1 INTRODUCTION

This EIAR has been prepared by Jennings O'Donovan & Partners Limited (JOD), on behalf of Constant Energy Limited (the 'Developer'), to accompany a planning application for the Proposed Development. This chapter of the Environmental Impact Assessment Report (EIAR) introduces Tirawley Wind Farm (the 'Development') see **Chapter 2: Project Description** for full details. In addition, this Chapter introduces the Environmental Impact Assessment (EIA) Project team and overall structure of the EIAR. It sets out the broad context and defines the key terms of reference used in the environmental assessment of the Proposed Development. The Proposed Development is subject to an EIA under Directive 2011/92/EU of the European Parliament and the Council of 13 December 2011 on the assessment of effects of certain public and private projects on the environment as amended by Directive 2014/52/EU (together, the 'EIA Directive) and the Planning and Development Act 2000 (as amended) (the 'PDA').

In addition to the identification, description and assessment of the Proposed Development, this EIAR identifies, describes and assesses the overall Proposed Development as described in **Table 1.1** and **Chapter 2: Project Description**, as a whole, and all likely significant direct and indirect effects, the cumulative effects and their interactions, including all relevant ancillary and subsidiary elements. This EIAR also includes the conclusion of the competent and qualified experts as to the significance of such environmental effects, to assist the competent authority in conducting its EIA.

The potential for significant or adverse effects resulting from the Development both individually and in combination with other activities, plans and developments, on European Site(s) as designated under the EU Habitats Directive and the conservation objectives for their qualifying species and habitats have been screened and assessed. This application is accompanied by an Appropriate Assessment Screening Report and Natura Impact Statement (NIS) which are intended to assist the competent authority in carrying out the Appropriate Assessment required in accordance with Article 6(3) of the EU Habitats Directive (92/43/EC).

This chapter is supported by Figures and the following Appendices in **Volume IV**:

- **Appendix 1.1:** Author Qualifications and Experience
- **Appendix 1.2:** Cumulative Windfarm Sites
- **Appendix 1.3:** Scoping Opinion
- **Appendix 1.4:** Glossary of Common Acronyms

- **Appendix 1.5:** Other Major Developments or Proposed Developments (bigger than a one-off house) within 10 km of the Proposed Development Site
- **Appendix 1.6:** Public Consultation Responses

1.1.1 Statement of Authority

This Chapter has been prepared by Jennings O'Donovan & Partners Limited. It was prepared by Michael Garvey and Darren Timlin.

Michael holds a B.Eng in Civil Engineering and a diploma in Project management. He is an experienced Chartered Professional Engineer (Ontario - Engineers Canada) with over 18 years of client-side and contractor/consultant experience on various Major Multi-Discipline Infrastructure Projects. Experienced in all stages of project life cycles from inception to operations. Projects varied from Design/Build, EPC, EPCM and P3 projects in Ireland, Australia and North America.

Mr. Darren Timlin is a Graduate Environmental Scientist and holds a Bachelor (Hons.) Degree in Environmental Science from the Atlantic Technological University. Darren has 3 years' experience drafting EIAR's and Screening Reports, Appropriate Assessments for Wind Farms, Hydrogen Plants and Power Generation Plants. He forms part of the Environmental team responsible for preparing the EIAR Chapters. Darren has experience drafting EIAR's and Screening Reports, Appropriate Assessments for Wind Farms, Hydrogen Plants and Power Generation Plants. He has experience in the use of Arc GIS Pro and Auto CAD 2D.

1.2 KEY DEFINED TERMS

To provide clarity in the EIAR, the following defined terms will be used throughout.

Table 1.1: Defined Terms used throughout the EIAR

Term	Definition
The Wind Farm Site	Refers to all land that falls within the main Wind Farm Site, excluding the Grid Connection Route and the Turbine Delivery Route.
The Proposed Development	Refers to all elements of the proposed development as described in the planning application public notices for Tirawley Wind Farm, the details of which are set out within **Chapter 2: Development Description**. These elements include the wind turbines, all site

Term	Definition
	infrastructure, the Grid Connection Route and all works required along the Turbine Delivery Route within the Redline Boundary.
(Tirawley) Wind Farm	Refers to The Proposed Development.
The Baseline	Refers to the existing site and site characteristics.
Survey Areas	Refers to areas within which surveys are undertaken. These are specifically defined within each technical section.
Study Areas	Refers to areas which are considered as part of the assessment process. These are specific and defined within each technical section.
The Council	Refers to Mayo County Council.
The Board	Refers to An Coimisiun Pleanála.(previously An Bord)
The Developer	Refers to Constant Energy Limited
EIA Regulations	The PDA 2000: 'Refers to the Planning and Development Act 2000, as amended'. The Planning Regulations 2001: 'Refers to the Planning and Development Regulations 2001, as amended'.
The EIA Directive	Refers to the EIA Directive 2011/92/EU.
The Revised EIA Directive	Refers to revised EIA Directive 2014/52/EU
Scoping / Scoping Opinion	This is the process to identify key environmental issues, and to determine which elements of the Proposed Development are likely to cause significant environmental impacts and to identify elements that can be removed from the assessment.
The Onsite Substation	Refers to the onsite 110 kV substation and control building including the compound in which it is located.
Battery Energy Storage System (BESS)	Refers to the battery storage element of the Proposed Development located next to the Onsite Substation.
Permanent Operations Building	An existing unoccupied dwelling and farmyard to be converted to office buildings for operation and management of the wind farm and an onsite storage unit
Permanent Operations Compound	This includes the Permanent Operations Building and associated lands. This will be used as a compound for the secure storage of maintenance materials, light equipment, and staff parking. Existing

Term	Definition
	services include a septic tank, existing water main, and electricity supply.
Site Access Tracks	Refers to tracks proposed for access to turbine and wind farm infrastructure on the Wind Farm Site.
Existing public roads to be upgraded	Public roads which require upgrade works to accommodate deliveries/works associated with the Proposed Development.
Met Mast	Refers to the proposed Meteorological Mast located on The Wind Farm Site.
The Replant Lands	Refers to the offsite forestry replanting lands.
The Turbine Delivery Route (TDR)	Refers to the proposed turbine delivery route from Galway Port /Killybegs Harbour/Foynes Port to The Wind Farm Site.
The Construction Haul Route (CHR)	Refers to the proposed routes from local quarries and suppliers to The Wind Farm Site.
Grid Connection Route (GCR)	Refers to the proposed 110 kV underground cable along public roads to the national grid at Tawnaghmore 110 kV Substation.
Interconnector Connection	Refers to the proposed route of connecting to the Proposed Hydrogen Plant (the Killala Energy Hub, Planning Application 23/60266) granted by Mayo County Council on the 27/05/2025.
Wind Farm Internal Cabling	Refers to the electrical cables connecting the turbines to the on-site substation.
Temporary Construction Compound(s)	Refers to the two compounds to be developed and used by the appointed contractor(s) for the purposes of constructing the Proposed Development which will be reinstated to the current land use following completion of construction.
Turbine Hardstand	Refers to the hardstand next to the turbine location used by cranes for erection of turbine hub, nacelles and rotor blades.
Turbine Foundation	Refers to turbine concrete base located below ground level and used to support the turbine hub.
Decommissioning	Refers to the end of the operational life of the Wind Farm when turbines are dismantled and taken off site for recycling. The turbine foundations and the Proposed Site Access Tracks will be left *in-situ* and allowed to revegetate through natural succession. The

Term	Definition
	underground cabling will be removed while the ducting will remain *in-situ*. The substation building will be left *in-situ*.
Reinstatement	Reinstatement means restoring the habitat in the areas of the Proposed Development where infrastructure was developed.
Killala Energy Hub	Refers to the Mayo County Council Planning Application 23/60266 for the Proposed Killala Energy Hub consisting of a Hydrogen Plant and an Energy Centre.

1.3 THE APPLICANT

The Applicant seeking planning permission is Constant Energy Limited, an Irish company based in Limerick, is seeking to develop and operate an energy portfolio with an emphasis on renewable energy and gas fuelled energy production and thus contribute to the security, reliability, and sustainability of Irish energy system. Constant Energy's strategy to achieve this vision is to develop an energy portfolio of Wind Farms, Hydrogen Production Plants, Open Cycle Gas Turbine Power Generation and Solar Farms.

1.4 THE SITE

The Proposed Development, as defined in **Table 1.1**, is located ~14.5 km northwest of Ballina Town, ~5.2 km northwest of the village of Killala and ~2.4 km east of Ballycastle village in north Co. Mayo. The Wind Farm Site is located ~10.5 km east of the county border between Mayo and Sligo. The Wind Farm Site has a total area of ~119.12 ha. The Wind Farm Site is accessed via local public roads which branch off the R314 which joins Killala in the southeast to Ballycastle in the northwest. These local public roads serve numerous dwellings and associated farm buildings scattered in lands surrounding the Wind Farm Site.

Topography across the Wind Farm Site is variable, ranging from ~20 to 155 m OD (meters above Ordnance Datum). The northern and central areas of the Wind Farm Site are located on elevated ground. The highest elevations are found in the north of the Wind Farm Site, which is situated on the southeastern slopes of Knockboha Hill, which stands at an elevation of ~186 m OD. There are also several other local high points further to the south which range in elevation from ~108 to 137 m OD. The southern section of the Wind Farm Site is located on lower ground with topography sloping gently to the southeast towards Cloonaghmore Estuary and Killala Bay. A Site Location Map showing the Wind Farm Site

boundary is appended as **Figure 1.1** and a map which comprises all elements of the Wind Farm Site is outlined as **Figure 1.2.**

The Wind Farm Site is located in a rural setting and housing density in the area is low. There are 284 houses within 2 km of the proposed turbines. The closest inhabited dwelling to a turbine not associated with the Proposed Development (H5) is located 554 m from the nearest turbine (AT10). The V117 turbine with a 135 m blade tip height (4 x 135 m = 540 m) maintains 540 m housing buffer. All residential dwellings located within 2 km of the proposed turbines are shown in **Figure 2.4**.

There is 1 no. disused vacant dwelling (H1) located c. 265 m southwest of AT14. This dwelling is under the control of the Developer and as part of the planning application, permission is sought for it to be converted and used as an operations building for the lifespan of the Proposed Development as outlined in **Section 2.7.8** of **Chapter 2: Development Description**.

There is 1 no. dwelling (H2) located c. 320 m southwest from AT01. This property is under the control of the Developer and the owner is a financial beneficiary of the Proposed Development. The owner has confirmed that this property will remain unoccupied for the operational lifespan of the Proposed Development

A full description of the Proposed Development is provided in **Chapter 2: Development Description**.

1.5 SUMMARY OF DEVELOPMENT DESCRIPTION

Planning Permission is being sought by the Developer for the construction of 18 No. Wind Turbines with an anticipated output of 77.40 MW, 1 no. meteorological mast, a Permanent Operations Compound, an Onsite Substation, Battery Energy Storage System (BESS), 19 no. Spoil Deposition Areas and all ancillary works, works along the Turbine Delivery Route (TDR) and the construction of an underground Grid Connection to Tawnaghmore 110 kV substation, Killala Business Park, Co. Mayo.

The Proposed Development will consist of the following:

- Construction of 18 no. Vestas V117 (4.3 MW) IEC IIA – T wind turbines. This specific model with a blade tip height of 135 m, was selected as the candidate turbine and its

associated parameters were used to determine the significant environmental effects associated with the Proposed Development.

- Construction of permanent Turbine Hardstands and Turbine Foundations
- Change the use of a residential site and vacant dwelling to a Permanent Operations Compound consisting of an operations office, storage area and staff parking
- Construction of two Temporary Construction Compounds with associated temporary site offices, parking areas and security fencing
- Installation of 1 no. (35-year life cycle) meteorological mast with a height of up to 80 m and a 4 m lightning pole on top
- Development of 19 no. permanent onsite spoil deposition area's
- Construct 6 no. new permanent site entrances as described in the EIAR **Chapter 17: Traffic and Transport** and **Figure 2.1**.
- Upgrade 9 no. existing site entrances as described in the EIAR **Chapter 17**: **Traffic and Transport** and **Figure 2.1.**
- Works for new and upgraded entrances include clearing visibility splays of vegetation, widening the entrances to allow HGVs turn onto local public roads and the R314, excavation to solid formation level, installation roadside drainage features, placing entrance sub-base with rockfill materials, placing capping level and providing surface dressing where necessary.
- Road construction works along the TDR and the Wind Farm Site consisting of the construction of approximately 10.41 km of new Site Access Tracks through the Wind Farm Site. The upgrading of 2.28 km of private Access Tracks and 2.82 km of public roads along the TDR to include, road verge widening, hedge trimming and all associated infrastructure and drainage works as described in EIAR **Chapter 17: Traffic and Transport** and the **Turbine Delivery Route Report Appendix 17.1.**
- Forestry felling of approximately 40.24 ha of coniferous forest will be required to facilitate the construction of the Proposed Development. For the purposes of this Proposed Development, the Developer commits that the location of any replanting (alternative afforestation) associated with the Proposed Development will be greater than 10 km from the Wind Farm Site and also outside any potential hydrological pathways of connectivity i.e. outside the catchment within which the Proposed Development is located. The extent of felling required to be licensed for the purpose of giving effect to the Proposed Development can only be determined once planning permission for the Proposed Development has been granted. It will be a condition of the felling licence that an equivalent area of land required to be felled shall be replanted. The felling will be subject to a separate planning application which, in practical terms,

can only be made once planning permission for the Proposed Development has been granted. No flexibility in terms of turbines dimensions is sought as part of the application for Planning Permission.

- All associated site development works including berms, landscaping, and soil excavation.
- Development of an internal site drainage network and sediment control systems.
- Construction of 1 no. 110 kV electrical substation including 2 no. control buildings with welfare facilities, all associated electrical plant and equipment, security fencing and gates, all associated underground cabling, wastewater holding tank, and all ancillary structures and works (the 'Wind Farm substation').
- Installation of battery arrays located within container units (20 no. units) and associated electrical plant for grid stabilisation adjacent to the Onsite Substation building (with up to 150 MW storage capacity) with surrounding palisade fence 2.65 m in height;
- All associated underground electrical and communications cabling connecting the wind turbines to the Wind Farm substation.
- All works associated with the permanent connection of the Wind Farm to the national electricity grid comprising of a 110 kV underground cable system in permanent cable ducts from the proposed, Wind Farm substation, in the townland of Barroe to the existing Tawnaghmore substation at the Killala Business Park.

A 10-year planning permission and 35-year operational life from the date of commissioning of the entire Wind Farm (apart from the substation) is being sought. This reflects the lifespan of modern-day turbines.

Planning permission is being sought for an onsite 110 kV Substation and an underground Grid Connection to the existing Tawnaghmore 110 kV Substation located in Killala Business Park. This infrastructure will become an asset of the national grid under the management of EirGrid and will remain in place upon decommissioning of the Wind Farm.

A second connection option considered in this EIAR is a 110 kV underground Interconnector cable between the Proposed Development (Tirawley Wind Farm) and a Proposed Hydrogen Plant known as the Killala Energy Hub, granted by Mayo County Council on the 27/05/2025 (Panning Reference No. 2360266). The Proposed Hydrogen Plant is in Killala Business Park in the townland of Tawnaghmore Lower and Meelick, south of Killala Village, Co. Mayo. Refer to **Figure 2.3** for proposed Interconnector Cable Route.

Both connections follow the same cable route from the Wind Farm Site to the townland of Tawnaghmore Lower, where the existing EirGrid 110 kV substation and the Proposed Killala Energy Hub are located.

This EIAR will assess the underground Grid Connection from the onsite 110 kV Substation to the existing Tawnaghmore 110 kV Substation located in Killala Business Park. EirGrid connections are offered through the Enduring Connection Process once planning permission has been obtained. EirGrid are open to consultation in terms of the grid connection. The Developer has initiated the Connection Process with EirGrid and completed a Consultation Clinic to assess the proposed connection options. Refer to **Figure 2.2** for proposed GCR.

Both the proposed Tirawley Wind Farm and Killala Energy Hub Developments are in the control of the Developer. An EIAR and NIS were prepared as part of Killala Energy Hub application; a copy can be found on the Mayo Eplanning website (Panning Reference No. 2360266).

1.6 ENVIRONMENTAL IMPACT ASSESSMENT

1.6.1 Environmental Impact Assessment Requirement and National Legislation

European Union Directive 2011/92/EU ("the EIA Directive") requires that, before consent is given for certain public and private projects, an assessment of the effects on the environment is undertaken by the relevant competent authority. The EIA Directive has been transposed into Irish legislation, for the purposes of this EIA Development, by the Planning and Development Act 2000, as amended ("the Planning Acts") and the Planning and Development Regulations 2001, as amended ("the Planning Regulations").

Section 171A of the Planning and Development Act 2000 (as amended) defines an Environmental Impact Assessment (EIA) as '*a process*—

(a) consisting of—

(i) the preparation of an environmental impact assessment report by the applicant in accordance with this Act and regulations made thereunder,

(ii) the carrying out of consultations in accordance with this Act and regulations made thereunder,

(iii) the examination by the planning authority or the Board, as the case may be, of— (I) the information contained in the environmental impact assessment report, (II) any supplementary information provided, where necessary, by the applicant in accordance

with section 172(1D) and (1E), and (III) any relevant information received through the consultations carried out pursuant to subparagraph (ii),

(iv) the reasoned conclusion by the planning authority or the Board, as the case may be, on the significant effects on the environment of the proposed development, taking into account the results of the examination carried out pursuant to subparagraph (iii) and, where appropriate, its own supplementary examination, and

(v) the integration of the reasoned conclusion of the planning authority or the Board, as the case may be, into the decision on the proposed development, and

(b) which includes—

(i) an examination, analysis and evaluation, carried out by the planning authority or the Board, as the case may be, in accordance with this Part and regulations made thereunder, that identifies, describes and assesses, in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of the proposed development on the following: (I) population and human health; (II) biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive; (III) land, soil, water, air and climate; (IV) material assets, cultural heritage and the landscape; (V) the interaction between the factors mentioned in clauses (I) to (IV), and

(ii) as regards the factors mentioned in subparagraph (i)(I) to (V), such examination, analysis and evaluation of the expected direct and indirect significant effects on the environment derived from the vulnerability of the proposed development to risks of major accidents or disasters, or both major accidents and disasters, that are relevant to that development.

Section 172(1)(a)(ii)(I) requires projects of a class specified in Part 2 of Schedule 5 of the Planning Regulations to be subject to an EIA where:

"(I) *such development would exceed any relevant quantity, area or other limit specified in that Part* ".

Part 2 of Schedule 5 of the Planning Regulations includes the following classes of EIA Development:

Class 3(i) *"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."*

Class10(dd) *"All private roads which would exceed 2000 metres in length."*

Class 15 *"Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, but which would*

be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7".

It is considered that the Proposed Development comes within the scope of Class 3(i) and Class 10(dd) and that it is appropriate to carry out EIA of the Proposed Development.

1.6.2 EIA Directive

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

(a) a description of the Development comprising information on the site, design, size and other relevant features of the Development

(b) a description of the likely significant effects of the Development on the environment

(c) a description of the features of the Development and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment

(d) a description of the reasonable alternatives studied by the developer, which are relevant to the Development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the Development on the environment

(e) a non-technical summary of the information referred to in points (a) to (d) and

(f) any additional information specified in Annex IV relevant to the specific characteristics of a particular Development or type of Development and to the environmental features likely to be affected.

In addition, Annex IV of the EIA Directive provides further detail on the information to 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.

JOD was appointed as environmental consultants in the Development and commissioned to prepare this EIAR in accordance with the requirements of the EIA directive and the PDA. The EIAR describes the receiving environment and assesses the likely significant effects of the Proposed Development on the receiving environment and proposes mitigation measures to avoid or reduce these effects as well as appropriate monitoring to ensure the efficiency of such mitigation measures. The function of the EIAR is to provide information

to allow the competent authority to reach a reasoned conclusion on the effects of a development and inform subsequent decisions, such as planning. All elements of the Proposed Development (including the Grid Connection Route (GCR) and TDR) have been assessed as part of this EIAR.

1.6.2.1 Factors of the Environment

The EIA Directive as amended requires the EIA to identify, describe and assess, in an appropriate manner and in light of each individual case, the direct and indirect significant effects of a project on the following factors:

(a) population and human health

(b) biodiversity, with particular attention to species and habitats protected under the Habitats and Birds Directives

(c) land, soil, water, air and climate

(d) material assets, cultural heritage and the landscape

(e) the interaction between the factors referred to in points (a) to (d)

The effects referred to above shall include the expected effects deriving from the vulnerability of the Proposed Development (the Project) to risks of major accidents and/or disasters that are relevant to the Proposed Development concerned.

Table 1.2: Outline of respective chapters relating to the requirements of the EIA Directive as amended

The EIA Directive	Chapter	Title
(a) population and human health	5. 15.	Population and Human Health Shadow Flicker and EMI
(b) biodiversity, with particular attention to species and habitats protected under the Habitats and Birds Directives	6. 7.	Biodiversity Ornithology
(c) land, soil, water, air and climate	2. 6. 7. 8. 9. 10. 13.	Development Description Biodiversity Ornithology Soils and Geology Hydrology and Hydrogeology Air and Climate Material Assets & Other Issues
(d) material assets, cultural heritage and the landscape	12. 13. 15. 14.	Landscape and Visual Amenity Material Assets & Other Issues Shadow Flicker and EMI Cultural Heritage
(e) the interaction between the factors referred to in points (a) to (d)	5. 18.	Population and Human Health Interactions of the Foregoing

1.6.2.2 Major Accidents and Disasters

A wind farm is not a recognised source of chemical pollution. Should a major accident or natural disaster occur, the potential sources of pollution onsite during both the construction and operational phases are limited. Sources of chemical pollution with the potential to cause significant environmental pollution and associated negative effects on health include bulk storage of hydrocarbons or chemicals and storage of wastes. Spills and leaks can occur if they are not mitigated against which may cause negative effects to human health, if contamination of food or water occurs. The occurrence of such spills and leaks is unlikely as bunding and safe storage practices will be complied with. The Proposed Development is not connected to or in the vicinity of any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations (SEVESO sites), therefore no significant effects associated with major industrial accidents involving dangerous

substances are anticipated. Gas explosions, petrochemical fires and fires from fuel emissions, leakages and spillages could occur causing personal injury, structural damage and forest fires.

While this SID application seeks permission for a connection to the existing EirGrid 110 kV substation at Tawnaghmore Lower this EIAR also assesses a second connection option, a 110 kV underground Interconnector cable to the Killala Energy Hub, which was granted consent by Mayo County Council on May 27th, 2025 (Planning Reference No. 2360266). If developed, the Killala Energy Hub which includes a hydrogen plant will be classified as an "Upper Tier" COMAH establishment Both the Proposed Tirawley Wind Farm and Killala Energy Hub Developments are in the control of the Developer (Constant Energy). If connected, the Proposed Development would be connected to a site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations (SEVESO sites). This is discussed in further detail in **Chapter 16: Major Accidents & Natural Disasters**.

There is limited potential for significant natural disasters to occur at the Wind Farm Site. Ireland is a geologically stable country with a mild temperate climate. The potential natural disasters that may occur are therefore limited to peat-slide, flooding and fire.

The Peat Landslide Risk Analysis has indicated a Negligible Hazard of instability in relation to the proposed turbine locations and proposed Site Access Tracks, should all mitigation measures and recommendations be adhered to, and as such the Proposed Development should have no adverse effect on the soils, geology or surface water aspects in the vicinity of the proposed Tirawley Wind Farm development. The risk of peat-slide is further addressed in **Chapter 8: Soils and Geology, Appendix 8.1 Peat Landslide Hazard Assessment Report.**

In general the risk of flooding at the Wind Farm Site is low due to the elevated and sloping nature of the land and the high density of streams and drainage features. The risk of flooding is addressed in **Chapter 9: Hydrology and Hydrogeology**, **Appendix 9.1: Flood Risk Assessment**.

A 2020 article in Wind Power Engineering Magazine estimated that 1 in 2,000 wind turbines catch fire each year[1]. Overall, the data shows that wind turbine fires are relatively rare[2]. It is therefore considered that the risk of significant fire occurring, by the wind farm and causing the wind farm to have significant environmental effects is limited. As described earlier, there are no significant sources of pollution in the Wind Farm with the potential to cause environmental or health effects. Also, the spacing of the turbines and distance of turbines from any properties limits the potential for effects on human health.

The Battery Energy Storage System (BESS) compound is located immediately to the east of the substation and includes 20 no. container units with up to 150 MW storage capacity. Battery storage sites are a potential source of fire and explosion risk during the operational phase of their lifetime. This is discussed in further detail in **Chapter 5: Population and Human Health, Chapter 16: Major Accidents and Natural Disasters,** and **Appendix 16.1: Fire Safety Assessment and Advise Report**.

1.6.2.3 Alternatives to the Development

Article 5(1)(d) of the EIA Directive requires that the EIAR include a description of the reasonable alternatives studied by the Developer, which are relevant to the Proposed Development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the Proposed Development on the environment.

In addition, Annex IV, paragraph 2 provides that the EIAR include "*A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*"

This is addressed in **Chapter 3: Alternatives Considered** of this EIAR.

1.6.2.4 National Guidance

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

[1] https://www.windpowerengineering.com/is-rope-based-descent-emergency-evacuation-at-the-end-of-its-tether/ [Accessed: 17/09/2025]
[2] https://www.firetrace.com/fire-protection-blog/wind-turbine-fire-statistics [Accessed: 17/09/2025]

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.

In preparing this EIAR regard has also been given to the Department of Housing, Planning and Local Government (2018) Circular PL. 05/2018 – Transportation into Planning Law of Directive 2014/52/EU.

1.6.2.5 European Guidance

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'. This EIAR has prepared in accordance with these guidelines.

1.6.2.6 Competent Experts and Quality of the EIAR

Article 5(3) of the EIA Directive states that, in order to ensure the completeness and quality of the EIAR, the Developer shall ensure (a) the EIAR is prepared by competent experts; (b) the competent authority shall ensure that it has, or has access to, sufficient expertise to examine the EIAR, and (c) where necessary, the competent authority shall seek from the Developer any supplementary information, in accordance with Annex IV (the information to be contained in the EIAR), which is directly relevant to reaching the reasoned conclusion on the significant effects of the Proposed Development on the environment.

The EIA Directive Consultation states that:
"It is not proposed to define the terms 'competent experts' or 'sufficient expertise' in legislation given the broad and diverse range of EIA topics and the different areas of specialist expertise. It is proposed that the competency of experts preparing an EIAR should be a matter for each competent authority, having regard to the diverse range of EIA topics and areas of specialist expertise.

Guidance will address the issue of 'expertise' in both the preparation and assessment of EIARs.

It would be good practice for the EIAR to state who prepared each element of the EIAR and list the qualifications and experience of each such person to assist the competent authority satisfy itself as to the competency of the experts who prepared the EIAR. The level of expertise required for each element of the EIAR would depend on the nature and importance of that element vis-à-vis the size, nature and location of the project and the receiving environment and the likely significant impact on that environment".

Article 94(e) of the Planning and Development Regulations 2001 (as amended) requires the following information to be provided in an EIAR:
"(e) a list of the experts who contributed to the preparation of the report, identifying for each such expert—
(i) the part or parts of the report which he or she is responsible for or to which he or she contributed,
(ii) his or her competence and experience, including relevant qualifications, if any, in relation to such parts, and
(iii) such additional information in relation to his or her expertise that the person or persons preparing the EIAR consider demonstrates the expert's competence in the preparation of the report and ensures its completeness and quality."

The Developer considers that each of the experts involved in the preparation of this EIAR is competent, having regard to the task he or she performed, taking account of the scope of the study for which he or she undertook the work and that the person(s) possesses sufficient training, experience and knowledge appropriate to the nature of the work. The competencies of the experts involved in the EIAR preparation are outlined in **Appendix 1.1, Author Qualifications and Experience**.

This EIAR has been prepared by Jennings O'Donovan & Partners Limited (JOD), Consulting Engineers, Finisklin Business Park, Sligo, F91 2HH9, on behalf of the Developer.

JOD are one of the longest established and most reputable multi-disciplinary engineering consultancies in Ireland. Established in 1950, it has grown to be the largest engineering consultancy in the north-west of Ireland. JOD have been an established presence in the Renewable Energy Wind Farm Sector since 1998. To date, the company has a portfolio of projects extending to over 2,500 MW of power in Ireland and Northern Ireland and is a recognised market leader in the area of Wind Energy development. This portfolio will

equate, when completed, to an investment of €3 billion in the Wind Energy Sector. Additionally, JOD has attained certificates in line with industry standards as follows:

- ISO 9001:2015 – Quality Management System
- ISO 14001:2015 – Environmental Management System
- ISO 45001:2018 – Occupational Health and Safety Management System

ISO certification demonstrates that JOD have developed, maintained and implemented systems in quality, safety and environmental related matters and are therefore competent experts.

This Proposed Development has been completed in line with JOD's Integrated Management System which is based on the current versions of ISO 9001 (Quality Management System), ISO 14001 (Environment Management System) and ISO 45001 (Safety Management System).

JOD have developed a Quality Policy Statement, an Environmental Policy Statement and a Safety Health and Welfare Policy Statement. It is a stated objective in our Quality Policy Statement that:
"…Jennings O'Donovan and Partners Limited is committed to complying with the requirements of the quality management system and to continually improve its effectiveness…".

JOD staff are degree qualified in their respective specialist fields and have developed their competence through both experience on the job and through training. Each team member has developed the following:

- Sufficient knowledge of the specific tasks to be undertaken and the risks which may arise
- Sufficient experience and ability to carry out their duties in relation to the project and to take appropriate actions required under the EIA Directive

Specialist consultancies have been employed to complete some of the EIAR chapters. Each chapter of the EIAR includes a Statement of Authority regarding the competency of the author and relevant qualifications.

1.7 NEED FOR THE PROPOSED DEVELOPMENT

The extent of the challenge to reduce greenhouse gas emissions in line with our International and EU obligations is well understood by Government and is reflected in the National Policy Position on Climate Action and Low Carbon Development (2014) and the Climate Action and Low Carbon Development Acts 2015 to 2021.

Both the policy position and legal framework are key elements of the effort to progress the national low carbon transition agenda. In 2015 the National Policy Statement on climate change made a commitment to transform Ireland into a Low Carbon Economy by the year 2050.

The Government quantifies this as:

- An aggregate reduction in CO_2 emissions of at least 80 % (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and
- In parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production.

The Climate Action Plan 2025

The Climate Action Plan 2025[3] (CAP2025) was published in April 2025 and is the latest assessment and measurement of what has been achieved over the past year, building on actions taken in 2024. It sets out what needs to be done in 2025, so Ireland is prepared to take on the challenges of our second carbon budget period 2026-2030.

Irelands Progress to date:

- In 2023 emissions reduced by nearly 7 %
- Emissions in the first half of 2024 were down over 17 %
- Compared with the same period in 2023, emissions in the first half of 2024 reduced by
- 3.5 %
- Irish wind farms generated nearly 40 % of Ireland's total electricity demand in the first
- half of 2024
- Over the past year, emissions in agriculture have reduced by over 4 %
- In the built environment, emissions have decreased by 21 % since 2018
- In transport, emissions increased by 0.3 % in 2023

[3] Government of Ireland. (2025). Climate Action Plan 2025 https://assets.gov.ie/static/documents/Climate_Action_Plan_2025_updated_cover.pdf [Accessed: 17/09/2025]

CAP25 re-affirms the previous commitment to increasing the share of renewable electricity to 50 % by 2025 and 80 % by 2030. Overall, the share of renewable electricity generation in Ireland increased from 38.6 % to 40.7 % from 2022 to 2023. The figure for 2024 will likely be between 40% and the interim, end of year target of 50 % set out in CAP25.
The targets are:

- Onshore wind, 2 GWs by 2025 and 9 GWs by 2030
- Offshore wind, at least 8 GWs by 2030
- Solar, up to 5 GW by 2025 and 8 GW by 2030

The Climate Action Plan 2024

The Climate Action Plan 2024 sets out a detailed sectoral roadmap designed to deliver a 51 % reduction in greenhouse gas (GHG) emissions by 2030. This requires significant reductions from all sectors. The Plan aims to evaluate in detail the changes that are required in order "to halve our emissions by 2030 and reach net zero no later than 2050, as we committed to in the Programme for Government".

In relation to electricity generation, the Plan sets an 8 0% target for electricity production from renewable sources by 2030, with an onshore wind energy target of 9GW in order to contribute to this.

These commitments highlight the need to remove barriers to the development of renewables, including onshore wind, such as streamlining regulation and encouraging reinforcement of the grid to facilitate greater renewables penetration.

The contribution of the Proposed Development to the de-carbonisation of the Irish electricity network will contribute positively to an issue of strategic social importance. The significance of the Climate Action Plan 2024 is underlined by the Irish government's declaration of a Climate Emergency in 2019.

The Renewable Energy Directive 2018 and 2023

The first Renewable Energy Directive (2009/28/EC) (RED I) provided the framework for the promotion of energy from renewable resources across the EU. The second Renewable Energy Directive 2018/2001/EU (RED II) entered into force in December 2018 and was transposed into Irish law in September 2020 by S.I. No. 365/2020 - European Union (Renewable Energy) Regulations 2020. In 2023, the European Union (EU) adopted an

amendment of the Renewable Energy Directive (EU/2023/2413), which is referred to as "RED III".

The regulations set the parameters for the establishment of future Renewable Electricity Support Schemes (RESS), and build on the existing regime, which was created by the European Union (Renewable Energy) Regulations 2014 (as amended) (the "2014 Regulations").

The RED III sets an 80 % target for electricity production from renewable sources by 2030. Ireland is facing significant challenges in efforts to meet these targets, alongside its commitment to transition to a low carbon economy by 2050. Ireland did not meet its 2020 target for renewable energy and is falling behind in the longer-term movement away from fossil fuels.

RED III raises the share of renewable energy in the European Union's overall energy consumption to 42.5 % by 2030, with an additional 2.5 % indicative top-up to allow the target of 45 per cent to be achieved.

A number of articles of RED III have been transposed into the planning code by the European Union (Planning and Development) (Renewable Energy) Regulations 2025. There are a number of changes to the requirements for making a planning application and Grid Applications which have just come into effect. Due to the short timescale between the publication of the new Regulations and the Grid Applications deadline of 30 September, there are some transition arrangements for this deadline only.

A planning authority must now acknowledge the *completeness* of an application within 45 days of its receipt. This is known as the Completeness Check and is in addition to Validation. A letter of acknowledgement from the local authority appears to now be sufficient for a Grid Application to be made.

A completeness check is considerably more extensive than a validation check. Validation only requires an application to meet the basic statutory requirements whereas a completeness check requires any additional documentation, information or plans and drawings that the planning authority considers necessary or appropriate to accompany the application to enable it to determine the application. It is therefore critical that the planning authorities, along with the applicant use the pre-application stage fully, to determine what

is necessary in this regard, and to agree a detailed record or checklist. It is within the applicant's control to ensure the quality of that information, and the applicant should use the pre-application process to interrogate such issues in a thorough and in a systematic way. Matters relating to the surveying of habits and species to inform the environmental assessments should be agreed at the earliest possible stage of the pre-application process, in consultation with the NPWS. Matters include the duration of surveys and location of surveys and methodologies having regard to current and developing best practices.

Additionally, amendments have been made to the statutory notices, where, from 6 August, wording must be inserted referring to the new legislation, RED III and the completeness check.

Mandatory permit granting timelines have been introduced and these cannot be paused due to Requests for Further Information or to allow for Environmental Assessments to be carried out. On that basis, the timelines prescribed in the transposing legislation which apply to planning are shorter than what is prescribed in the Directive. The timelines under the Regulations are, inter alia, 52 weeks for a renewable energy development with an electrical capacity of 150 kW or more. In addition, a planning authority can now specify the period for replying to a Request for Further Information. From the 1st October, EIA scoping opinion is mandatory.

In addition, as per the CRU Information Note (CRU/2025123) issued on the 25 August, where it states that the CRU has decided that, a copy of any letter issued by the Local Authority in respect of the proposed development pursuant to Article 26(2), can be submitted, any planning application being submitted does not have to be VALID or complete, but just submitted and acknowledged, before the 30 September.

The White Paper on Energy Policy in Ireland in 2015 – 2030

A Government White Paper entitled 'Ireland's Transition to a Low Carbon Energy Future 2015- 2030' was published in December 2015 by the Department of Communications, Energy and Natural Resources[4]. This Paper provides a complete energy update and a framework to guide policy up to 2030. The Paper builds upon the White Paper published in 2007 and takes into account the changes that have taken place in the energy sector since 2007.

[4] https://www.gov.ie/pdf/?file=https://assets.gov.ie/77389/e5aa9f25-da81-43eb-804d-57309615681e.pdf#page=null [Accessed: 17/09/2025]

The policy framework sets out a vision for a low carbon future that maintains Ireland's competitiveness and ensures a supply of affordable energy.

The Proposed Development is critical to helping Ireland meet the targets and commitments set by international, EU and national frameworks outlined above, as well as addressing the country's over-dependence on unsustainable imported fossil fuels. The need for the Proposed Development is driven by the following factors:

- A requirement to diversify Ireland's energy sources, to achieve international, EU, and national renewable energy targets;
- Avoid significant fines from the EU (the Promotion of the use of energy from renewable sources (recast) Directive 2018/2001/EU);
- A legal commitment under the Kyoto protocol to the United Nations Framework Convention on Climate Change (UNFCCC) from Ireland to limit greenhouse gas emissions;
- A requirement to increase Ireland's national energy security as set out in the Energy White Paper 'Ireland's Transition to a Low Carbon Energy Future 2015-2030';
- Provision of cost-effective power production for Ireland which would deliver local benefits;
- Increase energy price stability in Ireland by reducing an over-reliance on imported gas and exposure to international market price and supply fluctuations.

The Proposed Development will also offer opportunities such as:

- Provision of clean energy whilst minimising environmental effects;
- Contributing to renewable energy targets which will continue to drive down the overall cost of energy with benefits to the Irish consumer.

The Project will create additional jobs and will encourage continued investment in the renewable industry in Ireland. Wind Energy Ireland (WEI), Ireland's largest renewable energy organisation, in its annual Wind Energy Report for 2023[5] noted that Ireland's wind energy share of electricity demand in 2023 was 35 % compared to 34 % in 2022.

The total installed capacity of the Republic of Ireland's wind farms is now 4,375 MW[6], this is approximately enough to power 2.2 million Irish homes annually.

[5] https://windenergyireland.com/images/files/wind-energy-december-2023-key-statistics.pdf [Accessed: 17/09/2025]
[6] https://windenergyireland.com/images/files/20221026windenergyirelandoireachtasmembersbriefing.pdf [Accessed: 17/09/2025]

Chapter 4 of the EIAR relates to the Planning & Legislative Context and presents a full description of the international and national renewable energy policy context for the Proposed Development. **Chapter 10: Air and Climate** addresses Climate Change, including Ireland's current status with regard to meeting greenhouse gas emission reduction targets.

1.8 EIAR STRUCTURE

This EIAR uses the grouped structure method to describe the existing environment, the potential effects of the Proposed Development thereon and the proposed mitigation measures. Background information relating to the Proposed Development, scoping and consultation undertaken and a description of the Proposed Development are presented in separate sections. The grouped format section describes the impact of the Proposed Development in terms of human beings, biodiversity, soils and geology, hydrology and hydrogeology, air and climate, noise and vibration, landscape and visual, shadow flicker, cultural heritage, material and assets and traffic and transportation, together with the interactions and foregoing. Please note that the Irish Transverse Mercator coordinate system is used in the EIAR document for precise geographical referencing of the Proposed Development.

The layout of this EIAR is arranged in four volumes, I-IV.

Volume I: This volume includes the opening **Non-Technical Summary (NTS).** It is a condensed and easily comprehensible version of the EIAR document. The NTS is presented in a similar format to the main EIAR document and comprises descriptions of the Proposed Development, the receiving environment, impacts, mitigation measures and interactions presented in a grouped format. It is a standalone document.

Volume II: This volume contains the **Environmental Impact Assessment Report (EIAR).** The EIAR is presented using the grouped structure method and describes the existing environment, the potential impacts of the Proposed Development thereon and the proposed mitigation measures. Background information relating to the Proposed Development, scoping and consultation undertaken and a description of the Proposed Development are presented in separate chapters.

The chapters in this **Volume II: EIAR** are as follows:

- Chapter 1: Introduction
- Chapter 2: Development Description
- Chapter 3: Alternatives Considered
- Chapter 4: Planning Policy
- Chapter 5: Population and Human Health
- Chapter 6: Biodiversity
- Chapter 7: Ornithology
- Chapter 8: Soils and Geology
- Chapter 9: Hydrology and Hydrogeology
- Chapter 10: Air and Climate
- Chapter 11: Noise
- Chapter 12: Landscape and Visual Amenity
- Chapter 13: Material Assets and Other Issues
- Chapter 14: Cultural Heritage
- Chapter 15: Shadow Flicker
- Chapter 16: Major Accidents and Natural Disasters
- Chapter 17: Traffic and Transportation
- Chapter 18: Interactions of the Foregoing

Volume III: EIAR Figures and Drawings

The Figures referred to in each chapter of the EIAR are compiled separately in **Volume III**. Figures are numbered sequentially for each chapter in which they are principally referred.

Volume IV: Appendices

The Appendices referred to in each chapter of the EIAR are compiled separately in **Volume IV**. They are also numbered sequentially for each chapter in which they are principally referred.

Volume V: Natura Impact Statement (NIS)

The Natura impact Statement (NIS) for the Proposed Development is a separate and distinct document from the EIAR.

1.9 INFORMATION TO BE INCLUDED IN A DECISION TO GRANT

Article 8a (1) of the EIA Directive states:

"The decision to grant development consent shall incorporate at least the following information:

(a) the reasoned conclusion referred to in Article 1(2)(g)(iv);

(b) any environmental conditions attached to the decision, a description of any features of the project and/or measures envisaged to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment as well as, where appropriate, monitoring measures".

To assist the planning authority with this requirement, the EIAR includes a summary of all proposed mitigation and monitoring measures outlined within the technical assessments at the end of each chapter.

1.10 EIAR PREPARATION

1.10.1 Project Team

JOD had overall responsibility for the coordination of the EIAR with input from other independent specialist consultants where necessary as required by the EIA Directive and Regulations. Recital (33) of EIA Directive states the following in relation to the persons responsible for preparing the environmental impact assessment reports:

"Experts involved in the preparation of environmental impact assessment reports should be qualified and competent. Sufficient expertise, in the relevant field of the project concerned, is required for the purpose of its examination by the competent authorities in order to ensure that the information provided by the developer is complete and of a high level of quality."

In compliance with this requirement, and in line with emerging best practice, including with the 2018 EIA Guidelines for Planning Authorities, **Table 1.3** provides the names of the professionals who have prepared each element of the EIAR. It also lists their qualifications and relevant experience, demonstrating that the EIAR has been prepared by competent experts. Further details on the qualifications of each lead author can be found in **Appendix 1.1** and in the Statement of Authority in each individual technical assessment chapter.

Table 1.3: EIAR Preparation Details

EIAR Chapter	Company	Contributor & Qualifications	Years Relevant Experience
1: Introduction	Jennings O'Donovan & Partners Limited	Mr. Darren Timlin BSc., Environmental Scientist	DT – 3 Years MG – 15 Years

EIAR Chapter	Company	Contributor & Qualifications	Years Relevant Experience
	Jennings O'Donovan & Partners Limited	Mr. Michael Garvey B Eng in Civil Engineering	
2: Project Description	Jennings O'Donovan & Partners Limited Jennings O'Donovan & Partners Limited	Mr. Darren Timlin BSc., Environmental Scientist Mr. Michael Garvey B Eng in Civil Engineering	DT – 3 Years MG – 15 Years
3: Alternatives Considered	Jennings O'Donovan & Partners Limited	Mr. Darren Timlin BSc., Environmental Scientist	DT – 3 Years
4: Planning Policy	Jennings O'Donovan & Partners Limited	Mr. Darren Timlin, BSc., Environmental Scientist	DT – 3 Years
5: Population and Human Health	Jennings O'Donovan & Partners Limited Jennings O'Donovan & Partners Limited	Mr. Darren Timlin, BSc., Environmental Scientist Ms. Angelika Thiel BSc., Environmental Scientist	DT – 3 Years AT – 3 Years
6: Biodiversity	Biosphere Environmental Services Éire Ecology Enviroscope Environmental Consultancy Ecofact Environmental Consultants	Dr. Brian Madden, PhD, BA., MCIEEM, Environmental Consultant Mr. John Curtin BSc., Environmental Scientist Dr. John Conaghan, BSc, PhD, MCIEEM Dr. William O'Connor	BM – 40 Years + JC – 15 Years JC – 25 Years + WO'C – 30 Years +
7: Ornithology	Biosphere Environmental Services Biosphere Environmental Services Biosphere Environmental Services Biosphere Environmental Services Biosphere Environmental Services Veon	Dr. Brian Madden, PhD, BA., MCIEEM, Environmental Consultant Mr. Conor Ryan B.Sc., M.Sc., MCIEEM Hannah Keogh B.Sc., PGDip Mr. David Miley B.Sc., M.Sc Mr. Mick Hogan Mr. Joe Adamson B.Sc., M.Sc., MCIEEM David McGillycuddy ACIEEM, AEnvCW	BM – 24 Years + CR – 15 Years + HK – 9 Years + DM – 15 Years + MH – 12 Years + JA – 24 Years + DM – 7 Years +

EIAR Chapter	Company	Contributor & Qualifications	Years Relevant Experience
8: Soils and Geology	Whiteford Geoservices Limited Whiteford Geoservices Limited	Mr. John Whiteford BSc (Hons) Geophys MIOSH MEAGE FGS Mr. Jamie Stothers,	JW – 25 Years JS – 9 Years
9: Hydrology and Hydrogeology	Hydro Environmental Services Whiteford Geoservices Limited Whiteford Geoservices Limited	Mr. Michael Gill MSc Engineering Hydrology, MSc Hydrogeology Mr. Conor McGettigan BSc, MSc., Environmental Science Jenny Law BSc, MSc	MG – 20 Years + CMcG – 4 Years+ JL – 3 Years +
10: Air and Climate	Jennings O'Donovan & Partners Limited Jennings O'Donovan & Partners Limited	Mr. Darren Timlin BSc., Environmental Scientist Ms. Angelika Thiel BSc., Environmental Scientist	DT - 3 Years AT – 3 Years
11: Noise	Irwin Carr Consulting Irwin Carr Consulting Irwin Carr Consulting	Mr. Shane Carr, MPhil., Director, Irwin Carr Consulting Mark Burke BSc Brendan O'Reilly	SC – 20 Years + MB –5 Years + BOR – 40 Years +
12: Landscape & Visual Assessment	Macro Works Macro Works	Mr. Richard Barker, MLA, PGD, BA, MILI, Director, Macro Works Limited Mr Cian Doughan, Landscape Architect, BSLA., MILI	RB – 25 Years CD – 20 Years
13: Material Assets & Other Issues	Jennings O'Donovan & Partners Limited Veon	Mr. Darren Timlin BSc., Environmental Scientist Mr. Martin Murphy, BSc, Msc	DT - 3 Years MM – 2 Years + (Veon)
14: Cultural Heritage	John Cronin & Associates	Ms. Kate Robb MA PGDip. EIA/SEA Mgmt. MIAI	KR – 16 Years +
15: Shadow Flicker	Jennings O'Donovan & Partners Limited	Ms. Kathlyn Feeney, BSc., Graduate Environmental Scientist	KF - 1 Year
16: Major Accidents and Natural Disasters	Jennings O'Donovan & Partners Limited	Mr. Darren Timlin BSc., Environmental Scientist	DT - 3 Years
17: Traffic & Transport	Jennings O'Donovan & Partners Limited	Mr. Michael Garvey B Eng in Civil Engineering	MG – 15 Years

EIAR Chapter	Company	Contributor & Qualifications	Years Relevant Experience
		Mr. Cavelle Hendry Bsc. Civil Engineering	CH – 8 years
18: Interactions of the Foregoing	Jennings O'Donovan & Partners Limited	Mr Darren Timlin, BSc., Environmental Scientist	DT - 3 Years

1.10.2 Chapter Structure

Each technical assessment included in the EIAR has followed the same general format:

- Assessment Methodology and Significance Criteria: A description of the methods used in baseline surveys, limitations and in the assessment of the significance of effects
- Baseline Description: A description of the Wind Farm Site's existing baseline, based on the results of surveys, desk information and consultations, and a summary of any information required for the assessment, that could not be obtained. It also includes an outline of the likely evolution of the baseline without the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.
- Assessment of Potential Environmental Effects: A description of how the baseline environment could potentially be affected for the Proposed Development including a summary of the measures taken during the design of the Proposed Development to minimise effects
- Mitigation Measures and Residual Effects - A description of measures recommended that will be implemented to reduce and/or off-set potential negative effects and a summary of the assessed level significance of the effects of the Proposed Development and/or the Proposed Development after mitigation measures have been implemented
- Cumulative Effects: An assessment of the potential cumulative effects of the Proposed Development in combination with other existing, approved or proposed plans and projects
- Statement of Significance of effects

The significance of effects resulting from the Proposed Development will be determined through consideration of a combination of the sensitivity of the receiving environment and the predicted level of change from the baseline state. Environmental sensitivity can be categorised by several aspects including factors such as; the transformation of natural landscapes, the protection afforded to, and presence of, European sites, rare or endangered species, land use and fisheries.

Sensitivity of classification of the receiving environment can vary between the different technical areas of assessment e.g., ecology, hydrology, population and human health and visual. In general, this EIAR largely follows the principles and terminology of the 2022, EPA 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' in relation to the identification of significant effects. Where a technical assessment has adopted an alternative to this process, such as following technical guidance bespoke to that topic, such assessment criteria are made clear in that chapter. **Table 1.4** highlights the general framework for the assessment of significance of effects.

Table 1.4: Impact Classification Terminology (EPA Guidelines, 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

Impact Characteristic	Term	Description
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions
Probability	Likely	Effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented
	Unlikely	Effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented
Duration and Frequency	Momentary	Effects lasting from seconds to minutes
	Brief	Effects lasting less than a day
	Temporary	Effects lasting less than a year
	Short-term	Effects lasting one to seven years
	Medium-term	Effects lasting seven to fifteen years
	Long-term	Effects lasting fifteen to sixty years
	Permanent	Effect lasting over sixty years
	Reversible	Effects that can be undone, for example through remediation or restoration
	Frequency	Describe how often the effect will occur, (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Type	Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	'Do Nothing'	The environment as it would be in the future should the subject project not be carried out
	'Worst Case'	The effects arising from a project in the case where mitigation measures substantially fail
	Indeterminable	When the full consequences of a change in the environment cannot be described
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost

Impact Characteristic	Term	Description
	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

1.10.3 Significance Criteria

The significance of the potential effects of the Proposed Development have been classified by taking into account the sensitivity of receptors and the magnitude of the potential effect on them, combined with the likelihood of an effect occurring as defined in **Table 1.5**.

Table 1.5: Rating of Significant Environmental Impacts (EPA Guidelines, 2022)

Description of Impact Character/Magnitude/Duration/Probability/Consequences					
Magnitude of Significance /Sensitivity		**Negligible**	**Low**	**Medium**	**High**
	Extremely High	Not Significant	Profound/ Very Significant	Profound	Profound
	Very High	Not Significant	Moderate	Significant	Profound/ Very Significant
	High	Not Significant	Slight	Significant/ Moderate	Very Significant
	Medium	Not Significant/ Imperceptible	Slight	Moderate	Significant/ Moderate
	Low	Imperceptible	Slight/ Not Significant	Slight	Slight/ Moderate
	Negligible	Imperceptible	Imperceptible	Imperceptible	Imperceptible

1.10.3.1 Mitigation Measures and Residual Effects

There are three established strategies for impact mitigation - avoidance, reduction and remedy. The efficacy of each is directly dependent on the stage in the design process at which environmental considerations are taken into account, (i.e. impact avoidance can only be considered at the earliest stage, while remedy may be the only option available for projects where avoidance and reduction were not possible).

The EIA coordinator has engaged with stakeholders, which has provided the benefit of developing and refining mitigation through an iterative process rather than 'adding on' such measures at the end of the Proposed Development. Mitigation measures have been prioritised and embedded into the design phase of the Proposed Development to avoid, reduce and offset any significant adverse effects. These are referred to within this EIAR as 'embedded mitigation'.

Relevant mitigation measures are discussed within each technical Chapter of this EIAR. **Chapter 18: Interactions of the Foregoing** provides a summary of mitigation measures for all technical assessments.

1.10.3.2 Cumulative Effects

The potential cumulative effect of the Proposed has been assessed in line with Annex IV of the EIA Directive as amended which provides that the EIAR must contain a description of the likely significant effects of the project on the environment resulting from the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.

The assessment of the Proposed Development in combination with other projects considers the range and nature of existing projects within the cumulative impact study area of the Project, as far as practically possible. For the purposes of this EIAR, a radius of 20 km for larger scaled projects for the cumulative impact assessment. This Study Area is derived from the Wind Energy Development Guidelines (2006)[7] and Draft Wind Energy Guidelines 2019[8]. A list of wind farm and the turbine details to be included in the Cumulative Assessment is included in **Appendix 1.2: Cumulative Windfarm Sites** and in **Chapter 2: Development Description** in **Section 2.4.3**.

All of the relevant projects and plans with potential to create cumulative effects have been included in **Appendix 1.5: Other Major Developments or Proposed Developments (bigger than a one-off house) within 10 km of the Proposed Development Site** and in **Chapter 2: Development Description** in **Section 2.4.4** and detailed cumulative impact assessments are included in each relevant section of the EIAR.

[7] Wind Energy Development Guidelines (2006) https://www.gov.ie/en/publication/f449e-wind-energy-development-guidelines-2006/ [Accessed: 17/09/2025]
[8] Draft Wind Energy Development Guidelines (2019) https://www.gov.ie/en/publication/9d0f66-draft-revised-wind-energy-development-guidelines-december-2019/ [Accessed: 17/09/2025]

The geographic extent of the cumulative assessment is considered on a case-by-case basis, in line with the following:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022).
- Guidance on the Preparation of the Environmental Impact Assessment Report (European Union 2017) (Directive 2011/92/EU as amended by 2014/52/EU); and
- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Commission 1999).

All existing and approved large-scale projects and large-scale projects in the public domain pre planning or pending a decision from a planning authority within 20 km of the Proposed Development were considered for potential Cumulative Assessment in all other chapters of this EIAR. This measurement was taken from the outermost turbines of the Proposed Development. A 20 km distance was considered appropriate due to the size and extent of the proposed Wind Farm and the nature of the potential effects as detailed throughout the EIAR.

The material for the cumulative assessment was gathered through a search of relevant County Councils' Online Planning Registers, the An Bord Pleanála website and the EIA Portal for a period of ten years (the last check was carried out 15th May 2025). Relevant EIA documents, planning application details and planning drawings were reviewed, which served to identify the locations of existing and approved projects and projects pending a decision from a planning authority, their activities and their environmental effects. As outlined in **Chapter 2: Development Description, Section 2.4.3** and **2.4.4**.

The relevance of the projects was considered on a case-by-case basis in each chapter as necessary depending on the interaction and likelihood of in combination impacts.

1.10.3.3 Statement of Significance of Effects

The statement of significance outlines the conclusion of each technical assessment in order to provide a final overall conclusion as to the likely significant effects of the Project under the terms of the EIA Directive, Planning Development Act 2000 and Planning Regulations 2001.

1.11 SCOPING AND CONSULTATION

The scoping and consultation process was carried out in accordance with the EIA Directive, Planning Development Act 2000, Planning Regulations 2001 and in accordance with the Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022).

The EIA Directive Circular notes that:

"It is a requirement of the EIA process to consult with statutory consultees and to take into account any submissions made by these consultees. Such submissions may contain expert specialist opinions on topics to be assessed in the EIA process…".

A scoping exercise was carried out in March 2023. **Table 1.6** documents individuals and organisations that have been consulted as part of the EIA process. The purpose of this consultation process was to provide a focus for the EIA by identifying the key issues of relevance. As such, the consultation process informs the various organisations of the Proposed Development, thereby providing an opportunity to submit comments and to offer information relevant to the preparation of this EIAR. Responses can be found in **Volume IV**, **Appendix 1.3: Scoping Opinions.**

Table 1.6: Scoping List and Responses

No.	Consultee Organisation	Response
1.	AirNav Ireland (ANI)	No response received to date.
2.	An Taisce	No response received to date.
3.	Bat Conservation Ireland	No response received to date.
4.	Birdwatch Ireland	No response received to date.
5.	Broadcast Authority of Ireland (BAI)	Response received.
6.	Commissions for Communications Regulations (ComReg)	No response received to date.
7.	Department of Agriculture, Food and the Marine (DAFM)	Acknowledgement of receipt only.
8.	Department of Defence (DoD)	Response received.
9.	Department of Environment, Climate and Communications	No response received to date.
10.	Department of Housing, Local Government and Heritage	No response received to date.
11.	Department of Transport (DoT)	Response received.

No.	Consultee Organisation	Response
12.	Development Applications Unit (DAU)	Acknowledgement of receipt only.
13.	Eir Limited	No response received to date.
14.	ENET	Response received.
15.	Environmental Protection Agency (EPA)	No response received to date.
16.	ESB	No response received to date.
17.	Fáilte Ireland	No response received to date.
18.	Geology Survey of Ireland (GSI)	Response received.
19.	Health Service Executive (HSE) (Department of Public Health)	Response received.
20.	Health Service Executive (West) (Environmental Health Service)	Response received.
21.	Inland Fisheries Ireland (IFI)	Response received.
22.	Irish Aviation Authority (IAA)	Response received.
23.	Irish Farmers Association (IFA)	No response received to date.
24.	Irish Peatland Conservation Council (IPCC)	No response received to date.
25.	Irish Wildlife Trust (IWT)	No response received to date.
26.	Mayo County Council	Pre-planning meeting 18th August 2023
27.	Minister for Housing, Planning and Local Government	No response received to date.
28.	Office of Public Works (OPW)	Response received.
29.	RTÉ (2RN)	Response received.
30.	Sligo Airport	Response received.
31.	Sligo County Council	Acknowledgement of receipt only.
32.	Sustainable Energy Authority of Ireland (SEAI)	Acknowledgement of receipt only.
33.	Terta Ireland	Response received.
34.	The Arts Council	No response received to date.
35..	The Heritage Council	No response received to date.
36.	Three Ireland (Hutchison) Limited	Response received.
37.	Transport Infrastructure Ireland (TII)	Response received.
38.	Údarás na Gaelteachta	No response received to date.
39.	Uisce Éireann (Irish Water)	No response received to date.
40.	Virgin Media Television	Response received.
41.	Vodafone	Response received.
42.	Wind Energy Ireland (WEI)	No response received to date.

1.11.1 Public Consultation

Constant Energy Limited had direct public consultations with the residents in the area. This took the form of door-to-door contact with the local residents in the vicinity of the Proposed Development. With the aid of a local representative, Constant Energy Ltd also reached out to local community groups and third parties associated and/or interested in the Proposed Development.

In advance of the Public Information Day, notices were advertised in the local newspaper and local community groups were notified via word of mouth and social media messaging platforms.

1.11.1.1 Public Information Day (PID)

The PID took place at the Ballina Manor Hotel, Ballina Town on Tuesday 6th June 2023 from 14:00 - 19:00 as part of the Public Consultation process for the Proposed Development. There were 31 attendees at the PID of which 14 completed consultation forms. Consultation forms are attached in **Appendix 1.6 Public Consultation Responses.**

1.12 COMMUNITY BENEFIT AND COMMUNITY INVOLVEMENT

The Wind Farm operator will set up a community benefit fund which will allocate funds from the Wind Farm to community groups in the area should the Wind Farm be granted planning and be successful under the Government's RESS support programme.

If consented, the proposed Tirawley Wind Farm will require an approximate investment of circa €44 million and will provide sustainable, low carbon energy generation infrastructure to meet Ireland's growing demand. The Proposed Development has the potential to bring significant positive benefits to local communities. It will support sustainable local employment; it could contribute annual rates between €866,880 to €1,021,680 to the local authority (depending on the final installed capacity, and the Annual Rate on Valuation set by the council).

If consented the proposed Tirawley Wind Farm will also provide a community fund calculated in accordance with the Renewable Electricity Support Scheme (RESS) Terms and Conditions at €2 per MWh of electricity produced by the project. This is to be made available to the local community for the duration of the RESS (15 years). The average capacity factor of wind energy projects in Ireland is 28.3% (SEAI, 2019). Assuming this

efficiency, and a capacity of c. 77.40 MW, the community benefit fund would amount to an average of €383,743 per annum. The actual fund will vary around this average from year to year, depending on each year's wind conditions. Wind resource monitoring undertaken in the Study Area indicate that Tirawley Wind Farm could be capable of achieving an above average capacity factor and therefore contribute towards a larger community fund.

1.13 STRATEGIC INFRASTRUCTURE DEVELOPMENT (SID) PRE-APPLICATION CONSULTATION PROCESS

The Developer applied to An Bord Pleanála (the Board) (now An Coimisiun) in 2023 further to section 37B of the Planning and Development Acts 2006 to 2021 for an opinion as to whether the amended wind farm development is strategic infrastructure development (ABP Case Reference ABP-315864-23). As part of this initial consultation, the Developer reduced the number of wind turbines from 31 to 25 following a second pre-application meeting, and from 25 to 21 following a third meeting. Subsequently, the Developer applied again to the Board in 2024 for an updated opinion on the revised project (ABP Case Reference ABP-320703-24). A final pre-application meeting was held with An Bord Pleanála on 10th October 2024, after which the project was revised to reduce the proposed number of wind turbines from 21 to 18.

SID planning applications are made direct to An Coimisiun Pleanála with no requirement for an initial planning application to the local authority. In total, four pre-application meetings were held with the Board regarding this project: the first on the 5th April 2023, the second on the 14th August 2023, the third on the 6th November 2023, and the fourth on the 10th October 2024.

The Board issued notices confirming the project as a Strategic Infrastructure Development on two occasions: first on 21st December 2023 following the initial series of consultations, and again on 24th October 2024 after the final revision. The planning application for the Proposed Development will therefore be made to An Coimisiun Pleanála under Section 37E of the Planning and Development Acts 2000 to 2021.

1.14 AVAILABILITY OF INFORMATION

A copy of the EIAR may be viewed online on the Developers website (https://tirawleywindfarm.com/)

A paper copy of the EIAR can be viewed/purchased, during office opening hours at the following addresses:

1. An Bord Pleanála, 64 Marlborough Street, St. Rotunda, Dublin 1, D01 V902.
2. The Offices of Mayo County Council, Áras an Chontae The Mall Castlebar Co. Mayo F23 WF90 Telephone: +353 94 906 4000

Paper copies can be provided at the cost of printing, by writing to:
Jennings O'Donovan & Partners Limited at the above address.

Electronic copies are available via email (info@jodireland.com).

1.15 GLOSSARY OF COMMON ACRONYMS

The common acronyms used throughout this EIAR are contained in **Volume IV**: **Appendix 1.4**.