, drafting EIAR chapters and QGIS mapping.

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.

Meabhann Crowe

Meabhann Crowe is a Project Director within the Planning Renewables team in MKO and has over 15 years private sector experience. She is a fully chartered member of the Royal Town Planning Institute (MRTPI). Meabhann holds a BA (Hons) in Geography, Sociological and Political Science and a Masters in Urban and Regional Planning. Prior to taking up her position with McCarthy Keville O'Sullivan in October 2018, Meabhann was employed as an Associate Director with Colliers International in their Edinburgh office, prior to which she was employed for several years with Halliday Fraser Munro. In her time in the industry Meabhann has been active on a number of instructions across a broad spectrum of mixed-use, residential, commercial, renewable energy and retail projects.

Meabhann brings particular expertise in initial development feasibility appraisals and development strategies. Her experience in managing large multi-disciplinary teams in the preparation of local and major planning applications across residential, mixed-use and retail developments means she has a wealth of knowledge to draw on in the early stages of development. She has particular experience in preparing and managing project strategies which include both responding to emerging planning policy whilst also preparing and progressing complex planning applications and appeals.

Sean McCarthy (Hons)

Sean McCarthy is a Project Director in the Planning Team at MKO with over 10 years of experience in both private practice and local authorities. Sean holds a BSc. (Hons) in Property Studies from ATU and a Masters in Regional & Urban Planning for Heriot Watt University in Edinburgh. Prior to taking up his position with McCarthy Keville O'Sullivan in September 2015, Sean worked as a Planning Officer with the Western Isles Council in Scotland in the UK and prior to that worked as a Graduate Planner with Tipperary County Council. Sean is a chartered member of the Royal Town Planning Institute with extensive experience in residential, commercial, industrial, quarries and healthcare development projects. Sean has been involved in complex and large-scale development projects from inception through to planning permission both as a project manager and working as part of wider design teams. Sean has extensive experience in working on Strategic Housing Development Projects/Large Scale Residential Development Projects and EIAR projects. Within MKO, Sean plays a large role in the management and confidence building of junior members of staff and works as part of a large multi-disciplinary team to produce planning applications.

Alan Clancy BA (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. 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. Pat's 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 of 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.

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.

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.

Padraig Cregg M.Sc., B.Sc.

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

Patrick Manley

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

Kathryn Sheridan

Kathryn Sheridan is a project ornithologist at MKO. She completed her primary degree in Zoology at Trinity College Dublin in 2016 and her master's degree in Wildlife Conservation and Management in University College Dublin in 2017. Kathryn has over 3 years of experience in ecological consultancy with MKO and has worked on wind farm projects and residential developments. Prior to joining MKO in November 2020, Kathryn gained experience through her involvement in several bird conservation projects, including breeding curlew and breeding swifts, as well as research into breeding hen harrier and breeding curlew, providing her with extensive experience in a wide variety of bird survey methods, data management and reporting.

Ryan Connors

Ryan is a Bat Ecologist with MKO having joined the company in March 2023. Ryan holds a BSc (Hons) in Zoology at National University of Ireland, Galway and a MSc (Hons) in Conservation Behaviour at Atlantic Technological University. He has a range of experience from bat roost identification, acoustic sampling, sound analysis, mammal and habitat surveying to GIS, Ecological Impact Assessments (EIIAs) and mapping techniques. Since joining MKO, Ryan has been involved in roost assessments, deploying static bat detectors and weather stations nationwide, dawn and dusk bat detection surveys, sonogram analysis, mapping, impact assessment, mitigation and report writing. He attended BATS Research & Training courses on surveying trees for bats. Within MKO, he works as part of a multidisciplinary team to help in the production of ecological reports and assessments. Ryan currently holds a Bat Roost Disturbance licence and is a member of Bat Conservation Ireland as well as a qualifying member with CIEEM.

Jack Workman MSc

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 Smith, MSc., is a Project Environmental Scientist and LVIA Specialist who has been working with MKO since October 2023. Rachel is an Earth & Environmental Science consultant with more than 10 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-wind developments, as well as conducting research in Irish landscape policy. Rachel holds an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice) and a BSc. in Geology.

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 Brian's 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

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.

Gabriel Oliveira

Gabriela Oliveira is a CAD Technician with MKO with over 8 years of experience specializing in the design of residential and commercial spaces, as well as expertise in sustainable and energy-efficient drafting. Gabriela holds a Bachelor of Architecture (B.Arch. Hons) degree in Architecture and Urbanism. Before joining McCarthy Keville O'Sullivan in July 2023, Gabriela held significant roles in the industry, including Architect and CAD Technician positions. She contributed her skills and

knowledge at Fergal Bradley & Co. Building Surveyors in Ireland for 4 years and at DAMOUS Ltd. Consulting Engineers in Brazil for 3 years. Gabriela possesses specialized proficiency in architectural design, technical drafting utilizing software such as AutoCAD, SketchUp, and Revit, as well as expertise in measurement surveys and the preparation of Planning Application drawings and documents. Gabriela excels in various areas, with a particular focus on design, drafting, and leading measurement surveys for planning application packages. Since joining MKO, Gabriela has been actively involved in producing drawings for planning applications across a diverse range of projects, including Wind Farms, Solar Farms, residential developments, and commercial buildings.

Within MKO, Gabriela plays a role in the CAD team, dedicated to delivering high-quality technical drawings tailored for planning applications.

1.8.2.2 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.

Conor McGettigan

Conor McGettigan (BSc, MSc) is an Environmental Scientist with 4 years' experience in the environmental sector in Ireland. Conor holds an M.Sc. in Applied Environmental Science (2020) and a B.Sc. in Geology (2016) from University College Dublin. Conor routinely prepares the land, soils and geology chapters of environmental impact assessment reports for renewable energy developments, bedrock quarries, industrial and residential developments. Conor has worked on the EIARs for over 20 no. wind farms projects across the country.

Nitesh Dalal

Nitesh Dalal (B.Tech, PG Dip., MSc) is an Environmental Scientist with over 7 years' experience in environmental consultancy and environmental management in India. Nitesh holds an M.Sc. in Environmental Science (2024) from University College Dublin. Nitesh also holds a PG Diploma in Health, Safety and Environment from Annamalai University, India (2021) and a B.Tech. in Environmental Engineering (2016) from Guru Gobind Singh Indraprastha University, India (2016). Since joining HES Nitesh has assisted in the preparation of the land, soils and geology chapter of environmental impact assessments for a wide range of development types including wind farm developments.

1.8.2.3 Fluvio R&D Limited

Dr Igor Kerin CEng MIEI

Dr. Igor Kerin has 15+ years experience as civil engineer. He specialised in river engineering, hydrology and hydraulic modeller, bridge scour inspections, topographical/bathymetric survey, FRA, Section 50 applications, scour protection measures and flood forecasting. His first professional experience starts in 2009 with scour inspections and hydraulic assessment of 125 Iarnród Éireann

railway bridges. In 2012 Dr. Kerin was expert engineer and hydraulic modeller for Iarnród Éireann on the reinstatement of Lansdowne Road railway bridge on the river Dodder which has been undermined by scour. In 2013 as an Expert Associate he conducts FRA including 2D hydraulic modelling for three Hydro Power Plants on the Drava river in Croatia -HPP Varaždin, HPP Čakovec and HPP Dubrava (Client: Croatian Waters). Same year he is one of experts for Masterplan for Sisak New Port on river Sava. In 2014 he is lead engineer on design and defining of operational rules for Dam at the River Bednja (Client: Croatian Waters). In 2016 he is lead design engineer for Nancy's Falls HPP hydro project Hydraulic Dam design. In 2017 he is involved as an expert on River Dargle - Bray Bridge Scour Protection Design (Client: Jons Civil Engineering); River Ilen – Skibbereen Causeway Hydraulic Assessment - development of 1D HEC-RAS model (Client: Jons Civil Engineering); Conceptual design of storage for Coillte-Bord na Mona windfarm in Sliabh Bawn - Development of Wind Farm Hydrologic HEC-HMS model with designed reservoirs (Client: Coillte). In 2018 he does FRA for Belgooly - Mill Site Flood Study (private client). Since 2019 Dr. Kerin is a director of KU217 Ltd. and delivers his first operational Flood Early Warning System for Skibbereen in on the river Caol (Client: Fluvio R&D Ltd | Johns Civil Engineering Ltd.). In a period from 2019-2021 he is an expert engineer in conceptual hydraulic design including the river scour protection design under Section 50 guidelines for total 24 bridges and culverts for *Carrigdangan Wind Farm - Shehy More (Co. Cork)*, *Meenbog Wind Farm – Meenbog (Co. Donegal)*, *Cleanrath Wind Farm – Cleanrath (Co. Cork)*, *Ardderoo Wind Farm – Ardderoo (Co. Galway)*. In 2020 he is a lead engineer on Hydrological-Hydraulic assessment of river Sava and Danube for project Danube Floodplain (Client: Croatian Waters). In 2020 he is design engineer of a 2x50m span bridge "S28" and 12 culverts for project N22 Baile Bhuirne – Macroom Bypass road, design included scour protection (Client: Fluvio R&D Ltd. | JB Barry & Partners Ltd.). In 2021 he delivers for 1D-2D hydraulic HEC-RAS model for Ballincollig, Ireland and for Ilminster, United Kingdom (Client: Malachy Walsh and Partners). In 2022 he is lead design engineer of Dam for fish-farm reservoir "Grudnjak" in Croatia. He is also an expert for FRA of construction of Borrisbeg WF and Glenbriend WF, Ireland (Client: Enerco Ltd., subcontracted for Fluvio R&D Ltd.). The same year he is lead engineer for FRA of Carrigtwohill, Cork (Client: Fehily Timoney and Company Ltd.). In 2023 he is a lead designer for Coomloughra dam with a right embankment rehabilitation project and overflow design, (Client: Trewell Ltd.). In 2024 he is an expert for design of mitigation measures to enable rowing events during low and medium flows in Lough Rynn, Ireland (Client: Jennings O'Donovan and Partners Ltd.). He is also lead designer of forecasting procedures for Pakra Dam, including the development of 1800km² hydrologic HEC-HMS model of rivers Ilova in Pakra, Croatia, (Client: Croatian Waters). Since then he continues to work on many FRA studies, lake assessments, reservoir and dam design

Dr. Eamon McKeogh BSc, PhD, MBA, C.Eng. MIEI, MIEEE.

Dr. McKeogh is a hydrogeologist whose first major hydroelectric project was in 1985 when he designed a high head (320m) 1MW hydroelectric scheme in Co. Kerry Ireland. He was chief engineer on the complete hydrological/hydraulic and mechanical design, planning permission acquisition and overall project construction management. In 1989 he was chief design engineer for a 3.5MW low head (21m) hydroelectric station in Co. Sligo Ireland involving three cascaded power houses with Kaplan turbine and by-pass energy dissipation channels and connecting canals. In 1991 he was chief design engineer for a medium head 900kW hydroelectric station with responsibilities for complete civil and mechanical design and construction project management. This project involved the design of a dam 15m high and 100m crest length. These three power stations are operational today. Dr McKeogh then moved on to wind farm design in 1999 and was chief design engineer for a 60MW wind farm in the Boggeragh mountains in Co Cork. Dr. McKeogh was responsible for the planning application and the Environmental Impact Study. From 1999 to 2008 he was lead designer for five wind farms. In 2009 Dr. McKeogh was appointed by Irish Rail as the chief hydrological/hydraulic engineer for the reinstatement design of Malahide 150m long railway bridge and weir which collapsed due to scour. In 2011-2013 Dr. McKeogh was lead hydraulic engineer for Irish Rail on the reinstatement of Lansdowne Road railway bridge on the River Dodder which had been undermined by scour. From 2014-2017 Dr. McKeogh was chief engineer for Jons Construction company for the design of River Dargle Flood relief works in Co. Wicklow involving bridge armouring quay wall and river channel stabilisation. In the period 2018 to 2022 was chief engineer

for the hydrological/hydraulic design of bridges and culverts for a number of clients including; Jons Craddock Construction Limited, Enerco Energy Limited, Jennings O'Donnovan consulting engineers.

1.8.2.4 Fehily Timoney & Company

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

Ian Higgins

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

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

Emily Archer

Emily Archer (BSc Geology, MSc Applied Environmental Geology) is a Geotechnical Engineer with 6 years' experience and has been involved in the preparation of several peat stability reports and Land, Soils & Geology Chapters for EIAR's for wind farm developments.

1.8.2.5 AWN Consulting

Dermot Blunnie

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

Mike Simms

Mike Simms (Principal Acoustic Consultant) holds a BE and MEngSc in Mechanical Engineering and is a member of the Institute of Acoustics (MIOA) and of the Institution of Engineering and Technology

(MIET). Mike has worked in the field of acoustics for over 20 years. He has extensive experience in all aspects of environmental surveying, noise modelling and impact assessment for various sectors including, wind energy, industrial, commercial and residential.

1.8.2.6 IAC Archaeology

Faith Bailey

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

Jonny Small

Jonny has 7 years of experience working in the archaeological and cultural heritage sector, both in research, fieldwork and consultancy, and has been responsible for the production of impact assessments, built heritage reports and fieldwork reports.

1.8.2.7 Alan Lipscombe Traffic and Transport Consultants

Alan Lipscombe

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

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

1.9 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 Galway County Council website, under the relevant Planning Reference Number (to be assigned on lodgement of the application).

Galway County Council: <https://www.galway.ie/en/services/planning/>

This EIAR and all associated documentation will also be available for viewing at the offices of Galway 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:

Galway County Council,
Áras an Chontae,
Prospect Hill,
Galway,
Co. Galway
H91 H6KX

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>)