

# MWP

## **Chapter 01 Introduction**

### **Carrownagowan 110kV Grid Connection**

## 1. Introduction

FuturEnergy Carrowmagowan DAC (the 'Applicant') is seeking planning approval from An Bord Pleanála (ABP) under section 182A of the Planning and Development Act 2000 for a grid development provide a connection to the national grid from the consented Carrowmagowan Wind Farm in Co. Clare (ABP Ref: 308799-20) (hereafter referred to as the 'Proposed Development'). The Proposed Development is an integral element of the overall Carrowmagowan Wind Farm project.

The application for the Proposed Development is being made directly to ABP as the project is deemed a Strategic Infrastructure Development (SID) in accordance with the Planning and Development (Strategic Infrastructure) Act 2006. MWP commenced pre-application consultation for this Application with ABP on the 20<sup>th</sup> of October 2022 (under Section 182E of the Planning and Development Act 2000 (as amended)) on 20/10/2022. At the conclusion of the pre-application consultation meeting the board indicated a preliminary view that the Proposed Development was strategic infrastructure. On the 4<sup>th</sup> April 2023, ABP confirmed that the Proposed Development was Strategic Infrastructure. ABP is also the Competent Authority for the purposes of the Environmental Impact Assessment (EIA).

MWP have been engaged by the Applicant to prepare a planning application including this Environmental Impact Assessment Report (EIAR) to accompany the planning application. This Chapter sets out the purpose and scope of the EIAR, the report structure, assessment topics, and assessment authors and contributors. It introduces the Proposed Development and outlines the site location and key elements of the development. It sets out the legislative background to the Proposed Development and details the consultation undertaken with relevant stakeholders.

### 1.1 The Applicant

FuturEnergy Ireland is a joint venture company owned by Coillte and Electricity Supply Board (ESB) was established in November 2021. FuturEnergy Carrowmagowan DAC is the 'Applicant'. For the purposes of this application, a dedicated company and a subsidiary of FutureEnergy Ireland in the name of FuturEnergy Carrowmagowan DAC was established.

Combining the nation's strongest assets and expertise in renewable energy development, FuturEnergy Ireland's mission is to maximise the potential of Ireland's unique wind and land resources and accelerate Ireland's transformation to a low carbon energy economy.

FuturEnergy Ireland's ambition is to develop more than 1 gigawatt (GW) of renewable energy capacity by 2030 and to make a significant contribution to Ireland's commitment to produce 80% of electricity from renewable sources by the end of the decade. FuturEnergy Ireland want to do this by driving the development of the highest quality, locally supported green energy projects in Ireland.

## 1.2 Site Location and Description

The full length of the Proposed Development is approximately 25 km (**Figure 1-1**).

The underground grid cable between the permitted Carrownagowan Wind Farm (ABP Planning Ref: 308799-20) and the existing 110 kilovolt (kV) Gas Insulate Substation (GIS) in Ardnacrusha, will utilise public local road networks, existing access tracks (within Ardnacrusha), private forestry access tracks, private agricultural lands and permitted internal wind farm access roads.

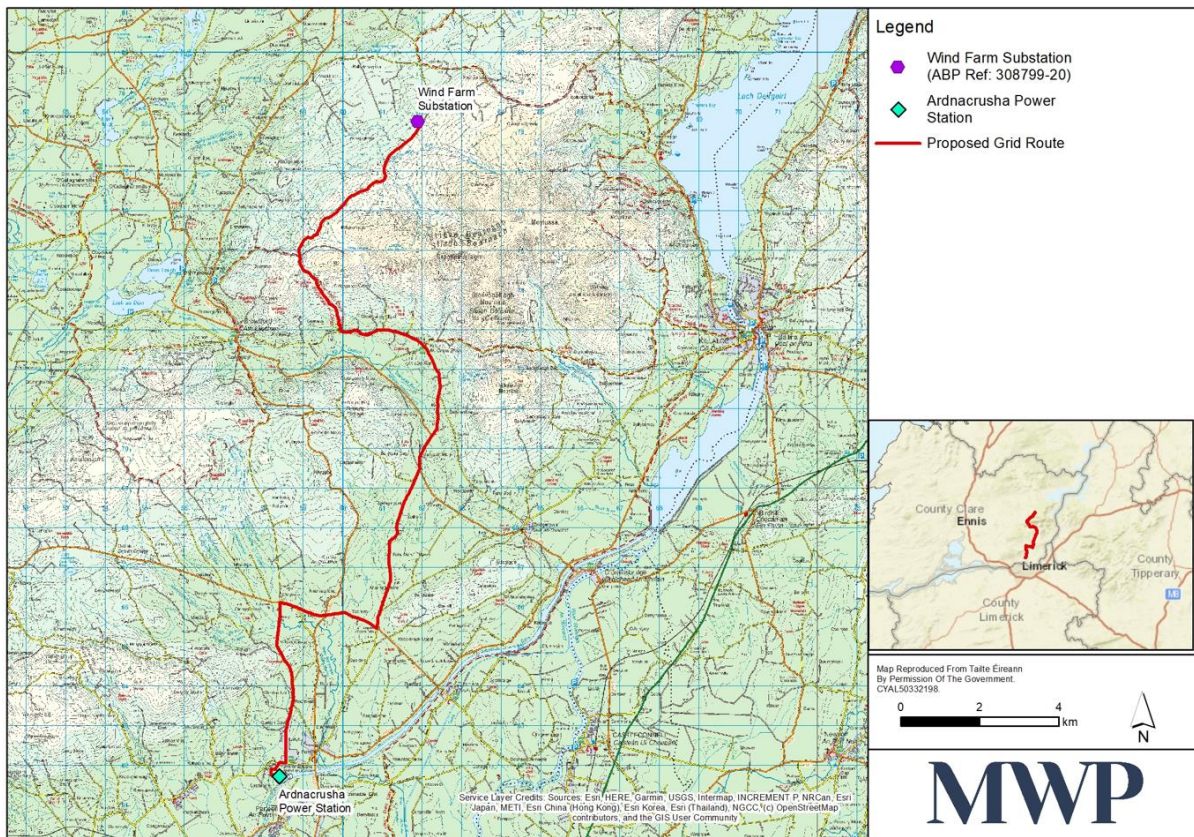


Figure 1-1 Site Location

## 1.3 Background

Planning permission was granted by ABP for the Carrownagowan Wind Farm on 29/09/2022 and the Applicant is now seeking permission under section 182A of the Planning and Development Act 2000 (as amended), for the Proposed Development. The Proposed Development was previously assessed as part of the permitted Carrownagowan Wind Farm EIAR; however, while it was assessed in accordance with EIAR requirements, it did not form part of the planning application at that time.

## 1.4 Overview of Proposed Development

The Proposed Development comprises an approximately 25 km long 110kV underground cable connection from the Carrownagowan Wind Farm substation to the existing ESB owned 110kV substation at Ardnacrusha, County Clare which will allow the electrical energy generated from the wind farm to be exported onto the national grid. A full description of the Proposed Development is provided in **Chapter 2** Description of the Proposed Development of this EIAR.

## 1.5 Need for the Proposed Development

The Proposed Development will facilitate the export of green electricity from the permitted Carrownagowan Wind Farm to the National Grid via the existing ESB owned 110kV substation at Ardnacrusha, County Clare.

## 1.6 Structure of the EIAR

Table 1-1 provides the structure of the EIAR.

**Table 1-1 Structure of the Environmental Impact Assessment Report**

Volume	Content	Description
<b>Volume I</b>	<b>Non-Technical Summary</b>	The Non-Technical Summary provides an overview of the Proposed Development and the EIAR in non-technical terms. It is presented in a similar way to Volume 2 – Main EIAR, in the use of a ‘Grouped Format Structure’, which discusses each environmental topic separately.
<b>Volume II</b>	<b>Main EIAR</b>	<p>The Main EIAR provides a detailed description of the Proposed Development and contains specialist reports on each of the selected assessment topics. This document is prepared in the ‘Grouped Format Structure’ which examines each environmental topic area within an individual Chapter. This structure was selected for the Main EIAR as it facilitates straightforward investigation of individual topics:</p> <ul style="list-style-type: none"> <li>• Chapter 1 Introduction</li> <li>• Chapter 2 Description of Proposed Development</li> <li>• Chapter 3 Civil Engineering</li> <li>• Chapter 4 Consideration of Alternatives</li> <li>• Chapter 5 Population and Human Health</li> <li>• Chapter 6 Biodiversity</li> <li>• Chapter 7 Water</li> <li>• Chapter 8 Land and Soils</li> <li>• Chapter 9 Noise and Vibration</li> <li>• Chapter 10 Cultural Heritage</li> <li>• Chapter 11 Air and Climate</li> <li>• Chapter 12 Material Assets</li> <li>• Chapter 13 Landscape and Visual</li> <li>• Chapter 14 Interaction of the Foregoing</li> <li>• Chapter 15 Schedule of Environmental Mitigation</li> </ul>
<b>Volume III</b>	<b>Appendices</b>	The Appendices volume contains supporting information and reference documents to Chapters of the Main EIAR Volume 2.

## 1.7 Methodology

### 1.7.1 Legislative Context

The Environmental Impact Assessment (EIA) Directive (European Union Directive 2011/92/EU and the amending Directive 2014/52/EU) on the assessment of the effects of certain public and private projects on the environment, requires Member States to ensure that a competent authority carries out an assessment of the likely significant effects of certain types of projects, as listed in the Directive, prior to development consent being given for the project.

EIA provisions in Irish Law in relation to planning consents are currently contained in the Planning and Development Act, 2000 (PDA), (Part X) as amended, and in Part 10 of the Planning and Development Regulations, 2001, as amended (PDR). Both the PDA and PDR have been amended by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) (EIA Regulations).

The EIA Directive and the PDR, provide that in respect of an application for development consent where EIA is required, the developer (applicant) is required to prepare and submit an EIAR to the competent authority.

This EIAR is compliant with the requirements set out in the PDR, and as set out in the EIA Directive in terms of the structure and content of the information required to be provided by the Applicant.

This EIAR has been prepared in accordance with this legislation and national guidance, as well as the European Commission's Guidance on the preparation of the EIA Report (Directive 2011/92/EU as amended by 2014/52/EU) (2017), and most recent 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out EIA (August, 2018)'. Regard was also had to the published EPA 'Guidelines on the information to be contained in Environmental Impact Assessment Report, 2022'.

Section 182A (1) of the PDA provides:

*'Where a person (hereafter referred to in this section as the 'undertaker') intends to carry out development comprising or for the purposes of electricity transmission, (hereafter referred to in this section and section 182B as 'proposed development'), the undertaker shall prepare, or cause to be prepared, an application for approval of the development under section 182B and shall apply to the Board for such approval accordingly'.*

Under Section 182A (9) of the PDA, "transmission", in relation to electricity, shall be construed in accordance with section 2(1) of the Electricity Regulation Act 1999 but, for the purposes of this section, the foregoing expression, in relation to electricity, shall also be construed as meaning the transport of electricity by means of—

- (a) a high voltage line where the voltage would be 110 kilovolts or more; or
- (b) an interconnector, whether ownership of the interconnector will be vested in the undertaker or not.

Section 2(1) of the Electricity Regulation Act, 1999, states that:

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

As the Proposed Development comprises or is for the purposes of electricity transmission an application is being made directly to ABP.

The prescribed classes of development and thresholds that trigger an EIA and the provision of an EIAR are set out in Schedule 5 of the PDR. The classes under Schedule 5 that are relevant are listed below:

Part 2 Class 3 Energy Projects

*(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.*

The Proposed Development is required to connect the Carrownagowan wind farm to the national grid and is an integral part of the consented Carrownagowan Wind Farm, which required EIA. As such the Proposed Development is also subject to EIA and an EIAR has accordingly been submitted with the application for approval for the Proposed Development.

A Scoping process has been undertaken to assist in determining the issues to be considered in the EIAR.

## 1.7.2 Consultation

Extensive consultation was undertaken in relation to the project, and comments from stakeholders and interested parties were requested and highly encouraged. The following outlines the consultation process.

Consultation through, meetings, letters, email and telephone calls, with various statutory and non-statutory consultees has been maintained throughout.

### 1.7.2.1 Planning Authorities

#### *ABP Pre-Application Stage Meeting*

One pre-application meeting was held with ABP on October 20<sup>th</sup> 2022 (Ref: ABP-314127-22), where the Applicant and MWP introduced the Proposed Development and the requirement for an NIS and EIA were discussed. ABP’s representatives advised the Applicant to be cognisant of matters such as cumulative impacts and in-combination effects with other developments in the area. The comments and suggestions from ABP were adopted in the EIA. The cumulative impacts have been considered in each environmental assessment chapter of this EIA.

#### *Meeting with Clare Co Planning Department*

The Applicant and MWP attended a meeting with Clare County Council’s Planning Department on November 7<sup>th</sup>, 2022. The project scope was explained, and Clare County Council stated it was important to consider the appropriate traffic management measures during the construction phase. MWP in combination with TLI have developed a detailed Traffic Management Plan (TMP) which outlines the appropriate traffic management measures that will be applied during the construction phase (**Appendix 2-3**, Volume III).

### 1.7.2.2 Other Statutory and Non-Statutory Bodies

Written notifications were circulated to a number of identified stakeholders (both statutory and non-statutory consultees) in November 2022, which set out an overview of the Proposed Development. The notifications invited feedback from the Consultee on any key issues and concerns which they consider should be addressed and expressed that their input at this stage would be welcomed. Consultees were informed that participation at this stage of the Proposed Development would not affect participation at a later stage in the planning process. A list of the organisations/groups consulted, a copy of the consultation document and the responses received are provided in Volume III **Appendix 1-1** and **Appendix 1-2**, Volume III of this EIA. The issues raised were subsequently taken into account in the preparation of the EIA. A summary of the responses and feedback received are provided in **Table 1-2**.

**Table 1-2 Consultees and Summary of Responses to Consultation Letter**

Organisation	Summary of Response/ Comments
Failte Ireland	<ul style="list-style-type: none"> <li>Consideration of Failte Ireland’s Guidelines for the treatment of tourism in an EIS</li> </ul>
Geological Survey of Ireland	<ul style="list-style-type: none"> <li>There are no County Geological Sites (CGS) located within the vicinity of the site.</li> <li>The Groundwater Data Viewer indicates several aquifers classed as a ‘Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones’, a ‘Locally important gravel aquifer’, a ‘Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones’ and a ‘Regionally Important Aquifer - Karstified (diffuse)’ underlie the proposed grid connection route.</li> <li>The Groundwater Vulnerability map indicates the range of groundwater vulnerabilities within the area covered is variable. We would therefore recommend use of the Groundwater Viewer to identify areas of High to Extreme Vulnerability and ‘Rock at or near surface’ in your assessments, as any groundwater-surface water interactions that might occur would be greatest in these areas.</li> </ul>
Office of Public Works (OPW)	<ul style="list-style-type: none"> <li>With regard to the proposed Grid Connection Route which is indicated in your documentation, 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</li> </ul>

Organisation	Summary of Response/ Comments
	<p>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 is 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.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>
TII	<ul style="list-style-type: none"> <li>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. Consultations should be had with the relevant Local Authority/National Roads Design Office with regard to locations of existing and future national road schemes.</li> <li>In the context of the existing national roads 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 National Development Plan, the National Investment Framework for Transport in Ireland and also the existing Statutory Section 28 Spatial Planning and National Roads Guidelines for Planning Authorities.</li> <li>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.</li> </ul>

### 1.7.2.3 Public Consultation

For the Proposed Development, the Applicant appointed two Community Liaison Officers (CLOs) and community consultation was completed between the period of February and May 2023. The consultation included a newsletter drop to houses along the route and door to door interaction with residents (See letter in **Appendix 1-3**, Volume III). After the newsletter drop there were several one-one follow-ups with individuals who contacted the Applicant who answered all questions to their satisfaction.

The consented Carrownagowan Wind Farm website: [www.carrownagowanwindfarm.ie](http://www.carrownagowanwindfarm.ie), was updated with a Grid Connection page that contained information about the application, including the proposed grid route map: <https://carrownagowanwindfarm.ie/grid-connection/>. The grid connection newsletter was also added to the Project Updates and made available to view and download.

### 1.7.3 Scoping

Scoping considers the potential for likely significant effects throughout different phases of a proposed project to determine “the content and extent of the matters which should be covered in the environmental information to be submitted in the EIAR” (EPA, 2022).

As described in the EPA guidelines, “the potential for likely significant effects throughout different phases of the proposed project, are considered as far as possible at scoping stage – whether they would individually require consent or not. These include, as relevant, site investigations, construction, commissioning and operation to eventual decommissioning. Scoping also considers the range of alternatives to be considered in an EIAR” (EPA, 2022).

The Scoping Report is included as **Appendix 1-4**, Volume III of the EIAR.

#### **1.7.4 Environmental Impact Assessment Report**

An “environmental impact assessment report” is defined in section 2(1) of the PDA:

*“A report of the effects, if any, which Proposed Development, if carried out, would have on the environment and shall include the information specified in Annex IV of the Environmental Impact Assessment Directive”.*

##### **1.7.4.1 General Approach to Assessment**

In preparing the EIAR, the following guidelines were considered:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (Environmental Protection Agency [EPA], 2022);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of the Housing, Local Government and Heritage, 2018); and

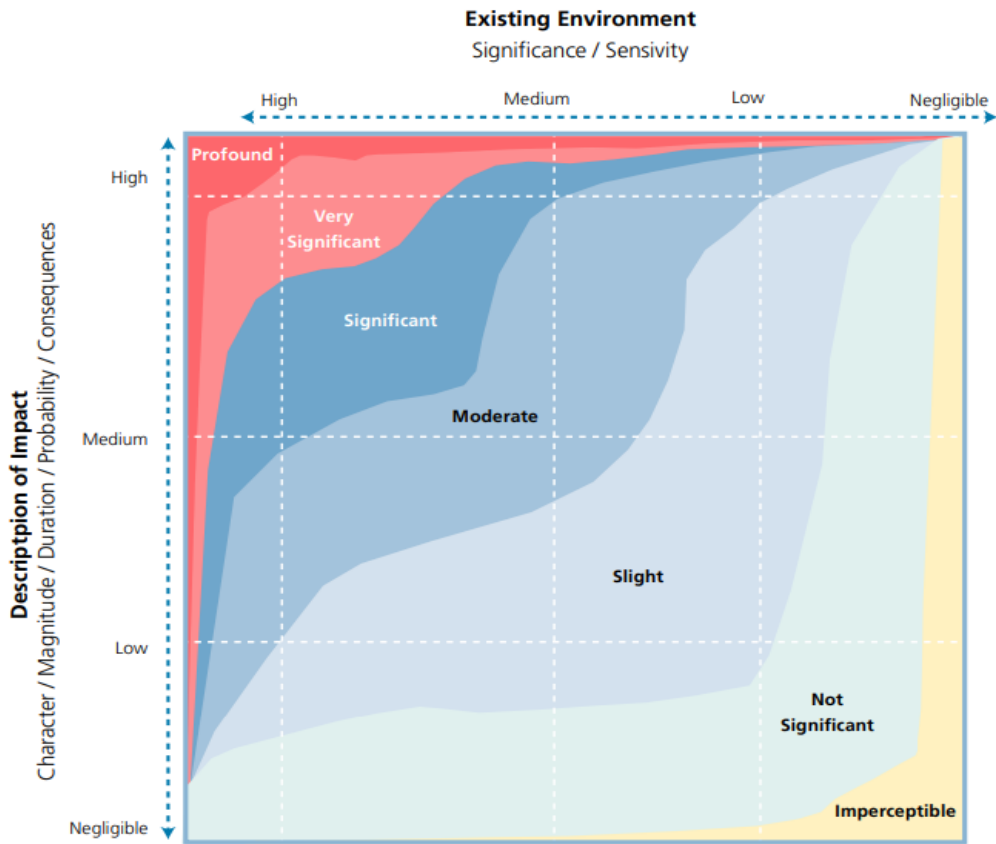
In addition, specialist disciplines have had regard to other relevant guidelines, as noted in the specific chapters of the EIAR.

For each technical EIAR chapter, the classification and significance of effects is evaluated in accordance with the EIA Directive and the methodology outlined in the EPA’s 2022 EIAR guidelines. Each of the chapters contains a description of the baseline environment, an assessment of the likelihood and extent of any potential environmental impacts and proposes mitigation measures, where necessary.



The matrix (Figure 1-2) adapted from the EPA’s guidelines is then used to classify the significance of effect being assessed. This considers the overall character of effect with the sensitivity of the receptor/existing environment.

**Table 1-3 Impact Assessment Criteria (ERA, 2022)**



**Figure 1-2 Determination of Significance Source: Figure 3.4, EPA Guidelines (EPA, 2022)**

	Term	Description
Quality of Effects	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 /adverse	A change which reduces the quality of the environment
Significance of Effects	Imperceptible	An effect capable of measurement but without significant consequence
	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 that is consistent with existing and emerging baseline trends
	Significant	An effect which, by its character, magnitude duration or intensity alters a sensitive aspect of the environment
	Very Significant	An effect which, by its character, magnitude duration or intensity alters most of a sensitive aspect of the environment
	Profound	An impact which obliterates sensitive characteristics
	Momentary	Effects lasting from seconds to minutes

	Term	Description
Duration of Effect	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	Effects lasting over sixty years
	Reversible	Effects than can be undone e.g. through remediation or restoration
	Frequency	How often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Types of Effects	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 a larger, more significant effect.
	‘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	The 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, (e.g. combination of SOx and NOx to produce smog).

It is important to note that the methodology outlined above is a general approach only. Characterising the character/significance of a potential effect can have specific criteria which is documented in the assessment chapters.

### Planning Search/Cumulative Impacts

A desktop search of proposed and existing planning applications was undertaken in October 2022 and updated in June and October 2023. The search used publicly available data from Clare County Council, Limerick County Council planning application portal and ABP’s online database. The purpose of this search was to inform the cumulative impact assessments within this EIAR. The scope of the search was based within a 10 km radius taken from the approximate centre point and along the full length of the Proposed Development. The initial search flagged planning applications within a period dating back to 2011 (12 years).

Any refused, invalid or withdrawn applications were omitted from the search. The criteria then focused on foreseeable developments to be considered in line with the Proposed Development. In respect of this, any small-scale residential type developments, such as; extensions and modifications, minor amendments to existing dwellings and changes of use developments were omitted from the search.

The relevant planning application search is listed in **Appendix 1-5**, Volume III. The findings show medium-large scale developments within the 10 km radius that have been granted planning permission. The cumulation of the Proposed Development with other existing and/or proposed developments has been assessed within each relevant chapter of this EIAR.

The primary foreseeable projects that have the potential to interact with Proposed Development include:

1. the proposed Fahey Beg Wind Farm Development Grid Connection;
2. the Drummin Solar Farm Grid Connection; and
3. the permitted Carrownagowan wind farm development.

Specifically for the first two developments, there are potential locations where the Proposed Development will overlap with the underground grid connections of the Fahy Beg Wind Farm and one location with an overlap with the Drummin Solar underground grid connection project. The location of the interactions on the grid routes is shown in **Figure 1-3** and **Figure 1-4**.

The first location where the Proposed Development and the Fahy Beg grid connection overlap is on a short section of public road 1.8km long between Carmody's Cross and Harolds Cross on the R471. The second location is located within the Ardnacrusha station lands and relates to a short section of existing track/roadway (approximately 810 m).

The Proposed Development also interacts with the Drummin underground grid connection within the Ardnacrusha station lands for a distance of approximately 205 m on a short section of existing track/roadway.

The following processes have been considered in the cumulative impact assessment of each EIAR chapter when referring to these developments:

1. In the first instance, each project will complete their planning compliance submission to the Local Authority and as part of that process the developer will have to engage with the roads department and other sections of the Local Authority including the environment and planning sections. That forum will allow the local authority to then decide on how the sections of public road are managed during the laying of the UG grid trenching.
2. Secondly, each project will apply for a specific Road Opening Licence. Each project developer will have to apply for a Road Opening Licence from the Local Authority. That application is submitted to the Local Authority and is dealt with by the roads Department. This is usually done at the planning compliance stage as well, as the Local Authority then has control of what happens on public roads and has the ability then to dictate/control and manage any potential impacts in conjunction with the developer.
3. Any grid connection located within Ardnacrusha will be managed by Eirgrid Station manager as it is not within the public road and does not require a Road Opening Licence.

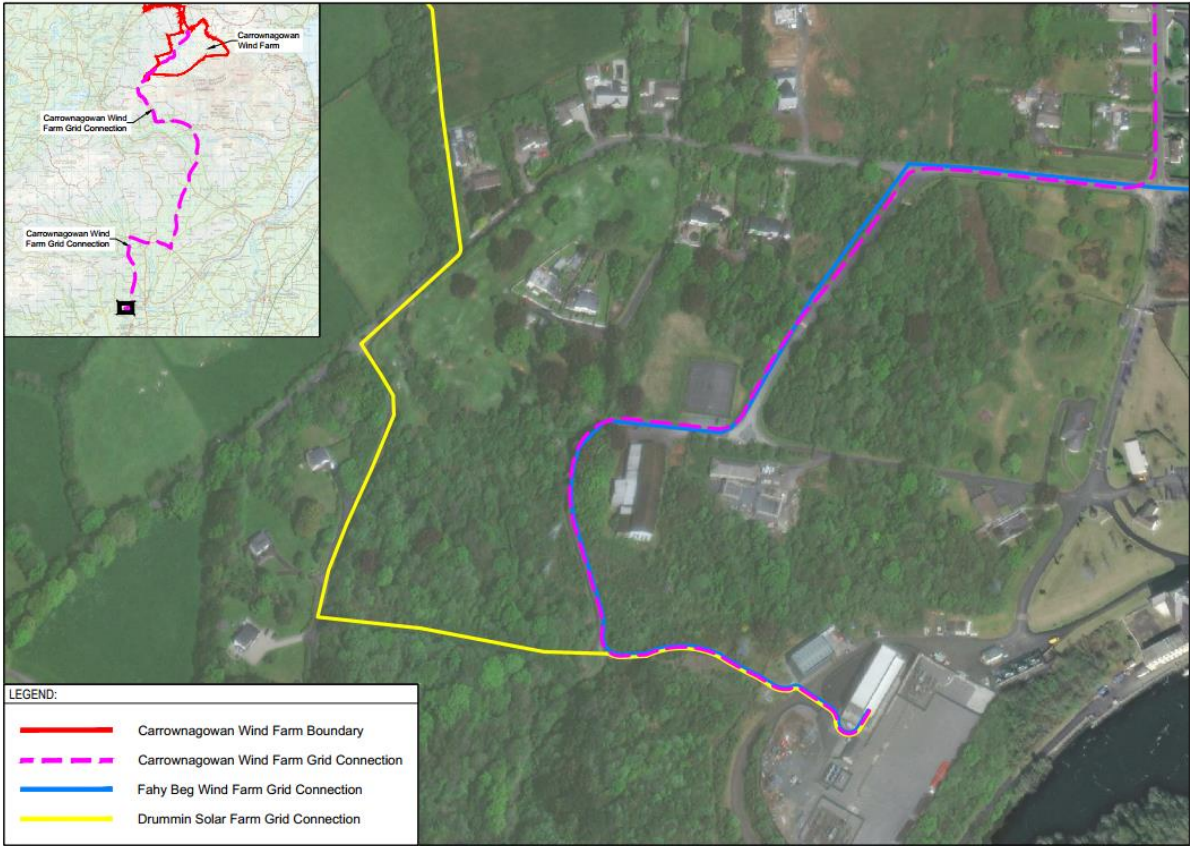


Figure 1-3 Locations of overlap with Fahy Beg WF and Drummin Solar Farm Grid Connection in the south

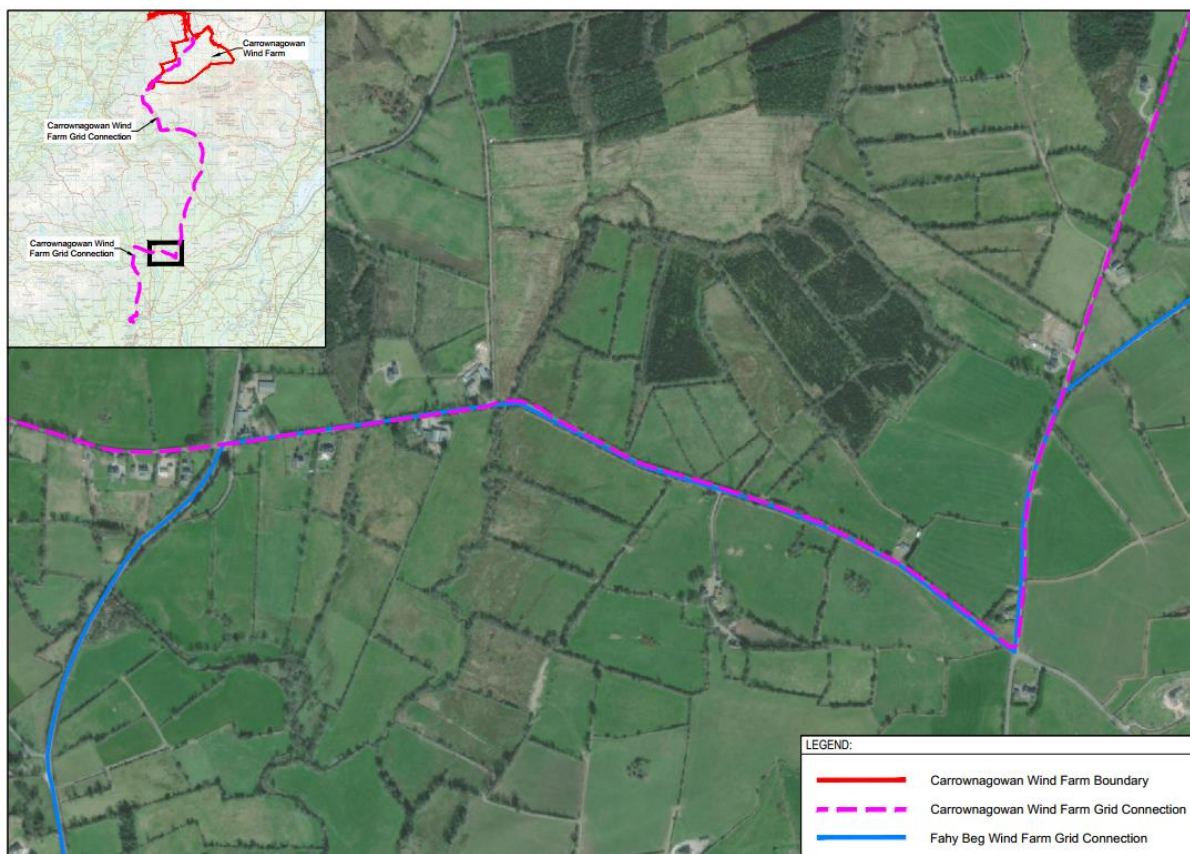


Figure 1-4 Locations of overlap with Fahy Beg WF and Drummin Solar Farm Grid Connection in the south

### Risk of Major Accidents and Disasters

There are two key considerations in considering the risk of major accidents and disasters (MAD) namely:

- a) The potential of the project to cause major accidents and disasters, including implications for human health, cultural heritage, and the environment; and
- b) The vulnerability of the project to potential major accidents and disasters, including the risk to the project of both natural disasters (e.g. flooding) and man-made disasters (e.g. technological disasters).

The risk of the Proposed Development causing a MAD is low due during the construction phase to the mitigation and control measures outlined within the CEMP and TMP which will be in place to reduce risk of a major accident throughout the construction phase; for example, the suspension of construction activities should the conditions be unsafe. Therefore, hazards will be managed to reduce risk to an acceptable level.

The Proposed Development in itself when completed is an underground buried electrical service contained within a number of PVC ducts. It is no different than the services that exist under the majority of our roads/streets within towns and cities across the country, including services like broadband, eircom, water, gas etc. The grid cables being buried underground by definition, cannot interact with above ground activities, the environment, society etc. So, there is no opportunity for the grid cables contained within ducts, encased in concrete and buried underground to cause a major accidents and disasters.

The completed and operational grid is an underground buried service, so given its physical location underground and given that it is a static or solid electrical grid cabling in a duct (as against a pressurised liquid gas service) at depth and surrounded in concrete protection zone, it is not vulnerable to a major accidents and disasters.

The potential for a) and b) during the construction phase is considered where relevant in chapters in this EIAR.

## 1.8 Project Team

MWP Engineering and Environmental Consultants are the Environmental and Engineering Consultants to the Applicant for the Proposed Development. The study team is a combination of in-house specialists and sub-consultants. The in-house environmental and engineering team at MWP specialises in wind farm development at both the pre-planning and construction phases. Other external specialist sub-consultants engaged for the purposes of the Proposed Development design and assessment were:

- Faith Bailey – IAC for Cultural Heritage and Archaeology
- Michael Gill – Hydro-Environmental Services (HES) for Water and Land and Soils
- Damien Brown - TLI for design of grid connection route
- Evelyn Sikora – Cunnane Stratton Reynolds (CSR) for Landscape and Visuals

The project team is presented in **Table 1-4**.

**Table 1-4 Expertise of EIAR Team**

EIAR Chapter/Role	Consultant	Title/Qualification	Competencies
Project Manager	Ken Fitzgerald (MWP)	Associate/Project Director  Diploma in EIA Diploma in Planning Diploma in Coastal Zone Management Degree in Surveying Diploma in Construction Economics	Ken Fitzgerald has worked in the area of civil engineering, construction management, EIA and planning over the last 35 years. During last 18years he has focused on renewable energy and marine projects. He has managed the design, planning and preparation of EIA's on a number of large-scale wind energy projects. He has acted as planning lead on wind farm development projects that availed of both Local Authority and Strategic Infrastructure Development planning routes. He has expertise in planning appeals, public consultation, community engagement, Oral Hearings and in Judicial Review proceedings.
01 Introduction	Noelle O'Leary (MWP) Main author	Environmental Consultant  BSc, MSc	Noelle works on a variety of infrastructure projects conducting environmental assessments and supporting the delivery of a number of environmental deliverables including Screening for Environmental Impact Assessment (EIA) Reports, feasibility and constraints studies, route options assessments and Environmental Impact Assessment Reports (EIAR).
02 Description of the Proposed Development	Ken Fitzgerald (MWP) Main author	<i>See above.</i>	<i>See above.</i>
	Noelle O Leary (MWP) Assistant author	<i>See above.</i>	<i>See above.</i>
03 Civil Engineering	Ken Fitzgerald (MWP) Main author	<i>See above.</i>	<i>See above.</i>
	Damien Brown (TLI) Assistant author	Senior Electrical Engineer	Damien is a Senior Electrical Engineer within the TLI Group Engineering Department, with 8 years of experience within various Engineering sectors. Work scopes have included providing a full array of Grid connection methods for preliminary route developments, planning applications, and detailed designs. He has provided full turnkey designs for substations in the renewable energy space whilst providing technical consultancy across a range of voltages from LV through to 220kV. Prior to joining TLI Group, he spent a number of years working with H&MV Engineering, undertaking various substation designs, electrical designs, and load flow studies. He also worked abroad in Australia, in the utility sector with a Mechanical, Electrical and Instrumentation contractor, EnerMech with various projects across the Oil & Gas, Transport and Energy sectors.
04 Consideration of Alternatives	Ken Fitzgerald Main author	<i>See above.</i>	<i>See above.</i>

EIAR Chapter/Role	Consultant	Title/Qualification	Competencies
05 Population and Human Health	Caitríona Fox (MWP) Main author	Associate Environmental Consultant BA, MSc	Caitríona is a Senior Environmental Consultant with 20 years environmental consultancy experience. She is an environmental impact assessment practitioner and has taken on the role of EIA Project Manager for a variety of large scale EIA projects including wind farms such as Knockranny/Cnoc Raithní Wind Farm and Leanamore Wind Farm. She has extensive experience in the management and compilation of environmental reports and has authored numerous specialist reports including: air and climate impact assessments, human beings impact assessment landscape impacts assessment, and material assets assessment for project EIAs.
06 Biodiversity	Gerard Hayes (MWP) Main author and ecological surveyor	Senior Ecologist BSc, MIEEM, FBA	Gerard Hayes is a Senior Aquatic Ecologist with over 13 years' experience in environmental consultancy. He is a member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and the Freshwater Biological Association (FBA). Gerard has a diverse ecological profile, with Phase 1 habitat, tree, mammal (including bats), fish, bird, amphibian, macroinvertebrate survey experience. He has had numerous responsibilities including report writing (EIAR, EIA, EA, AA, NIS) waste assimilation capacity assessment and ecological monitoring. His area of expertise covers the infrastructure projects ranging from wind energy development, waste-water treatment, roads/bridges, water supply, flood defence and hydroelectric schemes. He is co-author and/or carried out surveys for NPWS Irish Wildlife Manual Nos. 15, 24, 26, 37, 45. As part of his experience and continuing professional development, Gerard has developed excellent analytical and GIS skills.
07 Water	Michael Gill – Environmental Engineer/ Hydro-geologist	Civil Environmental Engineer / Hydrogeologist BA, BAI, Dip Geol., MSc, P. Geo, MIEI	Michael is an Environmental Engineer with over 18 years' environmental consultancy experience in Ireland. Michael has completed numerous hydrological and hydrogeological impact assessments of wind farms in Ireland. He has also managed EIAR assessments for infrastructure projects and private residential and commercial developments. In addition, he has substantial experience in wastewater engineering and site suitability assessments, contaminated land investigation and assessment, wetland hydrology/hydrogeology, water resource assessments, surface water drainage design and SUDs design, and surface water/groundwater interactions. For example, Michael has worked on the EIS for Oweninny WF, Cloncreen WF, and Yellow River WF, and over 100 other wind farm related projects across the country.
08 Land and Soils	Michael Gill – Environmental Engineer/ Hydro-geologist	<i>See above</i>	<i>See above</i>
09 Air & Climate	Peter Barry (MWP) Main author	Environmental Consultant B.Sc. M.Sc. AIEMA, AIOA	Peter is an environmental scientist and environmental impact assessment practitioner with 20 years' experience in the measurement, assessment, prediction and control of environmental noise. Peter is a member of the Institute of Acoustics (IOA) and has completed the IOA Diploma in Acoustics and Noise Control. Peter has prepared numerous noise impact assessment reports for various developments including major infrastructural developments, mixed use developments and wind energy development projects. He has presented evidence as expert witness on noise at oral hearings including a strategic infrastructure development (SID) wind farm development. Peter as prepared numerous technical chapters for Wind Farm developments including Noise and Vibration, Shadow Flicker and Air Quality and Climate. Peter has presented evidence on all three topics as expert witness at Oral Hearing.
10 Noise	Peter Barry (MWP) Main author	<i>See above</i>	<i>See above</i>



EIAR Chapter/Role	Consultant	Title/Qualification	Competencies
12 Cultural Heritage	Faith Bailey (IAC) Main author	Senior Archaeologist and Cultural Heritage Consultant Associate Director of IAC MA in Cultural Landscape Management (archaeology and built heritage) BA in Archaeology Member of the Institute of Archaeologists of Ireland Member of the Chartered Institute for Archaeologists	With over 18 years of experience in her field Faith is one of the most experienced archaeological and cultural heritage consultants currently operating within the sector. She has an in-depth knowledge of the planning systems and heritage legislation within both the Republic of Ireland and Northern Ireland; and has an excellent working relationship with clients and statutory authorities. She specialises in the preparation of archaeological and built heritage chapters for EIAR of large-scale developments and schemes, along with provision of expert witness services at Oral Hearing.
	Jacqui Anderson Assistant author	MA in Archaeology BA in Archaeology and Classical Studies Member of the Institute of Archaeologists of Ireland	Jacqui works as an Archaeologist and Cultural Heritage Consultant with IAC Archaeology. She has seven years' experience in the production of archaeological assessments and EIA across all sectors of development in Ireland. She has gained considerable experience in the collation of baseline research and writing of archaeological impact assessments to support planning applications and Further Information requests. These inform projects ranging from residential developments to energy projects.
12 Material Assets	Ilyaas Adams (MWP) Main author Traffic and Transport Assessment	BSc CEng MIEI PrEng ECSA Senior Traffic and Transportation Engineer	The assessment was completed by Ilyaas Adams, a senior traffic and transportation engineer for MWP (formerly Malachy Walsh and Partners). He holds a Bachelor of Science in Engineering (BSc Eng. Hons) and has completed multiple masters' courses (level 9) in the field of transport engineering and project assessment. He is a chartered engineer through Engineers Ireland for the field of traffic and transportation engineering. He is also a certified Professionally Registered Engineer (PrEng) in accordance with the Engineering Council of South Africa. Ilyaas has gained both contracting and consulting engineering experiencing in the construction, management, and design of public transport networks, with a wide range of experience in the planning, impact assessments and analysis of the operation of transport infrastructure.
	Noelle O'Leary Main author Built Services and Waste Assessment	<i>See above.</i>	
13 Landscape and Visual	Evelyn Sikora Main author	BA, MA	Evelyn is a qualified landscape architect and town planner. She is also a Corporate Member of the Irish Landscape Institute. She has specialised in Landscape and Visual Assessment (LVIA) and has five years' experience in a range of projects, including Strategic Infrastructure Projects throughout Ireland. Projects include a number of infrastructural projects including

EIAR Chapter/Role	Consultant	Title/Qualification	Competencies
		Senior Landscape Planner	numerous wind farms, solar farms, road schemes, flood relief projects, and other infrastructural projects in both rural and urban contexts
14 Interaction of the Foregoing	Noelle O Leary Main author	<i>See above.</i>	<i>See above.</i>
15 Schedule of Environmental Mitigation	Noelle O Leary Main author	<i>See above.</i>	<i>See above.</i>

## **1.9 Difficulties Encountered**

No difficulties were encountered.

## **1.10 Note on Drawings and Graphics**

Details of the Proposed Development are supported by the planning application drawings prepared by MWP in compliance with our internal Quality Management System (accredited to ISO: 9001). These drawings accompany the planning application and are referenced as relevant throughout the EIA. The 1:50,000 and 1:25,000 mapping that was used to generate many of the figures in the EIA are the copyright of Ordnance Survey Ireland (OSI licence number EN0015720).

## **1.11 References**

DHPLG. (2018). *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*, Department of Environment, Heritage and Local Government.

EPA. (2022). *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*, Environmental Protection Agency.

EU. (2014). Directive 2014/52/EU. Directive 2014/92/EU of the European Parliament and of the Council.

EU. (2017). *Environmental Impact Assessment of Projects: Guidance on Scoping*, European Union.