1 INTRODUCTION

1.1 INTRODUCTION

This chapter of the Environmental Impact Assessment Report (EIAR) introduces the proposed Garrane Green Energy Project (the Project) and provides details of the Environmental Impact Assessment (EIA) project team and the structure of the report. It defines the key terms of reference used in the environmental assessment of the Project. The Project is subject to an EIA, under the Environmental Impact Assessment Directive 2011/92/EU[1] of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU[2] (EIA Directive) and implemented in Ireland under the Planning and Development Act 2000[3] (as amended) (the 'PDA 2000').

The EIAR has been prepared by Jennings O'Donovan & Partners Limited, on behalf of Garrane Green Energy Limited, to accompany the planning application seeking planning permission for the Project.

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

The potential for the Project, both individually and in combination with other activities, plans and developments, to have a significant effect on or to have an adverse effect on the integrity of European Site(s) 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 (AA) 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).

[1] The European Council Directive 2011/92/EU. Available online at https://eur-lex.europa.eu/eli/dir/2011/92/oj [Accessed 06/08/2025]
[2] The European Council Directive 2014/52/EU. Available online at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052 [Accessed 06/08/2025]
[3] The Planning and Development Act 2000. Available online at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.irishstatutebook.ie/eli/2000/act/30/enacted/en/pdf [Accessed: 06/08/2025]

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

- **Appendix 1.1**: Author Qualifications
- **Appendix 1.2**: List of Projects for Cumulative Assessment
- **Appendix 1.3**: Scoping Opinion
- **Appendix 1.4**: Glossary of Common Acronyms
- **Appendix 1.5**: Community Engagement Report

1.2 KEY DEFINED TERMS

In order 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 Site	Refers to all land that falls within the proposed Garrane Green Energy Redline Boundary as shown on **Figure 1.1**.
Redline Boundary	Identifies the land that is subject to this planning application and is shown on the planning drawings accompanying this EIAR and as shown in **Figure 1.2**.
the Baseline	Refers to the existing Project lands and their characteristics.
the Project	Refers to the construction, operation and decommissioning of a wind energy development consisting of nine wind turbines, Turbine Foundations, Turbine Hardstands, Substation, Grid Connection, Met Mast, Access Tracks, Turbine Delivery Route and all associated infrastructure that has been assessed as part of this EIAR. The Project includes all works within the Redline Boundary for which planning permission is sought but also includes temporary works along the TDR that fall outside the Redline Boundary. A full description of the proposed Project is included in **Chapter 2: Project Description**.
Survey Areas	Refers to areas within or over which surveys are undertaken. These are specifically defined within each technical section/discipline chapter of this EIAR.

Term	Definition
Study Areas	Refers to the geographic areas which are identified by the relevant topic expert as areas in which the Project has the potential to give rise to significant environmental effects. These are topic-specific and defined within each technical section/discipline chapter of this EIAR.
the Local Authority	Refers to Limerick City & County Council.
the Commission	Refers to An Coimisiún Pleanála (ACP) previously know as An Bord Pleanála (the Board).
The Developer	Refers to Garrane Green Energy Limited
EIA Planning 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'.
EIA Directive	Refers to Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU.
Scoping	This is the process to identify key environmental issues, and to determine which elements of the Project are likely to cause significant environmental impacts and to identify elements that can be removed from the assessment.
the Substation	Refers to the onsite 110kV substation and control building(s) including the compound in which it is located.
Access Tracks	Refers to tracks proposed for access to wind turbine(s), Grid Connection, Substation, watercourse crossings and wind farm infrastructure on Site.
Met Mast	Refers to a proposed permanent meteorological mast located on the Site.

Term	Definition
Turbine Delivery Route (TDR)	Refers to the proposed delivery route for abnormal loads including turbine components within the public road network from Foynes Port and the Port of Galway to the Site.
Haul Route	Refers to the proposed delivery route from local quarries and concrete suppliers to the Site.
Grid Connection (GC)	Refers to the proposed ‚loop in' connection to the existing 110kV overhead line to the Substation, which will form part of the national electricity network.
Wind Farm Internal Cabling	Refers to the electrical cables connecting the turbines to the Substation.
Site Entrance 1	Refers to the site entrance on the N20 which is only to be used for deliveries of abnormal loads and civils construction traffic until the bridge over the River Maigue is constructed.
Site Entrance 2	Refers to the southern site entrance on the Local Road L1537 which is to be used for all construction traffic for the Substation and Grid Connection construction and as an access point for ESBN/Eirgrid during operation.

1.3 THE DEVELOPER

The Developer – Garrane Green Energy Ltd. a subsidiary of Greensource Sustainable Developments Limited (Greensource Ltd.).

Greensource is an innovative Irish renewable energy company based in Adare, Co. Limerick that specialises in the development of renewable energy projects, working with communities from pre-planning to operation, and creating long-lasting local partnerships. Greensource has over ten years development and operational experience. Greensource has a highly skilled and experienced team who are committed to developing projects with successful outcomes for all stakeholders. Working with integrity and care for the local environment, the team has a strong track record, having successfully completed wind energy and other renewable projects in Ireland.

1.4 THE SITE

The Site extends to approximately 158.75 hectares (ha) (392acres) which is owned by private third-party landowners. The general area is comprised of agricultural pasture grazing, farmland. The Site is located approximately 2.5 kilometres (km) (closest turbine) north of Charleville Co. Cork, 22.9km south of Limerick City and 46.9km north of Cork City.

The Site is located on relatively level ground, at elevations ranging from 58-61m above ordnance datum (AOD) in the northern side of the Site, to 63-73m AOD in the southern portion of the Site. A Site Location Map showing the Redline Boundary is appended as **Figure 1.1** and a map which comprises of all elements of the Project is outlined as **Figure 1.2.**

There are 166 sensitive receptors within 2km of the proposed turbines. This includes 3 No. commercial properties, 6 No. derelict houses and 157 No. residential receptors of which 5 No. are involved in the Project. The closest inhabited dwelling not involved in the Project is (H33) located 702m from the nearest turbine (T8). The closest dwelling involved in the Project is H28 located 529m from T3. All sensitive receptors located within 2km of the proposed turbines are shown on **Figure 1.3**. The nearest settlement is Charleville which is located approximately 2.5km (closest turbine) south of the Site.

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

Based on the constraints mapping, the Site has the potential to accommodate 9 no. 6MW wind turbines with an overall blade tip height of 170m. The candidate wind turbines have a rotor diameter of 150m and a hub height of 95m.

Initial grid connection feasibility work has been completed for the Project and a 'loop in' grid connection to the existing 110 kilovolt (kV) Overhead Line (OHL) between the existing Charleville 110kV substation and Killonan 220kV substation was selected as the preferred option.

1.5 SUMMARY OF PROPOSED PROJECT DESCRIPTION

Permission is being sought by the Developer for the construction of 9 No. wind turbines, a permanent Met Mast, an on-site 110kV Substation with a 'loop in' Grid Connection to the existing 110kV OHL between Charleville and Killonan, and all ancillary works. Temporary accommodation requirements at locations along the TDR are not included in the planning application but are assessed as part of the EIAR.

The Site is located within the townlands of Ballynagoul, Creggane and Garrane.

The proposed grid connection is located in the townland of Ballynagoul.

The proposed works within the Redline Boundary will include the following main components:

- Erection of 9 No. wind turbines with a tip height of 170m. The wind turbines will have a rotor diameter of 150m and a hub height of 95m.
- Upgrade of existing Access Tracks and construction of new permanent Access Tracks, permanent turbine hardstand areas and turbine foundations.
- Construction of two new bridge crossings on-site, one over the River Maigue and one over the Charleville Stream.
- Upgrade of existing site drainage network and installation of new site drainage.
- Wind Farm Internal Cabling connecting the wind turbines to the electrical substation.
- Construction of a permanent on-site AIS 110kV Substation, with a 'loop in' Grid Connection to the existing 110kV overhead line between Charleville and Killonan, including two single-storey control buildings with welfare facilities, all associated electrical plant and equipment, security fencing, gates, signage, all associated underground cabling, private well for water supply, wastewater holding tank, and all ancillary structures and works.
- Construction of a permanent double circuit 110kV underground cable and two steel cable interface masts to connect to the existing overhead line.
- Erection of a permanent 60m Meteorological Mast for monitoring wind speeds.
- Construction of a Temporary Construction Compound for use during construction.
- Upgrade of the existing entrance on the N20 (Site Entrance 1) (to be used for abnormal loads and turbine component delivery) and upgrade of an existing site entrance on the L1537 (Site Entrance 2) (to be used for all construction traffic except for abnormal loads and turbine component delivery).
- 6 No. temporary spoil storage areas and 1 No. permanent spoil storage area.
- Biodiversity enhancement and improvements associated with the Project.
- Landscaping, fencing and all associated ancillary works.

A 10-year planning permission and 35-year operational life from the date of commissioning of the entire wind farm is being sought. However, the onsite Substation and the Grid Connection will be handed over to ESB networks to own and operate. As part of the national grid infrastructure, permission is sought for the Grid Connection and the Substation in perpetuity.

The EIAR assesses the Project which includes the works within the Redline Boundary as outlined above as well as the temporary accommodation requirements at 6 No. locations along the proposed TDR from Foynes Port. An alternative TDR from the Port of Galway was also assessed for the delivery of turbine blades only which includes temporary accommodation works at 11 No. locations.

1.6 ENVIRONMENTAL IMPACT ASSESSMENT

1.6.1 Environmental Impact Assessment Requirement and National Legislation

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

The EIA 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 equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part".*

Part 2 of Schedule 5 of the Planning Regulations includes the following potentially relevant classes of an EIA Development:
Class 1(a) *" Projects for the restructuring of rural land holdings, undertaken as part of a wider proposed development, and not as an agricultural activity that must comply with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011, where the length of field boundary to be removed is above 4 kilometres, or where re-contouring is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares. "*
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."*
Class 10(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".

The Project comes within the scope of class 3(i) and is over the threshold specified therein. A mandatory EIA of the Project is required on that basis.

1,649m of hedgerow will be removed as part of the Project. On that basis, it is considered that the Project comes within the scope of class 1(a) but does not exceed the threshold specified therein. However, an EIAR is being submitted on the basis that the Project as a whole is likely to have significant effects on the environment.

4,100m of new Access Tracks and 1,080m of upgraded existing Access Tracks are proposed as part of the Project. As these are Access Tracks and not private roads, it is not considered that the Project comes within class 10(dd).

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

In addition, Annex IV of the EIA Directive provides further detail on the information to be included in an EIAR. These requirements are transposed under Article 94 and Schedule 6

of the Planning and Development Regulations 2001 (as amended), with which this EIAR complies.

The EIAR describes the receiving environment and assesses the likely significant effects of the proposed Project on the receiving environment and proposes mitigation measures to avoid or reduce these effects as well as appropriate monitoring to ensure the efficacy of such mitigation measures. The function of the EIAR is to provide information to allow the competent authority to conduct the EIA of the proposed Project. All elements of the Project (including the Turbine Delivery Route) have been assessed as part of this EIAR.

1.6.2.1 EIA Definition

Article 1(2)(g) of the 2014 EIA Directive defines EIA as a process consisting of:

"(i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2)

(ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7

(iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7

(iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination, and

(v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a".

1.6.2.2 Factors of the Environment

The EIA Directive 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 on the factors set out shall include the expected effects deriving from the vulnerability of the Project to risks of major accidents and/or disasters that are relevant to the Project concerned.

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

EIA Directive	Chapter	Title
(a) population and human health	5	Population and Human Health
(b) biodiversity, with particular attention to species and habitats protected under the Habitats and Birds Directives	6 7 8	Biodiversity Aquatic Ecology Ornithology
(c) land, soil, water, air and climate	2 6 7 8 9 10 11 13 14	Project Description Biodiversity Aquatic Ecology Ornithology Soils and Geology Hydrology and Hydrogeology Noise and Vibration Air Quality and Climate Shadow Flicker
(d) material assets, cultural heritage and the landscape	12 15 16 17	Landscape and Visual Amenity Archaeology and Cultural Heritage Material Assets & Other Issues Traffic Impact Assessment
(e) the interaction between the factors referred to in points (a) to (d)	18	Interactions of the Foregoing

1.6.2.3 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 on Site during both the construction and operational phases are limited. Sources of 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 waste, none of which will occur on the Site. The Site is not regulated under the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 i.e. SEVESO sites and so there is no potential effect from this source. The closest SEVESO site, at the Raheen Industrial Estate, Limerick is located approximately 23.1km north from the Site.

There is limited potential for significant natural disasters to occur at the 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 Site is relatively flat with no peat identified on the site, so the risk of peat slide is negligible. The risk of peat-slide is further addressed in **Chapter 9: Soils and Geology, Appendix 9.1 – Site Investigations & Stability Risk Assessment and Chapter 10: Hydrology and Hydrogeology**.

The closest mapped flood events to the Site are 2 no. historic and 1 no. recurring flood events along the N20 road on the western side of the Site. Provisional analysis of the OPW Flood Maps indicates that a significant portion of the proposed site is susceptible to fluvial flooding. To address this, a detailed site-specific Flood Risk Assessment has been carried out and the risk of flooding is addressed fully in **Chapter 10: Hydrology and Hydrogeology** and **Appendix 10.1 Stage III Site Specific Flood Risk Assessment.**

An article in Wind Power Engineering Magazine estimated that 1 in 2,000 wind turbines catch fire each year[4]. Overall, the data shows that wind turbine fires are relatively rare[5]. It is therefore considered that the risk of significant fire occurring, affecting 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 and infrastructure limits the potential for impacts on human health from pollution.

1.6.2.4 Alternatives to the Development

Article 5(1) of the EIA Directive sets out the information to be contained in an EIAR includes 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.

In addition, Annex IV, (2) of the EIA Directive 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 project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."*

[4] https://www.windpowerengineering.com/is-rope-based-descent-emergency-evacuation-at-the-end-of-its-tether/ [Accessed 06/08/25]
[5] https://www.firetrace.com/fire-protection-blog/wind-turbine-fire-statistics [Accessed 06/08/25]

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

1.6.2.5 National Guidance

The preparation of this EIAR has regard to the following documents:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, May 2022)[6]
- Draft Wind Energy Development Guidelines for Planning Authorities (DHPLG, 2019)
- The Department of Housing, Planning and Local Government (2018) Circular PL. 05/2018 -Transposition into Planning Law of Directive 2014/52/EU
- Department of Housing, Planning and Local Government 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment' (August 2018)
- Review of the Wind Energy Development Guidelines – Preferred Draft Approach (DoHPCLG, 2017)
- Best Practise Guidelines for the Irish Wind Energy Industry (IWEA, 2012)
- Guidelines for Environmental Impact Assessment of Electricity Transmission Projects (Eirgrid, various)
- Electricity Transmission Studies Evidence-Based Environmental Studies (Eirgrid, various)
- Wind Energy Development Guidelines for Planning Authorities (DoEHLG, 2006)

1.6.2.6 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.

1.6.2.7 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, (a) the developer shall ensure 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

[6] Environmental Protection Agency, (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports*. https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf - [Accessed 06/08/2025]

be contained in the EIAR), which is directly relevant to reaching a reasoned conclusion on the significant effects of the project 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*".
>
> Note there is a legal requirement under article 94(e) (Planning and Development Regulations 2001 (as amended):"
> *(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 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 staff from each company involved in the preparation of this EIAR are summarised 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 project involvement extending to over 2,500MW 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

This Project has been completed in line with JOD's Integrated Management System (IMS) 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 are fully certified and accredited to ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 for the provision of project management, environmental, civil and structural consulting engineering services.

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. **Table 1.4** provides details of the contributors of each aspect of the EIAR. 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.

1.7 NEED FOR THE 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 quantified 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 and Low Carbon Development Acts 2015 to 2021 has since prescribed that the national climate objective is to transition to a climate neutral economy by the end of the year 2050. A climate neutral economy is defined as a sustainable economy and society where greenhouse gas emissions are balanced or exceeded by the removal of greenhouse gases.

The Climate Action Plan 2025

The Climate Action Plan 2025[7] (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 need 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

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, 2GWs by 2025 and 9 GWs by 2030
- offshore wind, at least 8GWs by 2030
- solar, up to 5GW by 2025 and 8GW by 2030

These targets are unchanged for the previous two years. CAP25 states

"A renewables-led system is at the core of Ireland's plan to radically reduce emissions in the electricity sector, protect our energy security, and ensure our economic competitiveness. This requires the accelerated and increased deployment of new renewable electricity generation capacity and related infrastructure."

The Climate Action Plan 2024

Ireland's previous climate action plan was the Climate Action Plan 2024 (CAP24), which was approved by the government on May 21, 2024. This plan serves as the third annual

[7]Government of Ireland. (2025). Climate Action Plan 2025
https://assets.gov.ie/static/documents/Climate_Action_Plan_2025_updated_cover.pdf [Accessed 06/08/2025]

update to the original Climate Action Plan established in 2019 and is the second statutory update since the Climate Action and Low Carbon Development (Amendment) Act 2021 was enacted.

The CAP24 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. CAP24 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 80% target for electricity production from renewable sources by 2030, with an onshore wind energy target of 9 gigawatt (GW) 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 Project to the de-carbonisation of the Irish electricity network will contribute positively to an issue of strategic social importance and the significance of CAP24 is underlined by the Irish government's declaration of a Climate Emergency in 2019.

The Renewable Energy Directives 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)[8], 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").

[8] https://eur-lex.europa.eu/eli/dir/2023/2413/oj/eng [Accessed 06/08/2025]

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 climate neutral 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% to be achieved.

White Paper on Energy Policy in Ireland 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[9]. 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.

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 Project 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 Project is driven by the following factors:

- A requirement to diversify Ireland's energy sources, to achieve International, EU, and national renewable energy targets
- Avoidance of significant fines from the EU (the EU Renewables Directive)
- 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

9 https://www.gov.ie/pdf/?file=https://assets.gov.ie/77389/e5aa9f25-da81-43eb-804d-57309615681e.pdf#page=null [Accessed 06/08/2025]

- Increase energy price stability in Ireland by reducing an over-reliance on imported gas and exposure to international market price and supply fluctuations.

The Project will also offer opportunities such as:

- Provision of clean energy whilst minimising environmental impacts;
- 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 noted that Ireland's wind energy share of electricity demand in 2023 was 35% compared to 34% in 2022. The proposed Project will help achieve the 80% of electricity generated from the renewable energy target set by Red III.

The total installed capacity of the Republic of Ireland's wind farms is now 4,375MW[10]; this is approximately enough to power 2.2 million Irish homes annually.

The Project will contribute 54MW of renewable electricity or power for up to 37,000 homes. This represents c.1.2% of new onshore wind energy to reach the target of 9GW in CAP24. It also represents c.36% of the new Wind Target Capacity in the Limerick Development Plan 2022 – 2028 (LDP) of 152.1MW by 2030.

Chapter 4: Planning Policy of the EIAR relates to the Planning Policy Context and presents a full description of the international and national renewable energy policy context for the Project, including the Limerick Development Plan 2022-2028 (LDP) and the Cork County Development Plan 2022-2028 (CCDP).

Chapter 13: Air & Climate addresses Climate Change, including Ireland's current status with regard to meeting greenhouse gas emission reduction targets.

1.7.1.1 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:

[10]https://windenergyireland.com/images/files/20221026windenergyirelandoireachtasmembersbriefing.pdf [Accessed 06/08/2025].

(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 Commission 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 (**Appendix 18.1 - Schedule of Mitigation Measures**).

1.8 EIAR STRUCTURE

This EIAR uses the grouped structure method to describe the existing environment, the potential impacts of the Project thereon and the proposed mitigation measures. Background information relating to the Project, scoping and consultation undertaken and a description of the Project are presented in separate sections. The grouped format sections describe the impacts of the Project 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 assets and traffic and transportation, together with the Interactions of the foregoing. Please note that the Irish Transverse Mercator (ITM) coordinate system is used in the EIAR document for precise geographical referencing of the Project.

The layout of this EIAR is arranged in five volumes, I-V.

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 Project, the receiving environment, impacts, mitigation measures and interactions presented in a grouped format. It is a standalone document.

Volume II: This volume contains the main text of 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 Project thereon and the proposed mitigation measures. Background information relating to the Project, scoping and consultation undertaken and a description of the Project are presented in separate chapters.

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

- Chapter 1: Introduction
- Chapter 2: Project Description
- Chapter 3: Alternatives Considered
- Chapter 4: Planning & Policy
- Chapter 5: Population and Human Health
- Chapter 6: Biodiversity
- Chapter 7: Aquatic Ecology
- Chapter 8: Ornithology
- Chapter 9: Soils and Geology
- Chapter 10: Hydrology and Hydrogeology
- Chapter 11: Noise and Vibration
- Chapter 12: Landscape and Visual Assessment
- Chapter 13: Air Quality and Climate
- Chapter 14: Shadow Flicker and EMI
- Chapter 15: Archaeology and Cultural Heritage
- Chapter 16: Material Assets & Other Issues
- Chapter 17: Traffic and Transport
- Chapter 18: Interactions of the Foregoing

Volume III: EIAR Figures and Drawings

The Figures and Drawings 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 Project is a separate and distinct document from the EIAR.

1.9 EIAR PREPARATION

1.9.1 Introduction

JOD had overall responsibility for the coordination of the EIAR with input from other independent specialist consultants where necessary. The competency of JOD has been outlined in **Section 1.6.2.7**. **Table 1.3** provides details of the contributors of each aspect of the EIAR. 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	Contributor & Qualifications
1: Introduction	Mr. Andrew O'Grady, BSc., MSc., Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Mr. Padraig O'Dowd, B.A., GradDip, MSc, Junior Environmental Scientist, Jennings O'Donovan & Partners Limited Ms. Kathlyn Feeney, BSc, Environmental Consultant, Jennings O'Donovan & Partners Limited
2: Project Description	Mr. Andrew O'Grady, BSc., MSc., Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Ms. Sarah Moore, BSc., MSc, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Mr. Padraig O'Dowd, B.A., GradDip, MSc, Junior Environmental Scientist, Jennings O'Donovan & Partners Limited Ms. Kathlyn Feeney, BSc, Environmental Consultant, Jennings O'Donovan & Partners Limited
3: Alternatives Considered	Mr. Andrew O'Grady, BSc., MSc., Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Ms. Siobhan Roddy, BSc., Environmental Consultant, Jennings O'Donovan & Partners Limited
4: Planning & Policy	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited Ms. Breena Coyle, BA, MSc MRTPI HD Planning and Environmental Planning Law, Senior Planner, Jennings O'Donovan & Partners Limited Ms. Siobhan Roddy, BSc., Environmental Consultant, Jennings O'Donovan & Partners Limited

EIAR Chapter	Contributor & Qualifications
5: Population and Human Health	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited Ms. Sarah Moore, BSc., MSc, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Ms. Siobhan Roddy, BSc., Environmental Consultant, Jennings O'Donovan & Partners Limited
6: Biodiversity	Mr. Brian Madden, BA. Mod. (Hons), PhD, MCIEEM, Director, Biosphere Environmental Services Dr John Conaghan, BSc, PhD, MCIEEM, Enviroscope Environmental Consultancy Mr. John Curtin, BSc, Environmental Scientist, Eire Ecology Mr. Joe Adamson, BSc, MSc, MCIEEM, Environmental Scientist, BioSphere Environmental Services
7: Aquatic Ecology	Dr. Edward McCormack, Ph.D., BSc, Principal Ecologist, Aquafact Ms. Aisling Hearty, M.Sc., Senior Ecologist, Aquafact
8: Ornithology	Mr. Nick Henson BSc, MSc CEnv MCIEEM, Consultant Ecologist, Biocensus Ms. Ellis Perry, BSc, MSc, Consultant Ecologist, Biocensus Mr. George Wilkinson, BSc, MSc Senior Ecologist, Biocensus
9: Soils and Geology	Mr. John Whiteford, BSc (Hons), Director, Whiteford Geoservices Ltd
10: Hydrology and Hydrogeology	Mr. Michael Gill, P. Geo., B.A.I., MSc, Dip. Geol., MIEI, Environmental Engineer and Environmental Consultant, Hydro-Environmental Services Mr. Conor McGettigan, BSc, MSc, Environmental Scientist, Hydro-Environmental Services Mr. Nitesh Dalal, B.Tech, PG Dip., MSc, Environmental Scientist, Hydro-Environmental Services Mr. David Broderick, BSc, H. Dip Env Eng, MSc, Hydrogeologist, Hydro-Environmental Services
11: Noise and Vibration	Mr. Shane Carr, MPhil., Director, Irwin Carr Consulting Mr. Mark Burke BSc (Hons), Noise Modeller, Irwin Carr Consulting Mr. Brendan O Reilly, BSc, MSc, Senior Noise Consultant, Irwin Carr Consulting
12: Landscape and Visual Assessment	Mr. Richard Barker, MLA, PGD, BA, MILI, Director, Macro Works Limited

EIAR Chapter	Contributor & Qualifications
	Ms. Amy Doran, BA, LVIA Consultant Macro Works Limited Ms Bridget Macfarlane, BA, LVIA Consultant Macro Works Limited
13: Air Quality and Climate	Ms. Sarah Moore, BSc., MSc, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Mr. Padraig O 'Dowd, B.A., GradDip, MSc, Junior Environmental Scientist, Jennings O'Donovan & Partners Limited Ms. Kathlyn Feeney, BSc, Environmental Consultant, Jennings O'Donovan & Partners Limited
14: Shadow Flicker & EMI	Ms. Sarah Moore, BSc., MSc, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Ms. Kathlyn Feeney, BSc., Environmental Consultant, Jennings O'Donovan & Partners Limited
15: Archaeology and Cultural Heritage	Mr. Tony Cummins, BA., MA., Senior Archaeologist, John Cronin & Associates
16: Material Assets	Mr. Andrew O'Grady, BSc., MSc., Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Ms. Kathlyn Feeney, BSc., Environmental Consultant, Jennings O'Donovan & Partners Limited Mr. Kevin Hayes, B.Eng., M.Eng., Founding Director and Engineering Contracts Manager, Ai Bridges Limited Mr. Patrick Tinney, B.Eng. Electronics, B.Eng. Computer and IT Systems, Communications Engineer, Ai Bridges Limited
17: Traffic & Transport	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited Mr. John Doogan, NC., NDip. CEng. (HND), Senior Roads Technician, Jennings O'Donovan & Partners Limited
18: Interactions of the Foregoing	Mr. David Kiely, BSc., MSc., Director, Jennings O'Donovan & Partners Limited Ms. Sarah Moore, BSc., MSc, Senior Environmental Consultant, Jennings O'Donovan & Partners Limited Mr. Padraig O'Dowd, B.A., GradDip, MSc, Junior Environmental Scientist, Jennings O'Donovan & Partners Limited

1.9.2 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 and in the assessment of the significance of effects
- Baseline Description: A description of the Site's existing baseline, based on the results of surveys and desk information and consultations

- Assessment of Potential Environmental Effects: A description of how the baseline environment could potentially be affected for the Project including a summary of the measures taken during the design of the Project 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 of significance of the effects of the Project after mitigation measures have been implemented, including a time frame for the effective implementation of these measures, together with any necessary monitoring of measures undertaken during the lifetime of the Project
- Cumulative Effects: A description identifying the potential for effects of the Project to combine with those from other existing, pending and/or permitted developments to affect resources
- Statement of Significance of Effects.

The significance of effects resulting from the Project 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[11]' (EPA Guidelines, 2022) 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.

[11] https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed 06/08/2025]

Table 1.4: Effect Classification Terminology (EPA Guidelines, 2022)

Effect 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 significantly alters most of a sensitive aspect of the environment
	Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
	Profound	An effect which obliterates sensitive characteristics
Extent & Context	Extent	Describe the size of the area, number of sites and the proportion of a population affected by an effect
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions
Probability	Likely	Effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented

Effect Characteristic	Term	Description
	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
	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

1.9.3 Significance Criteria

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

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

Description of Effect 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

1.9.3.1 Mitigation Measures and Residual Effects

There are three established strategies for impact mitigation - avoidance, reduction/ elimination 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 Project. Mitigation measures have been prioritised and embedded into the design phase of the Project 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.

1.9.3.2 Cumulative Effects

The assessment has considered 'cumulative effects'; these are effects that result from increasing changes caused by past, present or those which are reasonably foreseeable together with the Project. Consideration has been given to the combined cumulative effects of several developments that may, on an individual basis, be insignificant, but which cumulatively may give rise to a significant effect. A cumulative assessment has been carried out in each of the technical chapters.

1.9.3.3 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 significance of the Project under the terms of the EIA Directive.

1.10 SCOPING AND CONSULTATION

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

The 2014 EIA Directive Circular (PL 05/2018) 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 May 2024. **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 Project, 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 Opinion.**

Table 1.6: Scoping Responses Received on The Project

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
Local Authorities			
Limerick County Council Planning Section	Email response received 04/07/2024 "Many thanks for your mail. Same has been forwarded to the planner for review." <u>Pre-Planning Meeting held 13/09/2024</u> Attendees: The Local Authority noted the following: **Landscape** The site is within the Agricultural Lowlands LCA 01 Agricultural Lowlands Landscape Character Area. The regular arrangement of turbines with equal spacing in proposed wind farm developments, which take field boundaries into account is encouraged in this landscape character area. Viewpoints and rationale for the Landscape and Visual Impact Assessment were discussed. **Flooding** The Site is within Flood Zone A and B and OPW benefiting lands. Hydrology reports are to be prepared. Archaeology There are a number of recorded monuments within the site. The County Archaeologist noted that test investigations should be carried out on site and in the event that works are being carried out to the bank of River Maigue, appropriate testing should be undertaken. **Access arrangements** A temporary entrance is proposed onto the N20 and TII are aware of this. There is ongoing consultation with the Roads Department, Area Planner to be included in discussions. Turbine Delivery Route has the benefit of the National Road Network and the Motorway. **Noise** The project delivery team and the Environment Department of Limerick City and County Council will be liaising in regard to potential noise created by the proposal. <u>Meeting with Simon Jennings (LCC Noise Specialist) held 26/09/2024</u> Attendees: Simon Jennings (LCC), Shane Carr (Irwin Carr), Larry O Halloran (Garrane Green Energy), Tomás Leen (Garrane Green Energy), and Sarah Moore (Jennings O'Donovan). The following was noted: • Shane Carr – "AM cannot be predicted, in the event of occurrence during operation, a penalty of up to 5dB can be added in accordance with IOA guidance" • Simon – "AM penalty could be as per RenewableUK guidance, new IEC guidance IOA working group method could be used. WSP report shows a penalty between 3dB to 5dB. • All parties agree on approach to AM, likely to be a clause on a planning condition. • Shane Carr noted that "Predicted levels are typically higher than actual" • Simon J noted "Road noise could effect measurements", Shane Carr noted that these are a different frequency to the wind turbine noise emissions. GS confirmed that background noise monitoring was undertaken 29th Jan to 1st Mar 2024.	All items considered during the design process. No implications for the EIA/Design	**Landscape discussed in Chapter 12: Landscape and Visual Assessment** Flooding addressed in **Chapter 10: Hydrology and Hydrogeology** and **Appendix 10.1 Flood Risk Assessment** Access Arrangements are addressed in **Chapter 2: Project Description**, **Chapter 17: Traffic and Transport** and **Appendix 17.5 Road Safety Audit** **Noise** is addressed in **Chapter 11: Noise and Vibration**
Limerick County Council Roads Section	Email response received 23/05/2024: *'All correspondence of this nature must firstly be sent to the Planning Authority. The Road Section will not make comment until we are requested to do so by our Planning Section.'*	na	**na**
Limerick County Council Water Services	No response received	na	na
Limerick County Council Environment Section	No response received	na	na

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
Cork County Council	No response received	na	na
Aviation			
Cork Airport	Email response received 23/05/2024: *'Your request has now been forwarded to our Senior Planner for comment. You will be contacted regarding same as soon as possible.'*	na	na
Shannon Airport Authority	Email response received 17/09/2024: *'In general terms, the siting of wind turbines at this location may have implications for the operations of the communication, navigation and surveillance systems used by Air Nav Ireland for the separation and safety of aircraft. The geographical siting of these turbines may also have implications for the flight paths of aircraft.* *Shannon Airport Authority DAC has specific responsibility to define the airspace around its aerodrome which must be maintained free from obstacles to permit the intended aircraft operations at the aerodrome to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around it. This is achieved by establishing a series of obstacle limitation surfaces (OLS) that define the limits to which objects (temporary or permanent) may project into the airspace. These surfaces may extend many kilometres outwards from the active runway strip at the aerodrome.* *With specific reference to the Garrane geographical location, and arising from our own internal assessment, this development of nine turbines will have no impact on the aerodrome OLS. The development is not within the protection areas as per our safeguarding maps. As there is no penetration of the aerodrome OLS surfaces, it is unlikely that there will be any Annex 14 OLS impacts due to the proposed wind farm.* *Shannon Airport does, however, also note and share the concerns of our colleagues in Air Nav Ireland specifically relating to potential impacts on IFP's and NAVAIDS/radar systems. We are not aware of any correspondence made by you directly to the Air Nav Ireland, Airspace and Navigation Manager advising them of this development in respect of the above systems. It would be advisable to reach out to them: (cathal.maccriostail@airnav.ie).* ***Please note:** For developments of this type the following conditions/requirements must be considered:* • *If the turbines are within 45km of Shannon Airport's ARP (Aerodrome Reference Point) and are greater than 100m in height they would be required to be included in the IAA Electronic Air Navigation Obstacle Dataset.* • *Also, standard: Chapter Q (Visual Aids for Denoting Obstacles) of the Certification Specifications for Aerodrome Design – Current Issue, contained in the EASA aerodrome rules must be applied to the turbines as they would be regarded as an extensive object.* • *During the construction phase of any development, any crane activity on the site must be pre-approved by the completion of the Shannon Airport Crane Operations application form (at least 30 days in advance) of any crane erection taking place in order for assessments to be carried out by the Airport, IAA and Air Nav Ireland against possible interferences by cranes against communication, navigation and surveillance systems.'*	All items considered during the design process. No implications for the EIA/Design	**Air Navigation** is addressed in **Chapter 15: Material Assets and Other Issues**
AirNav Ireland	Email response received 16/08/2024: *'I can confirm that the proposed Garrane Wind Farm, Co. Limerick, is not a concern in relation to its impact on AirNav Ireland's Surveillance radar infrastructure.'*	na	**Air Navigation** is addressed in **Chapter 16: Material Assets and Other Issues**
IAA	Email response received 27/05/2024: *'According to S.I. 215 of 2005, Irish Aviation Authority (Obstacles to Aircraft in Flight), the IAA AUSD requires any person who seeks to erect a manmade object to notify the aerodrome operator of the intended operation at least thirty days in advance if the structure is to be erected in the vicinity of the aerodrome or the areas around the aerodrome and other protected surfaces associated with the aerodrome. Aerodrome Operators can be contacted via the AirNav Ireland AIP AD 1.3 INDEX TO AERODROMES AND HELIPORTS, to evaluate the impact of the intended operation on the protected airspace established for the aerodrome.* *Additionally, any person who seeks to erect a manmade object in excess of 45 metres anywhere within the state above ground or water surface level must also notify the IAA AUSD of the intended crane erection at least thirty days in advance, as a crane operating at or above this height may constitute an obstacle to air navigation. The IAA AUSD can be contacted via ausd@iaa.ie.*	All items considered during the design process. No implications for the EIA/Design	**Air Navigation** is addressed in **Chapter 16: Material Assets and Other Issues**

<table>
<tr><th>Consultee Organisation</th><th>Response Received</th><th>Implications for the EIA/Design</th><th>EIAR Chapter/Section where comments have been addressed</th></tr>
<tr><td></td><td>
The State requires electronic terrain and obstacle data (eTOD) in accordance with International Civil Aviation Organisation (ICAO) Annex 15 requirements which shall be surveyed by SLC Geomatic Solutions Ltd. (SLC). The cost of this SLC surveyed data is to be borne by the developer. Additionally, the following data is to be supplied once construction is planned or commenced or available to the Airspace & U-Space team via ausd@iaa.ie:

• The WGS84 coordinates (In degrees, minutes and seconds) for each turbine?
• Height above ground level (to blade tip) and elevation above mean sea level (to blade tip)?
• Verification if it's a standalone wind farm or is merged with others. Does the wind farm have any alternative names?
• Horizontal extent (rotor diameter) of turbines and blade length where applicable?
• Lighting of the wind farm, which turbine(s) is/are lit, and what type of lighting? '

<table>
<tr><th>ICAO Light Type</th><th>Colour</th></tr>
<tr><td>Low-intensity Type A (fixed obstacle)</td><td>Red</td></tr>
<tr><td>Low-intensity Type B (fixed obstacle)</td><td>Red</td></tr>
<tr><td>Low-intensity Type C (mobile obstacle)</td><td>Yellow/Blue</td></tr>
<tr><td>Low-intensity Type D (follow-me vehicle)</td><td>Yellow</td></tr>
<tr><td>Low-intensity Type E</td><td>Red</td></tr>
<tr><td>Medium-intensity Type A</td><td>White</td></tr>
<tr><td>Medium-intensity Type B</td><td>Red</td></tr>
<tr><td>Medium-intensity Type C</td><td>Red</td></tr>
<tr><td>High-intensity Type A</td><td>White</td></tr>
<tr><td>High-intensity Type B</td><td>White</td></tr>
</table>
Email response received 04/06/2024:
'As the proposed development appears to be approximately 38km south of Shannon Airport, as such, it is the observation of the Irish Aviation Authority, that even at this pre-planning stage, it would be prudent to engage as early as possible with Shannon Airport Authority and the air navigation service provider, AirNav Ireland to undertake a preliminary screening assessment to confirm that the proposed wind farm and the associated cranes that would be utilised during its construction would have no impact on instrument flight procedures, communication and navigation aids or other en route communication, navigation and surveillance equipment.
It is likely that the following general observations would be proffered by the Authority during a formal planning process: In the event of planning consent being granted, the applicant should be conditioned to contact the Irish Aviation Authority to:
(1) agree an aeronautical obstacle warning light scheme for the wind farm development,
(2) provide as-constructed coordinates in WGS84 format together with ground and blade tip height elevations at each wind turbine location and
(3) notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection.'
</td><td></td><td></td></tr>
<tr><td colspan="4">Ecology</td></tr>
<tr><td>An Taisce</td><td>No response received</td><td>na</td><td>na</td></tr>
<tr><td>Bat Conservation Ireland</td><td>Email response received 05/07/2024:

'Unfortunately, as Bat Conservation Ireland is a very small organisation, with limited resources, we do not have the capacity to get involved in planning issues.

Please note that Bat Conservation Ireland is concerned that a request for our input/consultation/opinion/assistance on planning applications and reports, or objections/comments on same, can sometimes imply that we have been consulted for our opinion on planning matters when Bat Conservation Ireland does not, in fact, provide opinions or comments on developments.</td><td>na</td><td>Bats are addressed in Chapter 6: Biodiversity</td></tr>
</table>

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	Therefore, please note that this response should not be construed as a consultation with Bat Conservation Ireland regarding any planning or development matter or proposal. In order to avoid misunderstandings, please do not use this terminology in your reports to describe this transaction.'		
Birdwatch Ireland	No response received	na	na
Irish Wildlife Trust	No response received	na	na
Soils and Water			
Geological Survey of Ireland	Response as per 'Department of Environment, Climate and Communications' received 13/06/2024: '*With reference to your email received on the 23 May 2024, concerning the EIAR scoping for Garrane Green Energy, Co Limerick, Geological Survey Ireland would encourage use of and reference to our datasets. Please find attached a list of our publicly available datasets that may be useful to the environmental assessment and planning process. We recommend that you review this list and refer to any datasets you consider relevant to your assessment. The remainder of this letter and following sections provide more detail on some of these datasets'*. *'Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out. The data would be added to Geological Survey Ireland's national database of site investigation boreholes, implemented to provide a better service to the civil engineering sector'*.	All items considered during the design process. No implications for the EIA/Design	**Policy** is addressed in **Chapter 4: Planning and Legislative Context** **Soils and Geology** are addressed in **Chapter 9: Soils and Geology**
Inland Fisheries Ireland	No response received	na	na
Irish Peatland Conservation Council	No response received	na	na
The Local Authority Waters Programme (LAWPRO)	No response received	na	na
The International Association of Hydrogeologists (IAH) Irish Group	Email response received 16/08/2024: *'IAH(Irish group) do not comment on windfarm development as our mission is in relation to the promotion and development of the science and engineering of groundwater issues.'*	na	na
OPW	Email response received 10/06/2024: **Condition for maintenance:** A 10 Metre wide strip of land running parallel to the main channels C1, C1/34 and a 5 Metre wide strip of land running parallel to the channelsC1/35, C1/35/1, C1/36, C1/36/1, C1/36/2, C1/37, C1/37/1 and C1/37/2, should be provided to facilitate access and maintenance activities by this office in the immediate area. This area should be accessible to mechanical plant and should not be landscaped, paved or otherwise developed in a manner that would prevent access. The site indicated on the map proposed for the project falls within the area deemed to benefit from drainage by channels C1, C1/34, C1/35, C1/35/1, C1/36, C1/36/1, C1/36/2, C1/37, C1/37/1 and C1/37/2of the Maigue Drainage scheme. As a result, it may be subject to an increased flood risk. The proposal identifies a new bridge over the River Maigue, but the location is not provided. Any new culverts or bridges (or modifications to any existing culverts or bridges) are required to cross watercourses as part of the development or on proposed or existing access roads to serve or access the development; you should be aware that these require consent from the Commissioners of Public Works. This is a requirement of Section 50 of the Arterial Drainage Act of 1945 as amended. Please note that, in the context of seeking consent under Section 50, the current required design standard for bridges or culverts is based on the flood with an annual exceedance probability of 1% (often referred to as the 100 year flood), increased by 20% to cater for the effects of Climate Change. Bridges or culverts are required to be able to convey this design flood without	All items considered during the design process. No implications for the EIA/Design	**Drainage** is addressed in **Chapter 10: Hydrology and Hydrogeology** & **Appendix 2.1 CEMP – Management Plan 4: SWMP**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	significantly altering the hydraulic characteristics of the watercourse –further details on this issue are available in the brochure and can be clarified depending on the circumstances of any particular proposed bridge or culvert. You should be aware that a grant of Planning Permission by a planning authority for a development which contains bridges or culverts does not confer section 50 consent on the applicant, nor does it absolve the applicant from the requirement to obtain such consent from the Commissioners. Regarding the proposed Internal wind farm underground power and communications cabling route indicated in your documentation but the location not provided, it is possible that this route may cross several watercourses. If the cable and ducting are to be buried in the road as they cross bridges over the water courses, and there is no interference with the opening in the bridge spanning the watercourse, then there is no issue. On the other hand, if it is proposed to pass the cable in its ducting through the opening of any bridge or culvert, this would be considered to be a modification of a bridge, and it would require the consent of the Commissioners under Section 50 as mentioned above. Similarly, if it is proposed to carry the cable in its ducting across watercourses on new support structures spanning the watercourses, these should be treated as if they are bridges, and the consent of the commissioners under Section 50 should be obtained. If the cable and ducting are to be buried under the natural bed of the watercourses being crossed, Section 50 would not apply, and we would recommend that the duct be buried a sufficient distance below the natural bed to allow for erosion and mobility of the stream bed. We would recommend that a flood risk assessment be carried out with regard to the proposed development and its construction. This should consider all sources, pathways and receptors of flood risk. This should be carried out in accordance with the principles set out in the guideline document "The Planning System and Flood Risk Management" as published by the Minister for the Environment, Heritage and Local Government and the Office of Public Works. Please be aware that this is a separate issue from the requirement to obtain Section 50 consent,as mentioned above. *Include the following paragraph if the correspondence being dealt with relates to the preparation of an EIA.* *In terms of the preparation of an EIA, the matters referred to above principally relate to the Hydrology Section, and the Risk of Flooding on a development such as this can impact on Landscape (e.g. landslides that have been reported in recent years), Infrastructure (roads and bridges) and people and their homes, among other things. The aim of the Section 50 process and the Flood Risk Assessment, which is recommended, would be to mitigate any increased risk of flooding and the consequences of same, as arising from the proposed development.*		
Telecommunications			
Broadcasting Authority of Ireland	Email response received 03/07/2024: *'Coimisiún na Meán does not perform an in-depth analysis of the effect of wind turbines or electrical sub stations on FM networks. However, we are not aware of any issues from existing windfarms or electrical sub stations into existing FM networks. Also, the proposed sub station is not located close to any existing or planned FM transmission sites.'*	All items considered during the design process. No implications for the EIA/Design	**Telecommunications** are addressed in **Chapter 16: Material Assets and Other Issues**
Eir Limited	No response received	na	na
ESB Telecoms	No response received	na	na
RTÉ	Email response received 23/05/2024: *'2rn have no fixed linking that would be affected by the proposed windfarm.* *There is risk of interference to broadcast services in the area. We would therefore ask that a protocol be signed between 2rn and the developer should the site go ahead.'*	No implications for the EIA/Design	**Telecommunications** are addressed in **Chapter 16: Material Assets and Other Issues**
TV3	No response received	na	na
Three Ireland (Hutchison) Limited	No response received	na	na

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
Tetra	Email response received 22/07/2024: *'We anticipate no impact from the development as proposed.'*	All items considered during the design process. No implications for the EIA/Design	**Telecommunications** are addressed in **Chapter 16: Material Assets and Other Issues**
Virgin Media	Email response received 24/07/2024: Virgin Media shared a drawing showing the location of the cabling. The cable extends along the western red line boundary of the study area of the Project.	All items considered during the design process. No implications for the EIA/Design	**Telecommunications** are addressed in **Chapter 16: Material Assets and Other Issues**
Other			
Commission for Communications Regulation	Email response received 09/07/2024: *'Please use ComReg's siteviewer to see what masts are in the relevant area for you https://siteviewer.comreg.ie/#explore'* There are no masts located within the redline boundary of study area of the Project. The closest mast (Site ID VOD_CKCVE) is located c. 905 metres southwest of the Development.	All items considered during the design process. No implications for the EIA/Design	**Telecommunications** are addressed in **Chapter 16: Material Assets and Other Issues**
Department of Agriculture, Food and Marine	Email response received 07/08/2024: *'The following are the comments from this Division in relation to the proposed development:* *If the proposed development will involve the felling or removal of any trees, the developer must obtain a Felling License from this Department before trees are felled or removed. A Felling Licence application form can be obtained from* ***Felling Section, Department of Agriculture, Food and the Marine, Johnstown Castle Estate, Co. Wexford****. Email: felling.forestservice@agriculture.gov.ie or Web gov.ie - Tree Felling Licences (www.gov.ie)* *A Felling Licence granted by the Minister for Agriculture, Food and the Marine provides authority under the Forestry Act 2014 to fell or otherwise remove a tree or trees and/or to thin a forest for silvicultural reasons. The Act prescribes the functions of the Minister and details the requirements, rights and obligations in relation to felling licences. The principal set of regulations giving further effect to the Forestry Act 2014 are the Forestry Regulations 2017 (S.I. No. 191 of 2017).* *The developer should take note of the contents of* ***Felling and Reforestation Policy*** *document which provide a consolidated source of information on the legal and regulatory framework relating to tree felling; gov.ie - Tree Felling Licences (www.gov.ie) As this development is within forest lands, particular attention should be paid to deforestation, turbulence felling and the requirement to afforest alternative lands.* *In order to ensure regulated forestry operations in Ireland accord with the principles of sustainable forest management (SFM), as well fulfilling the requirements of other relevant environmental protection laws, the Department (acting through its Forest Service division) must undertake particular consultations, and give certain matters full consideration during the assessment of individual Felling Licence applications. This includes consultation with relevant bodies, the application of various protocols and procedures (e.g. Forest Service Appropriate Assessment Procedure), and the requirement for applicants on occasion to provide further information (e.g. a Natura Impact Statement).* *Consequently, when the Forest Service is considering an application to fell trees, the following applies:*	All items considered during the design process. No implications for the EIA/Design	There is no forestry removal as part of this Project.

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	1. *The interaction of these proposed works with the environment locally and more widely, in addition to potential direct and indirect impacts on designated sites and water, is required where specific sensitivities arise (e.g. local authorities, National Parks & Wildlife Service, Inland Fisheries Ireland, and the National Monuments Service);* 2. *Where a tree Felling Licence application is received, the Department will publish a notice of the application before making a decision on the matter. The notice shall state that any person may make a submission to the Department within 30 days from the date of the notice. The notices are published online at: gov.ie - Felling Licence Applications (www.gov.ie)* 3. *Third parties that make a submission or observation will be informed of the decision to grant or refuse the licence, and on request, details of the conditions attached to the licence, the main reasons and considerations on which the decision to grant or refuse the licence was based, and where conditions are attached to any licence, the reasons for the conditions. Both third parties and applicants will be also informed of their right to appeal any decision within 14 days to the Forestry Appeals Committee. Felling Licence decision are published online at: gov.ie - Felling Licence Decisions (www.gov.ie)* *It is important to note that when applying to **a Local Authority**, or **An Bord Pleanála**, for planning permission where developments are:* *a) subject to an EIA procedure (including screening in the case of a sub-threshold development) and any resulting requirement to produce an EIAR; and/or* *b) subject to an Appropriate Assessment procedure (including screening) and any resulting requirement to a Natura Impact Statement (NIS); and* *c) the proposed development in its construction or operational phases, or any works ancillary thereto, would directly or indirectly involve the felling and replanting of trees, deforestation for the purposes of conversion to another type of land use, or replacement of broadleaf high forest by conifer species,* *1. that there is a requirement inter alia under the EIA Directive for an overall assessment of the effects of the project or the alteration thereof on the environment to be undertaken, including the direct and indirect environmental impact of the project;* *and* *2. pursuant to Article 2(3) of the EIA Directive, the Department of Agriculture, Food and the Marine strongly recommends that, notwithstanding the fact that a parallel consent in the form of felling licence may also have to be applied for, any EIAR and/or NIS produced in connection with the application for planning permission to the Local Planning Authority or An Bord Pleanála, should include an assessment of the impact of and measures, as appropriate, to prevent, mitigate or compensate for any significant adverse effects direct or indirect identified on the environment arising from such felling and replanting of trees, deforestation for the purposes of conversion to another type of land use, or replacement of broadleaf high forest by conifer species.* *3. Please note that there must be absolute spatial consistency between the felling licence areas submitted to DAFM (second authority) and all related planning documents submitted to the first authority in respect of the felling area(s)'*		
Department of Defence	Email response received 27/05/2024: *'Based on the information supplied and following consultations with the subject matter in the Irish Air Corps, the Department of Defence wishes to make the following observations:* *All turbines should be illuminated by Type C, Medium intensity, Fixed Red obstacle lighting with a minimum output of 2,000 candela to be visible in all directions of azimuth and to be operational H24/7 days a week. Obstacle lighting should be incandescent or, if LED or other types are used, of a type visible to Night Vision equipment. Obstacle lighting used must emit light at the near Infra- Red (IR) range of the electromagnetic spectrum, specifically at or near 850 nanometres (nm) of wavelength. Light intensity to be of similar value to that emitted in the visible spectrum of light.'*	All items considered during the design process. No implications for the EIA/Design	**Chapter 16: Material Assets and Other Issues**
Department of Tourism, Culture, Arts, Gealtacht, Sport and Media	Email response received 08/07/2024: 'Please note the Department is not in a position to make specific comment on this particular referral at this time. No inference should be drawn from this that the Department is satisfied or otherwise with the proposed activity. The Department may submit observations/recommendations at a later stage in the process.'	na	**na**
Department of Environment, Climate and Communications	Email response received 13/06/2024 '*With reference to your email received on the 23 May 2024, concerning the EIAR scoping for Garrane Green Energy, Co Limerick, Geological Survey Ireland would encourage use of and reference to our datasets. Please find attached a list of our publicly available datasets that may be useful to the environmental assessment and planning process. We recommend that you review this list and refer to any datasets you consider relevant to your assessment. The remainder of this letter and following sections provide more detail on some of these datasets'*.	All items considered during the design process. No implications	**Policy** is addressed in **Chapter 4: Planning and Legislative Context** **Soils and Geology** are addressed in **Chapter 9: Soils and Geology**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	'Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out. The data would be added to Geological Survey Ireland's national database of site investigation boreholes, implemented to provide a better service to the civil engineering sector'.	for the EIA/Design	
Environmental Protection Agency	No response received	na	na
Fáilte Ireland	Email response received 04/06/2024: *'Please see attached a copy of Fáilte Ireland's Guidelines for the Treatment of Tourism in an EIA, which you may find informative for the preparation of the Environmental Impact Assessment for the proposed project. The purpose of this report is to provide guidance for those conducting Environmental Impact Assessment and compiling an Environmental Impact Assessment Reports (EIAR), or those assessing EIARs, where the project involves tourism or may have an impact upon tourism. These guidelines are non-statutory and act as supplementary advice to the EPA EIAR Guidelines outlined in section 2.'*	na	**Tourism** is addressed in **Chapter 5: Population and Human Health**
Health Service Executive	Email response received 12/06/2024: *'The following documents should be taken into consideration when preparing the Environmental Impact Assessment Report:* *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* *https://www.housing.gov.ie/sites/default/files/publications/files/guidelines_for_planning_authorities_and_an_bord_pleanála_on_carrying_out_eia_-_august_2018.pdf* *EU publication: Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report, EU, 2017* *http://ec.europa.eu/environment/eia/pdf/EIA_guidance_EIA_report_final.pdf* *Adoption of the Directive (2014/52/EU) in April 2014 initiated a review of the National Guidance for EIA and the EIAR accompanying a planning application. New guidelines can be seen at:* *https://www.epa.ie/publications/monitoring--assessment/assessment/guidelines-on-the-information-to-be-contained-in-environmental-impact-assessment.php* *The introduction of the new Guidance is supported by a Webinar produced by the EPA and can be found at:* *https://www.youtube.com/embed/ejKVFUztxBY* *The applicant should also consider the findings of the High Court judgement issued in the judicial review of the Derryadd Wind Farm. (2021 IEHC 390 [20202 No. 557 JR] P. Sweetman v An Bord Pleanála)'..* *'The applicant should be aware of the proposed development of the Greenway in the area and any opportunities this offers for enhanced connectivity and positive health gain from the proposed development'.* ***Public Consultation*** *It is recommended that early and meaningful public consultation with the local community is undertaken to ensure all potentially significant impacts of the proposed renewable energy development have been adequately addressed.* *All parties affected by the proposed development, including those who may benefit financially from the project, must be fully informed of what the proposal entails especially with regard to potential impacts on surrounding areas.* *Sensitive receptors and other stakeholders should be identified to ensure all necessary and appropriate mitigation measures are put in place to avoid any complaints about the proposed wind farm development in the future.* ***Decommissioning*** *The EIAR should detail the eventual fate of the wind turbines and associated material, i.e. will the material be recycled or how will it be disposed of.* *Information should also be provided regarding the proposed methodology to be used for the disposal of the materials forming the foundations of the wind turbines.* *The EIAR should indicate the proposed future use of the development site at the end of the planning permission period.* ***Siting, Location and details of Turbine***	N/A	Items raised under **Public Consultation** are addressed in **Chapter 1: Introduction** Items raised under **Decommissioning** are addressed in **Appendix 2.1 CEMP – Management Plan 6: Decommissioning Plan** Items raised under **Siting, Location** and **details of Turbine** are addressed in **Chapter 2: Project Description** Items raised under **Assessment of Consideration of Alternatives** is addressed in **Chapter 3: Alternatives Considered** Items raised under **Noise & Vibration** are addressed in **Chapter 11: Noise and Vibration** Items raised under **Shadow Flicker** are addressed in **Chapter 14: Shadow Flicker**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	The EIAR should include a map and a description of the proposed location of each of the proposed wind turbines. The Environmental Health Service expects that details (height and model) of the turbines to be installed will be available at the time planning permission is sought and will be included in the EIAR. Details of the foundations for the wind turbine including depth, quantity and material to be used should be included in the EIAR. ***Assessment of Consideration of Alternatives*** *The EIAR should consider an assessment of alternatives. The EHS recommends that alternative renewable energy options to on- shore wind farms should be assessed as part of the EIAR.* ***Noise & Vibration*** *The potential impacts for noise and vibration from the proposed development on all noise sensitive locations must be clearly identified in the EIAR. The EIAR must also consider the appropriateness and effectiveness of all proposed mitigation measures to minimise noise and vibration.* ***Shadow Flicker*** *It is recommended that a shadow flicker assessment is undertaken to identify any dwellings and sensitive receptors which may be impacted by shadow flicker. The assessment must include all proposed mitigation measures. Dwellings should include all occupied properties and any existing or proposed properties for which planning consent has been granted for construction or refurbishment.* *It is recommended that turbine selection will be based on the most advanced available technology that permits shut down during times when residents are exposed to shadow flicker. As a result no dwelling should be exposed to shadow flicker.* ***Air Quality*** *Due to the nature of the proposed construction works generation of airborne dust has the potential to have significant impacts on sensitive receptors. A Construction Environmental Management Plan (CEMP) should be included in the EIAR which details dust control and mitigation measures.* ***Surface and Ground Water Quality*** *The proposed development has the potential to have a significant impact on the quality of both surface and ground water. All drinking water sources, both surface and ground water, must be identified. Public and Group Water Scheme sources and supplies should be identified in addition to any private wells supplying potable water to houses in the vicinity of the proposed development. Measures to ensure that all sources and supplies are protected should be described. The Environmental Health Service recommends that a walk over survey of the site is undertaken in addition to a desktop analysis of Geological Survey of Ireland data in order to identify the location of private wells used for drinking water purposes. Any potential significant impacts to drinking water sources should be assessed. Details of bedrock, overburden, vulnerability, groundwater flows, aquifers and catchment areas should be considered when assessing potential impacts and any proposed mitigation measures.* ***Geotechnical and Peat Stability Assessment*** *A detailed assessment of the current ground stability of the site for the proposed windfarm development and all proposed mitigation measures should be detailed in the EIAR. The assessment should include the impact construction work may have on the future stability of ground conditions, taking into consideration extreme weather events, site drainage and the potential for soil erosion.* ***Ancillary Facilities*** *The EIAR should include details of the location of all site office, construction compound, fuel storage depot, sanitary accommodation and canteen, First Aid facilities, disposal of wastewater and the provision of a potable water supply to the site canteen.* ***Cumulative Impacts*** *All existing or proposed wind farm developments in the vicinity should be clearly identified in the EIAR.* *The impact on sensitive receptors of the proposed development combined with any other wind farm/renewable energy developments in the vicinity should be considered. The EIAR should include a detailed assessment of any likely significant cumulative impacts of the proposed windfarm development.*		**Air Quality** is addressed in **Chapter 13: Air Quality and Climate** **Surface and Ground Water Quality** are addressed in **Chapter 10: Hydrology and Hydrogeology** **Geotechnical and Peat Stability Assessment** is addressed in **Chapter 9: Soils and Geology** **Ancillary Facilities** are addressed in **Chapter 2: Project Description** and **Appendix 2.1 CEMP** **Cumulative Impacts** are addressed in **Chapters 3 - 16**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
Irish Water	Email response received 09/07/2024: *'Uisce Éireann note the proposals are located within the surface water abstraction catchment for the Adare Public Water Supply, with the abstraction point on the River Maigue located 21km downstream of the proposed development. There is a potential pollution pathway due to hydrological connectivity between the Charleville Stream_020 and Maigue_030 which are tributaries to the Maigue_080, where Uisce Éireann abstracts, that would need to be considered.* *At present, Uisce Éireann does not have the capacity to advise on the scoping of individual projects. However, in general the following aspects of Water Services should be considered in the scope of an EIA where relevant;* *a) Proximity to Abstraction Points* *All potential impacts arising from the development proposal on Uisce Éireann's abstraction points must be identified and addressed in the EIAR. This includes the Adare Water Supply which abstracts from the River Maigue located 21km downstream of the proposed development and any other surface water or groundwater abstraction points where a potential hydrological and hydrogeological pathway exists. The EIAR must include and consider all direct, indirect and cumulative effects on the abstraction points.* *b) Where the development proposal has the potential to impact an Uisce Éireann Drinking Water Source(s), the applicant shall provide details of measures to be taken to ensure that there will be no negative impact to Uisce Éireann's Drinking Water Source(s) during the construction and operational phases of the development. Hydrological / hydrogeological pathways between the applicant's site and receiving waters should be identified as part of the report.* *c) Stormwater Run Off and Hydrocarbons* *The potential impacts arising from run off and hydrocarbon during construction, operational and decommissioning phases should be addressed to include mitigations against contaminants entering groundwater and surface waters via hydrological and hydrogeological pathways.* *d) Where the development proposes the backfilling of materials, the applicant is required to include a waste sampling strategy to ensure the material is inert.* *e) Mitigations should be proposed for any potential negative impacts on any water source(s) which may be in proximity and included in the environmental management plan and incident response.* *f) Any and all potential impacts on the nearby reservoir as public water supply water source(s) are assessed, including any impact on hydrogeology and any groundwater/ surface water interactions.* *g) Impacts of the development on the capacity of water services (i.e. do existing water services have the capacity to cater for the new development). This is confirmed by Uisce Éireann in the form of a Confirmation of Feasibility (COF). If a development requires a connection to either a public water supply or sewage collection system, the developer is advised to submit a Pre-Connection Enquiry (PCE) enquiry to Uisce Éireann to determine the feasibility of connection to the Uisce Éireann network. All pre-connection enquiry forms are available from https://www.water.ie/connections/connection-steps/.* *h) The applicant shall identify any upgrading of water services infrastructure that would be required to accommodate the proposed development.* *i) In relation to a development that would discharge trade effluent – any upstream treatment or attenuation of discharges required prior to discharging to an Uisce Éireann collection network.* *j) In relation to the management of surface water; the potential impact of surface water discharges to combined sewer networks and potential measures to minimise and or / stop surface waters from combined sewers.* *k) Any physical impact on Uisce Éireann assets – reservoir, drinking water source, treatment works, pipes, pumping stations, discharges outfalls etc. including any relocation of assets.* *l) When considering a development proposal, the applicant is advised to determine the location of public water services assets, possible connection points from the applicant's site / lands to the public network and any drinking water abstraction catchments to ensure these are included and fully assessed in any pre-planning proposals. Details, where known, can be obtained by emailing an Ordnance Survey map identifying the proposed location of the applicant's intended development to datarequests@water.ie* *m) Other indicators or methodologies for identifying infrastructure located within the applicant's lands are the presence of registered wayleave agreements, visible manholes, vent stacks, valve chambers, marker posts etc. within the proposed site.* *n) Any potential impacts on the assimilative capacity of receiving waters in relation to Uisce Éireann discharge outfalls including changes in dispersion / circulation characterises. Hydrological / hydrogeological pathways between the applicant's site and receiving waters should be identified within the report.* *o) Any potential impact on the contributing catchment of water sources either in terms of water abstraction for the development (and resultant potential impact on the capacity of the source) or the potential of the development to influence / present a risk to the quality of the water abstracted by Uisce Éireann for public supply should be identified within the report.* *p) Where a development proposes to connect to an Uisce Éireann network and that network either abstracts water from or discharges wastewater to a "protected"/ sensitive area, consideration as to whether the integrity of the site / conservation objectives of the site would be compromised should be identified within the report.*	All items considered during the design process. No implications for the EIA/Design	**Hydrology** is addressed in **Chapter 10: Hydrology and Hydrogeology** & **Appendix 2.1 CEMP – Management Plan 4: SWMP**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	q) Mitigation measures in relation to any of the above ensuring a zero risk to any Uisce Éireann drinking water sources (Surface and Ground water). *This is not an exhaustive list.* ***Please note;*** *• Where connection(s) to the public network is required as part of the development proposal, applicants are advised to complete the Pre-Connection Enquiry process and have received a Confirmation of Feasibility letter from Uisce Éireann ahead of any planning application.* *• Uisce Éireann will not accept new surface water discharges to combined sewer networks.'*		
Minister for Housing, Planning and Local Government	No response received	na	na
Transport Infrastructure Ireland	Email response received 28/05/2024: *In relation to your EIAR Scoping referral, it is noted that Section 5.1 indicates that the proposed development includes for upgrade to the existing entrance on the N20, national road. Although the site access location is not detailed in the EIAR Scoping document, TII's records indicate that the site adjoins the N20 at a location where the national road is subject to a 100kph speed limit regime.* *It is critical that the developer/applicant be aware that official policy concerning access to national roads seeks to avoid the creation of additional access points from new development or the generation of increased traffic from existing accesses (i.e. non-public road access) to national roads, to which speed limits greater than 50 kph apply.* *Therefore, there are policy and road safety considerations that would need to be resolved in any subsequent application and available alternative arrangements to the local road network should be utilised and not direct access to the national road, contrary to the provisions of official policy. It is noted with concern that the EIAR Scoping Report does not appear to consider or address this potential policy conflict.* *Section 2.6 of the DoECLG Guidelines provides that planning authorities may apply a less restrictive approach to the management of access to a national road in 'exceptional circumstances' but only as part of the process of reviewing or varying the relevant development plan. However, the current Limerick City and County Development Plan has not provided any agreed 'exceptional circumstances' cases for development accessing a national road, such as that potentially proposed in this EIAR Scoping referral.* *With respect to EIAR Scoping issues, the recommendations indicated below provide only general guidance for the preparation of an EIAR, which may affect the national road network.* *The developer should have regard, inter alia, to the following:* *•TII notes that the subject site adjoins the N20, national road. Access to the road network shall be developed in accordance with official policy and road safety considerations. As outlined above, access directly to a national road outside a reduced 50 – 60kph speed limit location should be avoided in accordance with the provisions of official policy. Alternative arrangements should be identified to ensure adherence to the provisions of official policy.* *•Consultations should be had with the relevant Local Authority/National Roads Design Office, with regard to the locations of existing and future national road schemes, including the National Development Plan (NDP) investment objective M20 Cork – Limerick* *•TII would be specifically concerned as to potential significant impacts the development would have on the national road network (and junctions with national roads) in the proximity of the proposed development, including the potential haul route.* *•The developer should assess visual impacts from existing national roads.*	All items considered during the design process.	**Drainage** is addressed in **Chapter 10: Hydrology and Hydrogeology** & **Appendix 2.1 CEMP – Management Plan 4: SWMP** **Traffic/Roads** are addressed in **Chapter 17: Traffic and Transport** & **Appendix 2.1 CEMP – Management Plan 7: TMP** **TDR/Grid Route** are addressed in **Chapter 2: Project Description**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	•The developer should have regard to any EIAR/EIS and all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes in the area. The developer should, in particular, have regard to any potential cumulative impacts. *•The developer, in preparing EIAR, should have regard to TII Publications (formerly DMRB and the Manual of Contract Documents for Road Works).* *•The EIAR should have regard to TII's Environmental Assessment and Construction Guidelines, including the Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (National Road Authority (NRA), 2014).* *•The EIAR should consider the 'European Communities (Environmental Noise) Regulations, 2018, (S.I. no. 549 of 2018)', and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (NRA, 2014)').* *•It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site, with reference to impacts on the national road network and junctions of lower category roads with national roads.* *In relation to national roads, TII's 'Traffic and Transport Assessment Guidelines' (2014) should be referred to in relation to proposed development with potential impacts on the national road network. The scheme promoter is also advised to have regard to Section 2.2 of TII's TTA Guidelines, which addresses requirements for sub-threshold TTA.* *Any improvements required to facilitate development should be identified. It will be the responsibility of the developer to pay for the costs of any improvements to national roads to facilitate the private development proposed, as TII will not be responsible for such costs.* *•The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.* *•In the interests of maintaining the safety and standard of the national road network, the EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network.* *•TII recommends that the applicant/developer should clearly identify haul routes proposed and fully assess the network to be traversed. Where abnormal 'weight' loads are a feature of the development, e.g., turbine or substation components, separate structure approvals/permits and other licences may be required in connection with the proposed haul route. All national road structures on the haul route through all the relevant County Council administrative areas should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal 'weight' load proposed.* *In addition, the haul route should be assessed to confirm capacity to accommodate abnormal 'length' loads and any temporary works required are identified.* *The national road network is managed by a combination of PPP Concessions, Motorway Maintenance and Renewal Contractors (MMaRC) and local road authorities, in association with TII.* *The applicant/developer should also consult with all PPP Companies, MMaRC Contractors and road authorities over which the haul route traverses, to ascertain any operational requirements, including delivery timetabling, etc., to ensure that the strategic function of the national road network is safeguarded.* *Where temporary works within any MMaRC Boundary are required to facilitate the transport of turbine components to site, the applicant/developer shall contact thirdpartyworks@tii.ie in advance, as a works specific Deed of Indemnity will be needed by TII before the works can take place.*		

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	Additionally, any damage caused to the pavement on the existing national road arising from any temporary works due to the turning movement of abnormal loads (e.g., tearing of the surface course, etc.) shall be rectified in accordance with TII Pavement Standards and details in this regard shall be agreed with the road authority prior to the commencement of any development on site. *Any Road Safety Audit requirements should be addressed.* *•Any grid connection and cable routing proposals should be developed to safeguard proposed road schemes, as TII will not be responsible for costs associated with future relocation of cable routing where proposals are catered for in an area of a proposed national road scheme. In that regard, consideration should be given to routing options, use of existing crossings, depth of cable laying, etc.* *In the context of the existing national road network, in accordance with the National Planning Framework National Strategic Outcome No. 2 'Enhanced Regional Accessibility', there is a requirement to maintain the strategic capacity and safety of the network. This requirement is further reflected in the NDP, the National Investment Framework for Transport in Ireland and also the existing Statutory Section 28 'Spatial Planning and National Roads Guidelines for Planning Authorities'.* *There is around 99,000km of roads in Ireland. The national road network, which caters for strategic inter-urban travel, consists of only approx. 5.4% of this. There is a critical requirement to ensure the strategic capacity and safety of this national road network is maintained and significant Government investment already made in the national road network is safeguarded.* *The provision of cabling along the national road network represents a number of significant implications for TII and road authorities in the management and maintenance of the strategic national road network and TII is of the opinion that grid connection cable routing should reflect the foregoing provisions of official policy.* *Section 12.4.1.1 'Accelerate Renewable Electricity Generation' of the Climate Action Plan 2024 (CAP24) outlines the objective of reaching 80% of electricity demand from renewable sources by 2030 through a range of measures, including:* *"All relevant public bodies will carry out their functions in a manner which supports the achievement of the renewable electricity targets, including, but not limited to, the use of road and rail infrastructure to provide a route for grid infrastructure where this is the optimal solution". (Climate Action Plan 2024, p.163)* *Consistent with CAP24, for all renewable energy developments requiring grid connection to the national grid, TII recommends that a full assessment of all route alternatives for grid connection takes place, including alternatives to public road, where appropriate. In TII's experience, grid connection accommodated on national roads has the potential, inter alia, to result in technical road safety issues such as differential settlement due to backfilling trenches and can impact on ability and cost of general maintenance, upgrades and safety works to existing national roads.* *Having regard to the foregoing, in TII's opinion, the grid connection routing, where it is proposed to utilise the road network, must demonstrate that the route proposed represents the 'optimal solution'. In addition, there is a finite road space available to accommodate all utilities in the road network and TII recommends that a co-ordinated approach to grid connection routing in this area is achieved to avoid risk to the effective delivery of renewable energy projects.* *Other consents or licences may be required from the road authority for any trenching or cabling proposals crossing the national road. TII requests referral of all proposals agreed and licensed between the road authority and the applicant, which affect the national road network.* *Cable routing should avoid all impacts to existing TII infrastructure such as traffic counters, weather stations, etc. and works required to such infrastructure shall only be undertaken in consultation with and subject to the agreement of TII. Any costs attributable shall be borne by the applicant/developer. The developer should also be aware that separate approvals may be required for works traversing the national road network.*		
Department of Transport	Email response received 04/07/2024: *'The Department of Transport makes the following comments on consultation request relating to the Scoping Report for the proposed Garrane Wind Farm, Co. Limerick.*	All items considered	**Transport** is addressed in **Chapter 17: Traffic and Transport**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	It should be noted that the Department considers the construction involved in providing this development and especially, the connection cables to the national grid, may have effects on both the environment and the Regional and Local Road network. *Where the developer proposes the placement of any cables (or additional cables) in one or more trenches within the extents of the (regional and local) public road network, it is necessary to consider the following:* • *Their presence within the public road will likely significantly restrict the Road Authority in carrying out its function to construct and maintain the public road and will likely add to the costs of those works post construction.* • *Their installation within the lands associated with the public road may affect the stability of the road. In particular where the road is a "legacy road" (where there is no designed road structure and the subgrade may be poor or poorly drained) the design needs to take account of all the variable ground conditions and not be based on a sample of the general soil conditions.* • *The possible effect on the remaining available road space (noting that there may be need to accommodate other utilities within the road cross-section in the future).* • *The necessity to have the power in the cables switched off where the Road Authority considers this necessary in order to carry out its function to construct and maintain the public road.* *The Department consider it important that the examination of the proposal should include consideration of the following:* • *Examination of all available technologies (including both Overhead Line (OHL) and Underground Cable (UGC) options or combinations of both) and route options other than the routing of cables along the public road,* • *Examination of options for connection to the national grid network at a point closer to the wind farm in order to reduce the adverse impact on public roads,* • *Details of where within the road cross section cables are to be placed so as to minimise the effect on the Roads Authority in its role of construction and maintenance,* • *Examination of details of any chambers proposed within the public road cross section so as to minimise the effect on the Roads Authority in its role of construction and maintenance,* • *Elimination of permanent jointing bays from beneath the road pavement to protect the integrity of the road structure for the safety of those driving on the public road by eliminating hard spots and also preserve the road width for other utilities,* • *Prevention of the attachment of cables to all bridge structures and culverts by diverting them beneath or away from these structures and,* • *Rationalisation of the number of cables involved (including existing electric or possible future cables) and their diversion into one trench, in order to minimise the impacts on the road network and the environment along the road boundary (hedgerows).* *The Department considers the following should be considered when applying conditions to any approval:* 1. *A condition requiring the specific approval of the local authority to the detail of the final route of cables through the public road space. If during construction there is a need to deviate from the detailed design then the approval of the local authority would again be sought. This would assist in minimising the impact on the public road.* 2. *A condition requiring the developer to comply with all appropriate standards and, inter alia the Guidelines for Managing Openings in Public Roads, 2017 in order to ensure orderly development.* 3. *A condition requiring that the location of the cables would be recorded as exactly as possible (maybe using BIM type technology) so as to facilitate the further use of road space for utilities and the maintenance/construction of the public road by the Roads authority. This record should include as constructed surveys of all infrastructure altered, added, removed or relocated and exact detail of the road construction including any drains or other features encountered. The record should be lodged with the local authority and with the ESB Networks for retention on their records.* 4. *A condition to require the elimination of permanent jointing bays from under the road pavement to protect the integrity of the road structure, thereby improving safety for those driving on the public road by eliminating hard spots and preserving the road width for other utilities.* 5. *A condition requiring the developer to route cables away from bridge structures and specifically preventing the developer from attaching cables to road bridges. This would allow for the future maintenance of bridges without interruption of the electricity supply along the cables.* 6. *A condition requiring the replacement of culverts that have been excavated during the cable duct placement operation. The replacement culverts should be designed appropriately and include an allowance for the effects of climate change.*	during the design process.	

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	7. A condition requiring the developer to notify the Roads Authority of the owner of the cables (Owner) and the controller (Power Controller) of the power transmitted along the cables. In addition, the condition should require Owner and Power Controller to notify the Roads Authority of any change in ownership of the cables or change of Power Controller transmitting power along the cables. In all instances the Owner and Power Controller should be required to maintain an agreed contacts list with the Roads Authority.'		
OPW	Email response received 05/06/2024: *The site indicated on the maps provided intersects with a number of our channels* *C1, C1/34, C1/35, C1/35/1, C1/36, C1/36/1, C1/36/2, C1/37, C1/37/1 and C1/37/2 of the Maigue Scheme for which* *maintenance responsibility lies with this office. In order to gain access for the purpose of maintaining said channels, this office requests that the following be included in any submission for planning permission at this location.* *Any alterations or modifications of drainage channels would require section 9 consent of the Arterial Drainage Amendment Act, 1995* *Obtaining Section 9 consent information on the process including copies of the appropriate application form and brochure are available on our website at:* *https://www.gov.ie/en/publication/957aa7-consent-requirements-construction-alteration-of-watercourseinfrastructure/* ***Condition for maintenance:*** *A10 Metre wide strip of land running parallel to the main channels C1 , C1/34 and a 5 Metre wide strip of land running parallel to the channels C1/35, C1/35/1, C1/36, C1/36/1, C1/36/2, C1/37, C1/37/1 and C1/37/2, should be provided to facilitate access and maintenance activities by this office in the immediate area. This a rea should be accessible to mechanical plant and should not be landscaped, paved or otherwise developed in a manner that would prevent access.* *The site indicated on the map proposed for the project falls within the area deemed to benefit from drainage by channels C1, C1/34, C1/35, C1/35/1, C1/36, C1/36/1, C1/36/2, C1/37, C1/37/1 and C1/37/2 of the Maigue Drainage scheme. As a result, it may be subject to an increased flood risk. The proposal identifies a new bridge over the River Maigue, but the location is not provided. Any new culverts or bridges (or modifications to any existing culverts or bridges) are required to cross watercourses as part of the development or on proposed or existing access roads to serve or access the development; you should be aware that these require consent from the Commissioners of Public Works. This is a requirement of Section 50 of the Arterial Drainage Act of 1945 as amended Obtaining Section 50 consent information on the process including copies of the appropriate application form and brochure are available on our website at* https://www.gov.ie/en/publication/957aa7-consent-requirements-constructionalteration-of-watercourse-infrastru/ *Please note that, in the context of seeking consent under Section 50, the current required design standard for bridges or culverts is based on the flood with an annual exceedance probability of 1% (often referred to as the 100 year flood), increased by 20% to cater for the effects of Climate Change. Bridges or culverts are required to be able to convey this design flood without significantly altering the hydraulic characteristics of the watercourse further details on this issue are available in the brochure and can be clarified depending on the circumstances of any particular proposed bridge or culvert.* *You should be aware that a grant of Planning Permission by a planning authority for a development which contains bridges or culverts does not confer section 50 consent on the applicant, nor does it absolve the applicant from the requirement to obtain such consent from the Commissioners.* *Regarding the proposed Internal wind farm underground power and communications cabling route indicated in your documentation but the location not provided, it is possible that this route may cross several watercourses. If the cable and ducting are to be buried in the road as they cross bridges over the water courses, and there is no interference with the opening in the bridge spanning the watercourse, then there is no issue. On the other hand, if it is proposed to pass the cable in its ducting through the opening of any bridge or culvert, this would be considered to be a modification of a bridge and it would require the consent of the Commissioners under Section 50 as mentioned above. Similarly, if it is proposed to carry the cable in its ducting across watercourses on new support structures spanning the watercourses, these should be treated as if they are bridges, and the consent of the commissioners under Section 50 should be obtained. If the cable and ducting are to be buried under the natural bed of the watercourses being crossed, Section 50 would not apply, and we would recommend that the duct be buried a sufficient distance below the natural bed to allow for erosion and mobility of the stream bed.*	All items considered during the design process. No implications for the EIA/Design	**Drainage** is addressed in **Chapter 10: Hydrology and Hydrogeology** & **Appendix 2.1 CEMP – Management Plan 4: SWMP**

Consultee Organisation	Response Received	Implications for the EIA/Design	EIAR Chapter/Section where comments have been addressed
	We would recommend that a flood risk assessment be carried out with regard to the proposed development and its construction. This should consider all sources, pathways and receptors of flood risk. This should be carried out in accordance with the principles set out in the guideline document "The Planning System and Flood Risk Management" as published by the Minister for the Environment, Heritage and Local Government and the Office of Public Works. Please be aware that this is a separate issue from the requirement to obtain Section 50 consent as mentioned above.		
The Heritage Council	No response received	na	na
The Arts Council	No response received	na	na
N/M20 Project Office	Email response received 05/07/2024: *'We have no comments on the proposed development, as per the attached documents and please feel free to refer to our project website, www.corklimerick.ie, for constraints study information in the area.'*	na	**na**
Gas Networks Ireland	Email response received 08/07/2024: '*Cables need to have at least 600mm separation from the red high pressure transmission pipeline. Open cut trenching is preferred with all works supervised.* *We require a separation distance of 2 times hub height of wind turbine between wind turbine and the transmission pipeline.* *Brendan Creedon is the point of contact for all matters on site in terms of supervision and marking out the pipeline. It would be advisable to meet on site to review. You recently contacted Gas Networks Ireland and requested information on its infrastructure in the vicinity of your forthcoming works. The Gas Transmission Pipeline in the general area of interest to you is shown, in RED, on the drawing attached. Please treat all Gas Networks Ireland Drawings as 'indicative' only. The Gas Distribution Network in the vicinity is shown, in GREEN and/or in BLUE on the drawing attached. Please refer to the attached Safety Advice Booklet for guidance on working in the vicinity of this infrastructure. To verify the in situ position of the Gas Transmission Pipeline please contact Brendan Creedon, brendan@ipec.ie. All work in the vicinity of a Gas Transmission Pipeline must be completed in compliance with the attached 'Code of Practice 2021'. The Gas Transmission Pipelines exist within Gas Networks Ireland Wayleaves. No excavation may take place within any such Wayleave unless consent, in the form of a valid Excavation Permit, has been granted by Gas Networks Ireland. Brendan Creedon will issue this permit once all conditions for excavations have been met. Aurora Telecom Ducts, where present, are shown as MAUVE BROKEN LINES. Please contact Aurora Telecom, at Auroralink@gasnetworks.ie for advice where Aurora Telecom infrastructure is present. The Aurora Emergency Number is 1800-42 7399. I would recommend using our Dial Before you Dig system to ensure you get the required response in a timely manner. The online system can give immediate mapping of an area and just requires you to register for an account once. See https://www.gasnetworks.ie/home/safety/dial-before-you-dig/dbyd/.'*	All items considered during the design process. No implications for the EIA/Design	**Utilities (including gas)** are addressed in **Chapter 16: Material Assets and Other Issues**
Kerry Group	Engagement ongoing with Kerry Group since September 2022, items discussed include; • Discussions in relation to access for surveys to wastewater treatment plant • Discussions about Kerry outfall pipeline which traverses the Project Site, the Developer committed to minimizing the number of crossings and utilize robust crossing design	All items considered during the design process. No implications for the EIA/Design	Utilities (including the Kerry Group pipeline) are addressed in **Chapter 16: Material Assets and Other Issues, Section 16.9** and on **Drawing No. 6839-JOD-GGE-XX-DR-C-0404**

1.10.1 Public Consultation

1.10.1.1 Informing the Public and Local Residents

The public were informed about the project via a newsletter and leaflet which was issued in May of 2025 along with a dedicated project website www.garranegreenenergy.ie. This newsletter and leaflet outlined the project proposals, , the community benefit fund, the environmental benefits, answers to frequently asked questions and contact information for further information requests and consultations. The Community Engagement Report is attached as Appendix 1.5.

1.10.2 Community Benefit and Community Involvement

Should the Project be granted planning and be successful under the Government's Renewable Electricity Support Scheme (RESS) support programme, a community benefit fund will be established and a fund committee will be created to allocate funds from the Project to near neighbours and community groups in the area.

If consented, the Project will require an approximate investment of circa €65-70 million and will provide sustainable, low carbon energy generation infrastructure to meet Ireland's growing demand. The Project benefits to the local community would include significant investment in local infrastructure and electrical systems, local job creation, and a contribution of approximately €15.1million[12] in Limerick City and County Council rates over the project operational lifetime of 35 years.

If consented and successful under the RESS Support programme, the Project will also provide a community fund calculated in accordance with the 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). In line with the Community Benefit Fund Guidelines, governed by the Sustainable Energy Authority of Ireland (SEAI), and based on the current Project scope, Garrane Green Energy will generate a Community Benefit Fund estimated at over €3.7 million over the first 15 years of operation. This amounts to approximately €250,000 per annum. The actual fund will vary around this average from year to year, depending on each year's wind conditions. Improvement in wind turbine technology and site wind resource estimates indicate that the Project could be capable of achieving an above average capacity factor and therefore contribute towards a larger community fund.

[12] Estimated €8,000 per mega watt installed for 35 year project lifespan

Up to 50% of the fund will be distributed to near neighbours of the wind farm (within 1km). 40% of the fund, amounting to approximately €100,000 per year in this example, will be allocated to not-for-profit community enterprises, with an emphasis on low carbon initiatives. The fund will be directed towards local clubs, societies and other initiatives. It is envisaged that the communities nearest the Project will benefit most from the community fund. The community benefit fund will be managed by a fund committee comprised of local residents, the Developer and a fund administrator. The Developer and the administrator will also be members of the fund committee, to ensure that all funding applications meet the fund's eligibility criteria.

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

Pre-planning meetings were held with An Bord Pleanála as part of the SID pre-application process to determine if the Project was a SID.

On the 7th February 2025, JOD was notified by the Commission that this Project constitutes a SID in accordance with the 7th Schedule of the Planning and Development Act 2000 (as amended). The planning application for the Project will therefore be made to An Coimisiún Pleanála under Section 37E of the PDA 2000.

1.12 AVAILABILITY OF INFORMATION

A copy of the EIAR and associated planning documents may be viewed online on the dedicated project SID website (www.garranegreenenergyplanning.ie).

A paper copy of the EIAR and associated planning application can be viewed, during office opening hours at the following addresses:

1. An Coimisiún Pleanála, 64 Marlborough Street, Rotunda, Dublin 1, D01 V902.
2. The Offices of Limerick City & County Council, Dooradoyle Road, Dooradoyle, Co. Limerick, V94 WV78.

Paper copies can be provided at the cost of printing, through Limerick City & County Council.

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

1.13 GLOSSARY OF COMMON ACRONYMS

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