MWP

Chapter 01 Introduction

Brittas Wind Farm Project

Co. Tipperary

Brittas Wind Farm Ltd

November 2024

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1. Introduction

This Environmental Impact Assessment Report (EIAR) relates to a proposed wind energy project in County Tipperary, named Brittas Wind Farm, for which development consent is being sought by **Brittas Wind Farm Limited**, (the Applicant) from An Bord Pleanála (ABP) (the competent Planning Authority). The proposed project is located approximately 3km north of Thurles town in County Tipperary (hereafter referred to as the 'site'). A full description of the proposed development is provided in **Chapter 02 Project Description** of this **EIAR** which has been prepared by Malachy Walsh and Partners Engineering Consultants.

The **EIAR** consists of a systematic analysis and assessment of the potential effects from the proposed development on the receiving environment. The intended purpose of the **EIAR** is to:

- Inform decision makers and the public of the possible environmental effects and impacts associated with the implementation of the proposal;
- Determine whether the identified impacts and associated effects could be significant; and
- Suggest mitigation measures for potential impacts where feasible.

This chapter of the **EIAR** sets out the background and terms of reference for the **EIAR**. It sets out the report structure, assessment topics, assessment authors and contributors, and their experience and qualifications, and assumptions which underlie the **EIAR**. Any references to legislation throughout the **EIAR** include any amendments thereto.

MWP have been engaged by the Applicant to prepare an 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, assessment authors and contributors, and assumptions which underlie the EIAR. It introduces the project and outlines the site location and key elements of the project. It sets out the planning policy and legislative background to the project and details the consultation undertaken with relevant stakeholders.

1.1 The Applicant

The Applicant is **Brittas Wind Farm Limited**, a subsidiary of **Ørsted Onshore Ireland Midco Limited**. Ørsted is a renewable energy company taking action to create a world that runs entirely on green energy. Ørsted develop, construct, own and operate onshore wind farms, solar farms and energy storage facilities across Ireland. The company has 21 operational wind farms on the Island of Ireland producing 378MW of renewable electricity. There are additional wind farms in the construction and planning stage. Ørsted is also recognised on the CPD Climate Change A List as a global leader for their work on climate action. They were the first energy company to have its science-based net-zero emissions target validated by the SBTi or Science Based Targets initiative. Their headquarters is in Denmark with their Irish operations based in Cork City. Over the next decade, Ørsted aims to develop 1,000MW of onshore wind, solar, and storage capacity across Ireland.

1.2 Site Location

The proposed Wind Farm Site is located 3km north of Thurles town (see **Figure 1-2**) in the following townlands: Brittas, Rossestown, Clobanna, Brownstown, Kilkillahara and Killeenleigh, County Tipperary. The proposed Grid Connection Route (GCR) is located within the public road between the Wind Farm Site and the existing Thurles 110kV Substation. The Grid Connection Route is located in the following townlands: Killeenleigh, Coolgarrane,

Clobanna, Athnid More, Rossestown, Cassestown, Laghtagalla, Farranreigh. Furze, Loughlahan and Ballygammane, County Tipperary. The Turbine Delivery Route (TDR) runs from the Port of Foynes in County Limerick to the Wind Farm Site via the national, regional and local road network. Proposed works associated with the Turbine Delivery Route are located in the Townlands of Brittas and Brittas Road, County Tipperary.

The planning application development site boundary includes a total land area of approximately 331.98 ha. The lands of the Wind Farm Site are made up of agricultural fields bounded by hedgerows and treelines. An area of broadleaf forestry is located at the southwest corner of the project site. The River Suir transects the site from north to south. The N62 is located west of the site, running north to south, connecting Templemore to Thurles. The N62 provides a link to the M6, M7 and M8 motorways. The L8017 local road traverses the centre of site from east to west, crossing the River Suir at a bridge point. There are a small number of recorded monuments in the study area, including Brittas Castle, located in the southeast portion of the project site and is included in the National Inventory of Architectural Heritage.

1.3 Project Summary

The proposed development will consist of the following elements that are described separately in Chapter 2 of the EIAR:

- The Wind Farm Site which includes ten (10) wind turbines;
- Associated tracks and infrastructure;
- An on-site 110kV electrical substation;
- A 7km Grid Connection Route (GCR) which consists of an underground electrical grid connection from the Wind Farm Site to the existing Thurles 110kV substation; and
- Temporary accommodation works along the turbine delivery route to allow for the delivery of large turbine components.

The development description as per the statutory newspaper notice and the application form for which consent from An Bórd Pleanála (ABP) is being sought is as follows:

- 10 No. Wind Turbines with a blade tip height of 180m, hub height range from 102.5 to 105.5m and a rotor diameter range from 149m to 155m;
- 10 No. Wind Turbine foundations and Hardstand areas and associated drainage infrastructure;
- 1 No. Permanent Lidar unit and associated foundation, hardstand area and compound for Meteorological Monitoring;
- 1 No. 110kV Electrical Substation including 2 No. control buildings, electrical plant and equipment, welfare facilities, carparking, water and wastewater holding tanks, security fencing, lightening protection and telecommunications masts, security cameras, external lighting and, all associated infrastructure;
- Installation of medium voltage underground electrical and communication cabling connecting the wind turbines to the proposed onsite substation and associated ancillary works;
- Installation of approximately 7km of underground electricity and communication cabling between the proposed onsite substation and the nearby existing Thurles 110kV substation in the townland of Ballygammane, Co. Tipperary. The cabling will be laid primarily within the public road and will connect the proposed wind farm to the national grid;

- 4 No. Site Entrances from the public road and associated fencing and signage;
- Construction of new permanent site access tracks, turning heads and associated drainage infrastructure;
- The upgrading of existing access tracks and associated drainage infrastructure;
- 2 No. Temporary construction site compounds and mobile welfare facilities;
- 1 No. Borrow pit and associated drainage infrastructure to be used as a source of stone material during construction;
- Spoil deposition areas;
- Associated surface water management systems;
- Tree felling and hedgerow removal to accommodate wind farm infrastructure;
- Temporary accommodation works at 2 no. locations adjacent to the public road to facilitate delivery of turbine components to site within the townlands of Brittas and Brittasroad, Co. Tipperary. The works primarily relate to trimming and clearing of vegetation, temporary removal of street furniture and fencing, and installation of temporary stone hard standing; and
- All related site works and ancillary development;

The applicant is seeking a ten-year permission and an operational period of no less than 35 years from the date of commissioning of the entire Wind Farm.

1.3.1 Flexibility Application

In accordance with Section 37CC of the Planning and Development Act 2000, as amended, and article 15J of the Planning and Development Regulations 2001, as amended, Brittas Wind Farm Ltd formally submitted a flexibility request application to An Bord Pleanála (ABP) for the proposed project. The flexibility request in this case was for alternative turbine models which includes different hub heights, rotor diameters, blade lengths, maximum power outputs and variations in the hardstanding areas at the base of each respective turbine model. The reasons for the flexibility application are related to the fact that the exact turbine model will be subject to a competitive procurement process that will only commence if the project receives planning consent. At this pre-application stage it is not possible to be definitive about the exact turbine type, i.e. the exact dimensions, as different turbine manufacturers produce different sized machines. The three types of potential turbines to be used in the proposed project are described in Section 2.4.1 of Chapter 02 Project Description.

Flexibility of turbine make and model, including hardstands, was requested for the following reasons:

- Procurement;
- Potential obsolescence of existing technology; and
- To allow Orsted to take advantage of new technologies which may become available during the consent process.

After consideration of this application and a consultative meeting, ABP granted permission for flexibility with respect to the turbine models. A copy of the letter from ABP granting this permission is provided in Appendix 1A.

The EIAR has assessed the potential effects of all three turbine options. Although flexibility was granted for alternative hardstanding areas at the base of each turbine, one single hardstand design was brought forward for the proposal and is assessed throughout the EIAR.

1.3.2 Other Project Elements subject to separate Planning Applications

Other elements of the project which are assessed throughout the EIAR but are not the subject of this SID planning application are as follows:

- Battery Energy Storage Facility (BESS);
- Rerouting of an on-site ESB 38kV overhead powerline (OHL); and
- Accommodation works along the turbine delivery route which includes temporary removal of traffic signs and lights, electricity poles, bollards and lamp posts, fences and hedge and tree removal/trimming.

Two separate planning applications for the BESS and re-routing of the ESB OHL will be prepared and lodged with Tipperary County Council (TCC) after planning permission has been obtained for the main wind farm project. Relevant consent will also obtained from ESB for the rerouting of the OHL.

1.4 Application Area

The planning application area spans a total of 331.98 ha and includes the wind farm site, the grid route along the public road corridor between the proposed on-site substation and the existing Thurles 110kV substation, and an area in Thurles town required for accommodation works to allow for turbine delivery.

Other options considered and assessed are discussed in Chapter 4 of the EIAR (Alternatives chapter).

1.5 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
Volume I	**Non-Technical Summary**	The Non-Technical Summary provides an overview of the project 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.
Volume II	**Main EIAR**	The Main **EIAR** provides a detailed description of the proposed project 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: • Chapter 1 Introduction • Chapter 2 Project Description • Chapter 3 Civil Engineering • Chapter 4 Alternatives • Chapter 5 Population and Human Health • Chapter 6 Biodiversity • Chapter 7 Ornithology • Chapter 8 Land and soil • Chapter 9 Water • Chapter 10 Material Assets • Chapter 11 Cultural heritage • Chapter 12 Noise and Vibration • Chapter 13 Shadow Flicker • Chapter 14 Air and Climate • Chapter 15 Landscape and Visual

Volume	Content	Description
		• Chapter 16 Traffic • Chapter 17 Interaction of Effects • Chapter 18 Schedule of Environmental Mitigation Measures
Volume III	**Appendices**	The Appendices volume contains supporting information and reference documents to Chapters of the Main **EIAR** Volume 2.
Volume IV	**Photomontages**	This volume contains the Photomontages and Zones of Theoretical Visibility maps in support of Chapter 15, the Landscape and Visual Impact Assessment. Chapter 15 should therefore be read in conjunction with Volume 4 Photomontages.

A Screening for Appropriate Assessment and a Natura Impact Statement accompany this application.

1.6 Methodology

1.6.1 Strategic Infrastructure Development

In relation to projects that may be deemed to be Strategic Infrastructure Development (SID), Part 1 of the Seventh Schedule of the Planning and Development Act 2000 (Act), as amended, specifies, inter alia, the following classes of development:

"An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50 megawatts."

Once a SID determination request is made by a prospective applicant, An Bord Pleanála (the Board) must satisfy itself that the development meets one or more of the conditions set out in section 37A(2) of the Planning and Development Act 2000 as amended, namely:

> "(a) the development would be of strategic economic or social importance to the State or the region in which it would be situate;
>
> (b) the development would contribute substantially to the fulfilment of any of the objectives in the National Spatial Strategy or in any regional spatial and economic strategy in force in respect of the area or areas in which it would be situate; and
>
> (c) the development would have a significant effect on the area of more than one planning authority."

The SID determination letter for the Brittas Wind Farm Project, dated the 8th May 2024, is included in **Appendix 1B**.

1.6.2 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, (Part X) as amended, and in Part 10 of the Planning and Development Regulations, 2001, as amended. Both the Act and Regulations have recently 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 Planning and Development Regulations 2001, as amended, 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 Planning and Development Regulations 2001, as amended, 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 having regard to this legislation and national guidance, including European Commission's Guidance on the preparation of the EIA Report (Directive 2011/92/EU as amended by 2014/52/EU) (2017), 'Guidelines on information to be contained in an Environmental Impact Statement, 2002' and most recent 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out EIA (August 2018)'. Regard was also had to the EPA's 'Guidelines on the information to be contained in Environmental Impact Assessment Report, 2022'.

1.6.3 Environmental Impact Assessment

The Environmental Impact Assessment (EIA) Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment as amended by EIA Directive 2014/52/EU, requires Member States to ensure that a competent authority (in this instance An Bord Pleanála) 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.

The requirement for EIA of certain categories of development is transposed into Irish legislation under the Planning and Development Act 2000 as amended and the Planning and Development Regulations 2001 to 2023 as amended (the "Regulations").

The proposed wind energy project, is of a prescribed class of development to which the EIA Directive applies and falls within the list of project types requiring an EIA as set out under 3(i) of Part 2 of the 5th Schedule of the Planning and Development Regulations 2001 to 2023 (as amended) which states:

> *"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 project includes works that are part of the windfarm development including access tracks, tree felling and excavation. The works have been assessed as part of the windfarm development.

This EIAR is compliant with the requirements of the EIA Directive and the Planning and Development Regulations 2001 to 2023, as amended in terms of the structure and content of the information required to be provided by the Developer.

1.6.4 EIA Process

In terms of the EIA process, the following stages were undertaken:

- Screening;
- Consultation;
- Scoping; and
- EIAR preparation (i.e., establishing baseline data, evaluating impacts, defining mitigation measures, etc.).

The EIA process begins with Screening to determine whether EIA is required followed by Scoping and Consultation to identify the specialist studies required in the EIA. Where effects are considered to be unacceptable, they can be avoided or mitigated against at the design stage.

In EIA, impacts are defined as the changes resulting from an action, whereas effect is the term used to express the consequence of an impact (expressed as the 'significance of effect'). If the anticipated effects are unacceptable, design measures or other relevant mitigation measures can be implemented to reduce or avoid those effects. The EIAR describes the current state of the environment and assesses the likely significant effects of a proposed development on the environment, including the residual effects once mitigation and monitoring measures have been implemented.

1.6.4.1 Screening

The first step in the EIA process is 'Screening' which determines whether an EIA is required (EPA, 2022), and usually commences at the project design stage. The EIA Directive lists those projects that require a mandatory EIA (Annex I) such as motorways or roads with 4 or more lanes wide over 10 km in length (Annex 17(b)1) and those projects for which an assessment must be undertaken to determine if they are probable to result in likely significant effects (Annex II). For Annex II projects, individual Member States can choose to institute specific thresholds or project-specific considerations, or a combination of both of these approaches to arrive at a decision regarding the requirement to undertake an EIA.

Schedule 5, Part 2 of the Planning and Development Regulations 2001, as amended, lists the Energy Industry projects for which EIA is required including "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 for ten (10) wind turbines with an output of greater than 50MW, thus the project will exceed the mandatory threshold for EIA, therefore EIA is required.

1.6.4.2 Consultation

Extensive consultation was undertaken in relation to the project, and comments from stakeholders and interested parties were requested and recorded. Consultation through meetings, public information days, letters, email, and telephone calls, with various statutory and non-statutory consultees has been maintained throughout. The following outlines the consultation process.

Pre-planning consultation meetings took place with the following parties:

- An Bord Pleanála;
- Tipperary County Council; and
- National Parks and Wildlife Service (NPWS)

1.6.4.2.1 An Bord Pleanála (APB)

One pre-application consultation meeting was held with ABP. The meeting was held online on 5th May 2023, where Brittas Wind Farm Ltd and MWP provided an overview of the proposed project. The Natura Impact Statement (NIS) and EIAR were also discussed at this meeting.

A separate meeting was held with ABP on 1st March 2024. The discussion of this meeting focused on the developer's application for flexibility with respect to the proposed turbine models. Permission for this flexibility was granted by ABP on the 8th May 2024 (see Appendix 1A).

ABP confirmed the project would be Strategic Infrastructure as it meets the requirements outlined in Section 1.6.1, in correspondence dated the 8th May 2024 (see Appendix 1B).and advised on the list of prescribed bodies to be informed once the pre-application stage was closed.

1.6.4.2.2 Local Authority – Tipperary County Council

Brittas Wind Farm Ltd. and MWP held an online meeting with members of Tipperary County Council Planning Department on 1st March 2023. This was a preliminary meeting to provide an overview of the proposed development. It was confirmed that all of the proposed wind turbines are located within an area identified as "open for wind farm development" as outlined in the Tipperary County Development Plan 2022-28 at the time of the meeting. The turbine delivery route, potential visual impacts, public consultation, and environmental impacts were also discussed.

1.6.4.2.3 National Parks and Wildlife Service (NPWS)

A pre-application consultation meeting was held with NPWS on the 19th September 2023. This was a preliminary meeting to provide an overview of the proposed project, the ecological characteristics of the site and the ecological surveys and assessments being undertaken and get their feedback.

1.6.4.2.4 Community Engagement and Public Consultation

Brittas Wind Farm Ltd. has engaged and consulted with the local community to ensure that their views, queries, and suggestions were considered as part of the project design and the Environmental Impact Assessment process.

The applicant has also undertaken a robust programme of community engagement, a summary of which is presented in detail in the Brittas Wind Farm Community Report (see Volume III Appendix 1F). Brittas Wind Farm Ltd. have sought to engage with the community to gain valuable insights into the local area and to facilitate productive discourse. In line with national policy, Brittas Wind Farm Ltd. are committed to transparent and meaningful consultation to facilitate more informed and active engagement with stakeholders. A summary of the public consultation is presented in Table 1-2.

Table 1-2: Summary of Public Consultation

Date	Description of Activity
02 May 2022	Appointment of Community Liaison Officer (CLO)
16 June 2022	Project Newsletter 1 distributed via a door knock to all houses within 1.5km of the site
11 November 2022	Project Website is launched www.brittaswindfarm.com
03 January 2023	Assistant CLO appointed to aid in community consultation
03 April 2023	Project Newsletter 2 distributed via a door knock to all houses within 1.5km of the site
17 April 2023	Public Consultation Session 1 at Thurles Sarsfield GAA Club – Introduction to the Project
17 April 2023 to October 2023	Ongoing communications with residents via phone calls and email
03 October 2023	Project Newsletter 3 distributed via a door knock to all houses within 1.5km of the site
10 October 2023	Public Consultation Session 2 at Thurles Sarsfield GAA Club – Initial Turbine Layout
11 October 2023	Public Consultation Session 2 at Loughmore Castleiney GAA Club – Initial Turbine Layout
11 October 2023	Online exhibition is launched www.innovision.ie/brittas

Date	Description of Activity
11 October 2023 to June 2024	Ongoing communications with residents via phone calls and email
04 June 2024	Project Newsletter 4 distributed via a door knock to all houses within 1.5km of the site
12 June 2024	Public Consultation Session 3 at Rahealty Community Hall
24 June 2024	Project Website and Virtual Consultation Room updates with latest project information
Ongoing	Responses to queries raised in relation to the project.

A project website (https://orsted.ie/brittaswindfarm) has been established to share information with the local community. This website has been updated regularly to reflect progress on the proposed development. Information presented on the project website includes:

- Project Information;
- Project Benefits;
- Company Information;
- Local Community Material;
- Project Updates and News;
- Timeline;
- Frequently asked questions answers;
- Contact information; and
- The online exhibition

An online exhibition was set up to present project information in a clear and accessible format. The online exhibition includes a project description, maps of the latest project design, a range of environmental information and a photomontage viewer to view what the proposed turbines will look like I the existing landscape. The online exhibition is accessed from the main project website and can be viewed here: https://www.innovision.ie/brittas

1.6.4.3 Scoping and Written Consultations

If it is determined that an **EIA** is required, the next step is to 'scope' the content of the **EIAR**. 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).

Written requests outlining details of the proposed development were issued in December 2022 to a number of key stakeholders (both statutory and non-statutory consultees) for consultation/feedback. This included a notification setting out an overview of the development project. The notifications invited feedback from the Consultees on any key issues and considerations which they believe should be addressed and expressed that their input at this stage would be welcomed. Consultees were informed that participation at this stage of the project would not affect participation at a later stage in the planning process. A list of the organisations/groups consulted, a copy of the consultation documents and the responses received are provided in **Volume III Appendix**

1C, 1D and 1E respectively of this EIAR. The issues raised were subsequently considered in the EIA process and are addressed where relevant in the various chapters.

1.6.4.4 Environmental Impact Assessment Report

An EIAR is prepared as part of the EIA process. Typically the EIAR includes a baseline assessment to determine the status of the existing environment; impact prediction and evaluation to determine the significance of effects identified (this can include cumulative effects); determination of mitigation and monitoring measures to reduce the impacts identified; and a residual impact assessment once any mitigation and monitoring measures have been implemented.

An EIAR is defined by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (Statutory Instrument (S.I.) No. 296 of 2018) (EU, 2018):

"*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*".

The EIAR consists of a systematic analysis and assessment of the potential effects of the entire proposed project on the receiving environment. The intended purpose of the EIAR is to:

- Identify the baseline environmental context of the proposed development;
- Inform the consenting authority, other regulatory bodies and the public of the possible environmental effects and impacts associated with implementation of the proposed development;
- Determine whether the identified impacts could be significant; and
- Propose preventative or mitigation measures for potential impacts, as required, where feasible.

1.6.4.5 General Approach to Assessment

In preparing the EIAR, the following regulations and guidelines were considered:

- The requirements of EC Directives and Irish Regulations regarding Environmental Impact Assessment;
- Guidelines on the Information to be Contained in Environmental Assessment Reports (Environmental Protection Agency [EPA], May 2022);
- Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2003);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of the Environment, Community and Local Government [DoHPLG], 2018);
- In addition, specialist disciplines have had regard to other relevant guidelines, as noted in the specific chapters of the EIAR;
- Wind Energy Development Guidelines for Planning Authorities (DoEHLG, 2006);
- Draft Revised Wind Energy Development Guidelines (DoHPLG, 2019);
- European Commission Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment, EU 2013; and
- European Commission notice: Guidance document on wind energy developments and EU nature legislation (2020).

For each technical EIAR chapter, the classification and significance of effects is generally evaluated in accordance with the EIA Directive and the methodology outlined in the EPA's draft guidelines.

Where more relevant and specific standards and methodologies exist, they are adopted and outlined in the respective methodology sections within each technical chapter (for example, specific criteria and assessment terminology used to assess air quality impacts). The EIAR is based on the data gathered during the assessment process. It applies accepted methodologies in determining if effects will be significant and recommends mitigation measures to avoid or reduce impacts where possible.

Each of the technical chapters contains a description of the existing environment, an assessment of the likelihood and extent of any potential environmental impacts and proposes mitigation measures, where necessary.

Assessment of Impacts

The potential impacts of the Proposed Development and associated effects on a sensitive receptor/existing environment are determined. This is undertaken by assessing the character of effect (including magnitude, duration probability and quality) in comparison to baseline conditions using the relevant terminology outlined in the EPA's 2022 Guidelines (EPA, 2022) (see Table 1-3 below).

The assessment of impacts takes into account any embedded mitigation measures that forms an inherent part of the Proposed Development (and as included in the EIAR Chapter 02 Project Description. For this assessment, 'embedded mitigation measures' are those that have been incorporated into the design of the development and any 'additional mitigation' are those preventing, reducing and offsetting any remaining significant adverse effects.

Where it has not been possible to quantify effects, qualitative assessments are carried out, based on expert opinion and professional judgement. Where uncertainty exists, this is noted in the relevant EIAR chapter. Overall, a character of effect of High, Medium, Low or Negligible is then assigned to the impact being assessed.

The matrix (Table 1-3) adapted from the EPA's 2022 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: EPA 2022 Criteria for Assessing Effects of developments

Criteria	*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 effect which obliterates sensitive characteristics*

Criteria	Term	Description
Extent of Effects	Describe the size of the area, the number of sites and the proportion of a population affected by an effect.	
Context	Conform	Where the extent, duration or frequency conforms to established (baseline) conditions (is it the biggest, longest effect ever?)
	Contrast	Where the extent, duration or frequency contrasts to established (baseline) conditions (is it the biggest, longest effect ever?
Duration of Effect	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	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)
Likelihood of Effects	Likely	Where the extent, duration or frequency conforms to established (baseline) conditions (is it the biggest, longest effect ever?)
	Unlikely	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Types of Effects	Indirect	Effects 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).

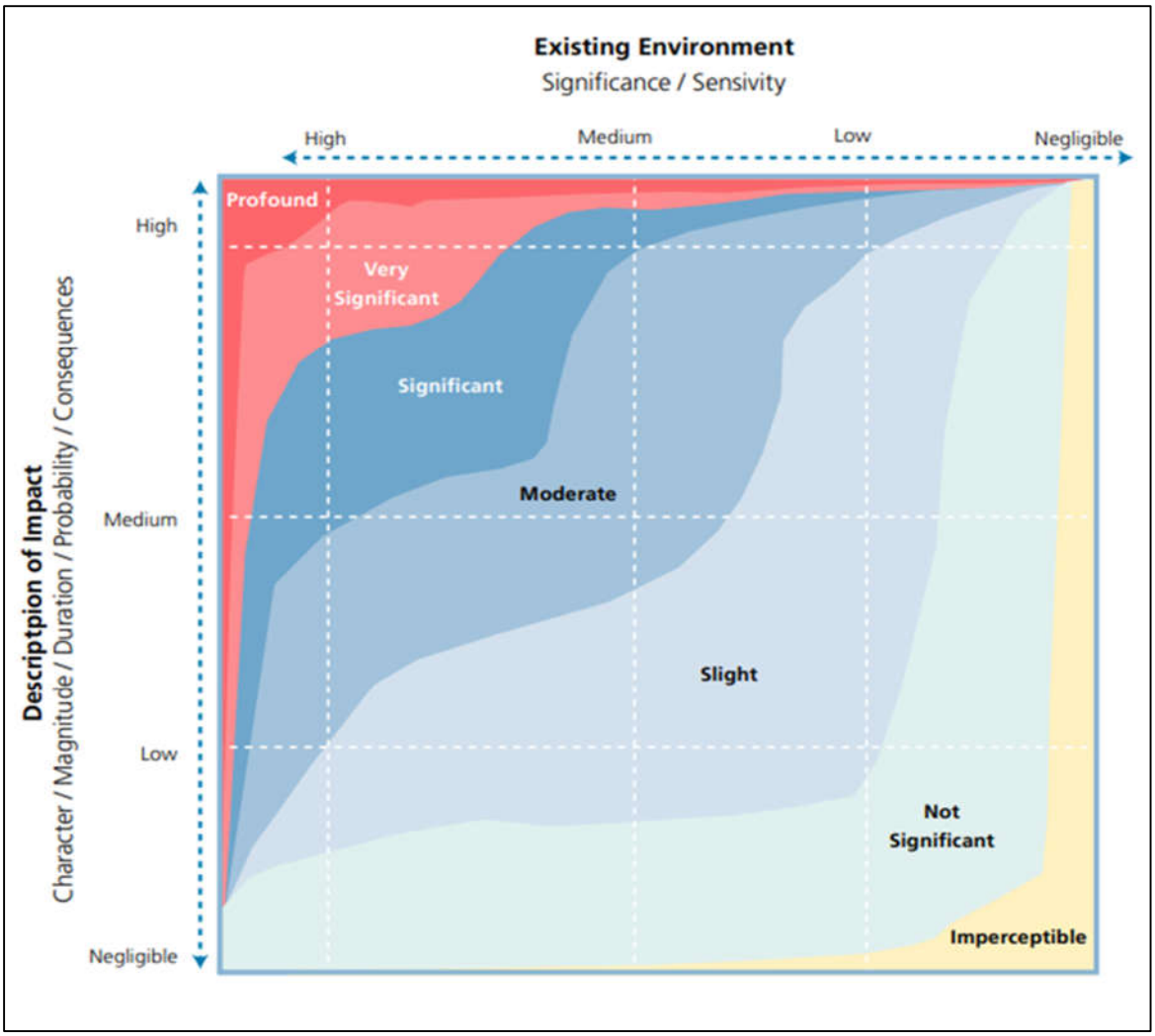

Figure 1-1:Determination of Significance Source: Figure 3.5, EPA Guidelines (EPA 2022)

Cumulative Impacts

The environmental assessment also takes into consideration cumulative impacts with consented, planned and reasonably foreseeable projects.

The results of a desktop search of proposed and existing planning applications is provided in Section 1.6.4.6. The search used publicly available data from MyPlan.ie 'National Planning Application' database and Tipperary County Council planning application portal. The purpose of this search is to inform the cumulative impact assessments within this EIAR. The cumulation of the Proposed Project with other existing and/or proposed developments has been assessed within each relevant chapter of this EIAR.

Mitigation and Monitoring Measures

Mitigation and monitoring measures are identified through the assessment process to prevent, reduce, offset/remedy the likelihood of the environmental impact identified arising.

Residual Impacts and Effects

'Residual impacts' are defined as those impacts that remain following the implementation of mitigation measures. As per the EPA guidelines, the effects that remain after all assessment and mitigation are referred to

as 'Residual Effects' (EPA, 2022). Determination of residual effects follows the same methodology outlined above.

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.

1.6.4.6 Cumulation with other existing and/or approved Projects

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

The potential for cumulative effects is considered in the relevant chapters of this EIAR. This section of the EIAR profiles the existing and planned projects and plans that could potentially have cumulative effects with the proposed Project.

Although the BESS element and rerouting of the existing on-site overhead line do not form part of the planning application, they do form part of the wind farm project and are assessed as part of the environmental impact assessment.

The project is considered in combination with other plans and projects that could result in cumulative effects including (amongst others):

- Tipperary County Development Plan (2022-2028); and
- Tipperary County Renewable Energy Strategy. Appendix 2 of the Tipperary County Development Plan (2022-2028).

Any development under these plans will first have to be consented under planning and development legislation. Significant cumulative impacts are not predicted with the plans listed above, as each plan has a range of environmental and natural heritage policy safeguards in place. Furthermore, this project has been developed in view of achieving the objectives of these plans. Therefore, development of this project in combination with the scope of works required to achieve the objectives of these plans will not result in cumulative effects. In terms of the proposed wind farm at Brittas, the Tipperary County Development Plan 2022 to 2028 the proposed project area is 'open for consideration to wind energy' development. There is no other contradictory zoning for other project types or infrastructure in this area.

The information on other developments gathered for the cumulative assessment involved a search of relevant County Councils' Online Planning Registers, the An Bord Pleanála website and the EIA Portal, over the period of the last 10 years. This search was carried out during the EIA process with a final search in October 2024. The search focused on the townlands common to the development area and a radius area where there may be potential significant cumulative impacts due to traffic, utility demand, etc. Searches within 4 key areas were undertaken namely:

1. Significant Planning Application - Large development planning applications within 20 km of the proposed project during the last 10 years, (see Section 1.6.4.6.1) (excluding the wind farms, solar farms and bioenergy projects which researched and reported on separately),
2. Small (domestic, recreational and agricultural) development planning applications within 3km of the proposed project during the last 5 years (see Section 1.6.4.6.2),

3. Wind farm development within 20km of the proposed project (see Section 1.6.4.6.3), and
4. Solar Farms and other energy developments within 20km of the proposed project site (see Section 1.6.4.6.4)

This assessment also considered existing forestry and agricultural activities within the proposed project area.

1.6.4.6.1 Significant Planning Applications

The search within 20km of the development site within the last 10 years identified 68 sizable developments (Table 1-4). This included eight multiple housing developments, three sports facilities, six quarry developments or extensions, two overhead power lines, two waste recovery/processing facilities, one mixed-use development, two mining developments, two wastewater treatment plants, one substation, one agricultural development, one retail park, one nursing home and one medical care centre.

The closets of these planning applications to the development include:

- Four multiple housing developments in Thurles;
- 1 incomplete powerline (Borrisoleigh to Thurles – note there are 2 planning applications for this line);
- A community health care centre and pharmacy (Thurles); and
- A multifunctional spectator stand for a sports facility with three pitches in Thurles (Table 1-4).

One multi-housing development (86 units) in Thurles was permitted in Feb 2024, another in Feb 2023 (26 units) and a third in Sept 2022 (63 dwellings). One multi-housing planning application in Thurles is still under consideration. These are all located at least 3km south and downstream of the proposed wind farm site.

The only potential development where direct cumulative effects that could reasonably be foreseen is the incomplete powerline which transects the proposed Brittas WF development site (see Figure 2-22 in Chapter 02 Project Description). This c.6.94 km of incomplete powerline requires either new poles to be erected or that existing poles be strung. The structures to be erected comprise either twin or predominately single timber pole structures strung or to be strung with a twin line. This development was permitted in mid-2023 and is likely to be constructed prior to construction phase of the proposed project. The wind farm developer will submit a separate planning application for the rerouting of this line through the wind farm site to Tipperary County Council, in consultation with ESB. The possible options for this re-routing are outlined in Chapter 04 Alternatives of the EIAR.

The construction of this powerline will be completed prior to construction of the Brittas windfarm project and will therefore not have any additional cumulative effects in combination with the proposed wind farm. This EIAR has assessed the potential effects of rerouting this powerline during the construction of the wind farm – as part of the project. Therefore, an assessment of cumulative effects is not relevant.

Table 1-4: Significant Planning Applications within 5km of the proposed project

#	Planning Reference Number	Type of Project	Description	Decision/Grant Date	Address	Distance from Proposed Project
1	TCC 201598	Sports Facilities	To move location of previously granted hurling wall Planning Ref. 19600797, for new astro turf finish to playing area in front of hurling wall, flood lighting to hurling wall area and flood lighting to existing playing pitch and associated site works	16/4/2021	Corriga, Clonakenny, Roscrea, Co. Tipperary	18.6km North of Brittas
2	TCC 1460014	Electrical Power Line	Divert the existing 38KV overhead electric line to facilitate development of new reuse at same address	01/9/2014	Gortnagowna, Roscrea, Co. Tipperary. Co. Tipperary	17.3km North of Brittas
3	TCC 2360666	Alterations to existing industrial/ commercial facilities	(a) existing industrial/commercial uses and associated facilities on a reduced site area than that which was approved under Planning Ref No: 06511394 & 12510064, (b) retention of Building No 3 for uses consisting of treatment/recycling of ELVs (end of life vehicles) and general industrial purposes, (c) retention of former sandblasting building and associated facilities for use as general storage, (d) retention of weighbridge and associated facilities and (e) permission for chemical toilets	29/04/2024	Clontaffe, Killea, Templemore, Co. Tipperary	13.9km North of Brittas
4	TCC 2124	Quarry Extension	Extension of sand and gravel quarry - the development will consist of extension of the existing sand and gravel quarry and for continued use of the site entrance, access laneway, weighbridge, maintenance shed, settlement lagoons, site office, toilet, plant and machinery and ancillary works. The extension area will be 13.818ha in lands to the north-west of the existing quarry. An Environmental Impact Assessment Report has been prepared and is submitted with the application	31/01/2022	Ballybeg and Aghnameadle, Toomevara,Co. Tipperary	17.8km North West of Brittas
5	TCC 16601054	Quarry Reinstatement of land	The filling of 0.5ha of quarry land with inert materials comprising soil and stone and all associated ancillary works as part of the reinstatement of the quarry land	13/01/2017	Lackenavorna, Templederry,, Co. Tipperary	19.1km Northwest of Brittas
6	SU11.SU0137	Quarry facilities	Quarry buildings, weighbridge and concrete batching plant.	12/02/2019	Knockahaw, Errill, Co. Laois	11km North of Brittas
7	PL10.302845	Housing – multi-units	Construction of 14 terraced houses	07/03/2019	Lumper Lane and New Line, Urlingford, Co. Kilkenny.	14.9km West of Brittas
8	PL10.315747	Housing – multi-units	Change of design to previously granted permission of 12 houses.	11/04/2024	Togher Crescent, Urlingford , Co. Kilkenny	14.4km West of Brittas
9	PL92.310786	Expansion – existing industrial facility	1) an increase in the annual waste intake from 45000 tonnes/year to 80,000 tonnes; (2) single storey extensions to the east and west of the existing building (having a combined floor area of 6,083m2), (3) relocation of existing firewater lagoon (324m2), (4) construction of new firewater lagoon (401m2) The existing biological treatment process is carried out in accordance with an Industrial Emissions Licence granted by the Environmental Protection Agency. An Environmental Impact Assessment Report (EIAR) shall be submitted with this planning application.	06/10/2023	Ballybeg, Littleton, Co. Tipperary	12.3km South of Brittas

#	Planning Reference Number	Type of Project	Description	Decision/Grant Date	Address	Distance from Proposed Project
10	PL02.245693	Waste Recovery Facilitity	Construction and demolition waste recovery facility.	09/06/2016	Killough Hill, Gaile, Holycross, Co. Tipperary	12.4km South of Brittas
11	PL92.309294	Housing - multi-unit	Construction of 63 no. dwellings	17/08/2022	Dún Lia, Lognafulla, Thurles. Co. Tipperary	4.04km South of Brittas
12	PL92.311097	Housing - multi-unit	Demolition of 2 buildings and construction of 26 houses. Provision of new roads and footpaths, car parking areas, playgrounds & open spaces, boundaries.	15/02/2023	Dublin Road, Thurles, Co. Tipperary	4.2km South of Brittas
13	PL92.301811	Housing - multi-unit	Permission to demolish and remove existing house and construct 3 new houses.	09/10/2018	Dublin Road and Ard Carraig, Thurles, Co. Tipperary.	4.2km South of Brittas
14	PL92.302913	Medical Care Facilities	Development of a Community Primary Healthcare Centre and Pharmacy including Change of Use, demolition and alterations to existing Structures	01/03/2019	Mitchel Street, Thurles County Tipperary	3.81km South of Brittas
15	PL92.305908	Housing - multi-unit	Construction of 4 in total, 3-bedroom, 2 storey terraced dwelling houses.	10/03/2020	No 12 Sarsfield Street, Slieve Na Mban Meadows (Slievenamon Meadows) , Davis Road, Thurles, Co. Tipperary.	4.21km South of Brittas
16	PL92.247557	Retail Park	Extension of existing planning application. Three years on development previously granted under PL22. 238797 for building material and plant yard/compound.	01/03/2017	Racecourse Retail Park, Bawntameena, Thurles, Co. Tipperary	3.87km South of Brittas
17	PL92.310934	Electrical Powerline	Completion of partially constructed overhead electricity line from Thurles electricity substation to the Borrisoleigh electricity substation as permitted under TCC Reg 08/511136.	23/06/2022	Ballygammane, Lisduff, Knockanacunna, Cassestown, Farranreigh, Tooreen, Rossestown, Brittas, Clonamuckoge More, Clonamuckoge Beg, Kilkillahara, Ballybristy, Lisheenataggart, Rorardstown Lower, Rorardstown Upper, Rathleasty, Kivilcorris, Clonbrassil,	Goes through the Brittas site
18	TCC 14600480	Quarry	Consist of re-opening of a borrow area, previously permitted under Planning Ref No PLC/17663. Aggregate materials (soil, stone & Rock) extracted from the borrow area will be used for on-site works, rehabilitation & future closure related activities, at Lisheen Mine. Aggregate extraction activities will be undertaken over an extension area of approx 13.5m within an overall site area of approx 27.5h. The maximum quantum of material to be extracted will be approx 1000000m3. Extraction activities will cease once closure activities at Lisheen Mine are completed as previously permitted under Ref No PLC/17663. The borrow area will then be rehabilitated. The development also include all related ancillary site works. An EIS & NIS have been submitted.	22/05/2015	Barnalisheen, Thurles	8.25km Northeast of Brittas

#	Planning Reference Number	Type of Project	Description	Decision/Grant Date	Address	Distance from Proposed Project
19	TCC 17600440	Agricultural Facilities	The development will consist of a Phase III mushroom substrate (compost) production facility and will involve the construction of an administration building (296.16 sq. m), storage building (8444.04 sq. m), bunker building (9967.59 sq. m), tunnel building (10628.75 sq. m), woodchip bio-filter, wheelwash, weighbridge, 6 no. water storage tanks, 2 no. fuel storage tanks, well, wastewater treatment system, hardstanding areas, internal access roads, parking facilities, boundary fencing, landscaping, and all ancillary works. An Environmental Impact Statement (EIS) will be submitted with the planning application. The application relates to development which comprises or is for the purposes of an activity requiring an Integrated Pollution Prevention and Control Licence or a Waste Licence	23/01/2018	Killoran, Moyne, Thurles, Co. Tipperary	8.91km Northeast of Brittas
20	TCC 14600396	Mine Facilities Expansion	An increase in height of the existing Tailings Management Facility (TMF), previously permitted under Reg. No. 13/510275, granted in 2013 (small adjoining cell to the main TMF). The raise in height of this adjoining cell, from c. 131.5 mod up to aa maximum of c. 136.5 mod, will provide additional storage for the management of mine tailings for the purposes of extending the life of the mine, abd will result in an increase in the footprint of the TMF of c 2.25 hectares. The development also includes all related ancillary development works. This application is accompanied by an Environmental Impact Statement(EIS) & Natura Impact Statement(NIS) and relates to an activity requiring an Integrated Pollution Control Licence	23/12/2014	Killoran, Moyne, Thurles, Co. Tipperary	9.87km Northeast of Brittas
21	TCC 21709	Mine Facility	Building (3657 sq m) with a car park and access road, commercial yard area and access road, truck prep building (110 sq m), 2 m high boundary architectural fence, signage, public lighting, solar panels to the building roof, an on-site waste water treatment system and associated polishing filter bed percolation area, rainwater harvesting tank, emergency storage tank, attenuation tank, bored well and all associated site works - application is accompanied by a Natura Impact Statement (NIS)	13/07/2021	Cooleeney and Derryfadda, Moyne, Thurles, Co. Tipperary	9.59km East of Brittas
22	TCC 2360281	Waste Water Treatment Plant	Development consisting of Workshop Building (1242m2), Truck Washout Building (64m2), commercial yard area, new boundary fence and entrance gates, an on-site Wastewater Treatment System and associated polishing filter bed percolation area, attenuation tank, bored well & water storage tank, rainwater harvesting tank, emergency storage tank, solar panels to roof of existing building and all associated siteworks - application is accompanied by an NIS	05/11/2023	Killoran, Thurles, Co. Tipperary, E41 R622	9.25km East of Brittas
23	TCC 20825	Substation	Works within the boundary of the existing Lisheen 110 kV Substation, the proposed works will comprise: replacement and improvement works to an existing electrical transformer bund; construction of two new concrete plinths for associated electrical infrastructure; installation of electrical infrastructure; and underground cable connection from the electrical infrastructure to the existing substation control building.	03/12/2020	Killoran, Templetuohy, Co Tipperary	9.16km East of Brittas

#	Planning Reference Number	Type of Project	Description	Decision/Grant Date	Address	Distance from Proposed Project
24	TCC 2361035	Agricultural – waste processing	The construction of an 1,800 sq.m sludge holding building of c. 60m in length, 30m in width and 13.5m in height, to incorporate an open faced biofilter to be installed at the western end of the facility building, for the acceptance and temporary storage of up to 12,000 tonnes per annum of sludges produced from wastewater treatment; internal site roads and parking; a 50 sq.m welfare/office facility of c. 10m in length, 5m in width and 5m in height; 1 no. surface mounted weighbridge; an electrical sub-station of c. 7.5m in length, 4.3 m in width and 3.2 m in height; underground holding tanks, infiltration areas and associated drainage pipework; pumphouse of c. 2.5m in width, 2.5 m in length and 2.8m in height; permeable and impermeable hardstanding; entrance gate and fencing and perimeter landscaping.	18/07/2024	Derryville, Moyne, Thurles, Co. Tipperary	10.1km Northeast of Brittas
25	TCC 19601025	Housing - multi-unit	To retain indefinately, alter and complete housing development at Manna South, Templemore, Má Chaoin (to which Permission No. TM/780 applies). The works will include completion of 8 No. houses for which sub-structures are in place, construction of 5 No. houses and completion of external works and site development works. The completed development will now comprise 16 No. houses, including 3 No. already completed; compared to 18 No. permitted under TM780	10/11/2019	Manna South, Templemore, Co. Tipperary	8.78km North of Brittas
26	TCC 2360337	Quarry expansion	Extension of the existing limestone quarry and for continued use of the site entrance, access laneway, lagoons, plant and machinery and ancillary works. The extension area will be 0.869ha in lands directly north of the existing quarry. An Environmental Impact Assessment Report has been prepared and will be submitted with this application	03/07/2024	Maher Quarries Ltd, Castletown, Moyne, Thurles, Co. Tipperary, E41 K656	7.97km East of Brittas
27	TCC 17601350	Mixed Use Development	The Tipperary Venue -Mixed use Leisure Campus comprising: A) Demolition of all existing buildings on site comprising 5No. dwelling houses; 1No. derelict dwelling house; 1No. commercial warehouse/storage build; agric. outbuildings.Total GFA of buildings to be demolished is 2,872sq.m. B) Construction of: i) 500 Bedroom Hotel build. (80,577sq.m.) ii) 15,000 person capacity Venue Build. (23,362sq.m.-to accommodate sports, concerts & other events. iii) Equestrian Centre (5,872sq.m.) iv) Heliport (2,383sq.m.) v) 18 Hole Golfcourse & ancillary Golf Club Build. (3,462sq.m.) vi) Driving Range & ancillary build.(484sq.m.) vii) Chapel (255sq.m.) viii) 31No. Retail units (2,883sq.m.) ix) Hoban Memorial Build. (1,984sq.m.) to accommodate banqueting suite & museum with reproduction Lafayette Park & subterranean link to proposed Hotel Build. x) Grade 1 Race Course (c.23.5ha) & Greyhound Track (c.0.36ha) with shared ancillary builds. (40,358sq.m.) xi) Single Storey Energy Centre Build. (1,530sq.m.) xii) Treatment Plant (252sq.m.) C) Provision of all associated landscaping, boundary treatment & site development works includ.: i) Diversion of existing site services. ii) Revised surface water drainage regime includ. diversion & culverting of parts of Derheen & Clover Rivers. Relocation of an attenuation pond adjacent to the Two Mile Borris Interchange. iii) Drilling for a potable water supply (on site) to serve proposed development. iv) Provision of 5743No. Car Parking spaces; 136 Bus Parking Spaces; 72No. Greyhound box spaces; 100 Horse Box Spaces. v) Provision of new 4-arm roundabout on R639 to serve proposed develop. Provision of emergency only access rd. with priority junction onto R639. vi) Link Rd. to connect R639 (via new 3-arm roundabout) to recently constructed Two Mile Borris Grade Separated Junction on M8 & construct 2No. slip lanes to complete the diamond interchange. Widening of approaches to roundabouts at Two Mile Borris	/02/2018	Noard, Newhill, Leigh & Borris, Two-Mile-Borris	10.1km Southeast of Brittas

#	Planning Reference Number	Type of Project	Description	Decision/Grant Date	Address	Distance from Proposed Project
			Interchange to allow two way flow. Segregated left turn lane (on existing southbound diverge) to allow traffic to join proposed Lind Rd in a free flow manner. Termination of existing accommod. rd (on sth. side of new Link Rd) & new access onto northern side of link rd. for exist. accomm. rd. Total GFA of entire develop. 163,091sq.m. The Planning Application is accompanied by an Environmental Impact Statement (EIS). A Waste Licence will be required in respect of this development. (Previous Ref. 09/51/0624)			
28	TCC 16600240	Nursing Home	Construction of a purpose built 86 no. bedroom two-storey nursing home. The development will involve utilising and upgrading an existing vehicular access along with the provision of car parking, connections to public utilities and all ancillary site works on land to the rear & also a partially within the curtilage of the former Convent. The former Convent of Mercy is a Recorded Protected Structure in the Nth Tipperary County Development RPS S440, NIAH 22309020	21/08/2016	Pallas Street, Borrisoland South, Borrisoleigh	11.6km West of Brittas
29	TCC 14600422	Quarry	Quarrying of stone over an extraction area of approximately 2.6 hectares over a 20 year period, and all ancillary site development works. An Environmental Impact Statement (EIS) has been prepared and accompanies this application	01/07/2015	Garranmore, Cashel	19.1km South of Brittas
30	TCC 16600783	Sports Facilities	2 no. senior pitches with ball stops at each end, dug outs, a training pitch with flood lighting, car parking areas, temporary accommodation structures for a 10 year period to facilitate the main building, a facility store structure, and percolation area and rainwater harvesting to the main building, external escape stair to main building at first floor level and all associated and ancillary siteworks (Note the main part of this application was previously granted under permission ref no.09/672)	20/10/2016	Glenbane Lower, Holycross, Thurles, Co. Tipperary	11.8km South of Brittas
31	TCC 23227	Housing - multi-unit	51 no. dwellings consisting of 20 no. detached, 28 no. semi detached and 3 no. duplex apartments, a creche development with separate site entrance, main service road, main site entrance to include all associated site development works	19/10/2023	Ardmayle East, Boherlahan, Cashel, Co Tipperary	17.4km South of Brittas
32	TCC 16600877	Waste Water Treatment Plant	The construction of a water treatment plant and outfall to the River Suir. The water treatment plant will consist of a water treatment and administration building, sludge dewatering building, ESB sub-station, generator & oil tank enclosure, raw water balancing tank, clear water tanks, sludge balancing tank, sludge thickening and sludge holding tank, washwater tank, sludge skip and emergency sludge storage area, chemical storage tanks, washwater storage tank and all associated site development and site excavation works above and below ground	28/03/2017	Bohernacrusha, Killeenyarda, Holycross, Co. Tipperary	10.9km Southeast of Brittas
33	TCC 16600783	Sports Facilities	2 no. senior pitches with ball stops at each end, dug outs, a training pitch with flood lighting, car parking areas, temporary accommodation structures for a 10-year period to facilitate the main building, a facility store structure, and percolation area and rainwater harvesting to the main building, external escape stair to main building at first floor level and all associated and ancillary siteworks	20/10/2016	Glenbane Lower, Holycross, Thurles, Co. Tipperary	12.2km southeast of Brittas

1.6.4.6.2 Small Planning Applications

Small scale planning applications for dwellings in proximity to the project have been considered in the cumulative assessment. There is potential for some cumulative construction traffic and noise effects should these projects be constructed in parallel with the proposed wind farm. This is unlikely however, as potential construction works for the proposed project are not expected to be initiated until Q4 of 2028. Consequently, the potential for cumulative effects during construction will not occur. Other small planning applications within a 3km radius around the development site (refer to Appendix 1G) relate to agricultural sheds and shed extensions, livestock facilities, dwelling houses, and extensions to dwelling houses, attic conversions, domestic wastewater treatment systems, property entrances and roads, sports facilities, garages, demolitions, and retention permission applications etc. Twenty-Eight of these are in areas around Thurles town or in villages north and further east of the site that would not be affected by construction works at the proposed project site. Seven are in the Rossestown and Clobanna areas where there is some potential for cumulative construction related effects along the grid route. Seven of these were permitted in 2023, two in 2022, six in 2021, seven in 2020 and four in 2019. The construction of these development will likely be completed, and their planning permissions expired by the time construction of the proposed project would potentially begin (at the end of 2028). Consequently, such dispersed small scale domestic and agricultural developments are not expected to have significant cumulative effects with the proposed project. These minor projects are either under the threshold for EIA or excluded from the list of projects requiring EIA and due to the nature and scale of these applications would not introduce complex or significant issues and are therefore not considered in the cumulative assessment.

1.6.4.6.3 Other Wind Farm Developments

Other existing wind energy development in proximity to the proposed Brittas wind farm have potential to cause cumulative noise and visual effects in combination with the proposed project. Any permitted and proposed wind farms in the area may also have cumulative effects should the construction phases overlap with the proposed project. The energy produced by the proposed project would positively cumulate with other wind farm developments in the region to advance in delivering local, regional, and national Green Energy targets. The 17 wind farms identified within 20km of the proposed Brittas development are listed below and illustrated in Figure 1-2. The nearest wind farms are the Kiloran and Lisheen wind farms which are 9.2 and 9.8km from the proposed project.

Table 1-5: Wind Farms within 20km of the Proposed Project Site

#	Wind Farm	Coordinates		Distance from Brittas	Status
1	Lisheen wind farm	ITM Easting ITM Northing	621489 666703	Approximately 9.8km	Operational
2	Bruckana wind farm	TM Easting622222 ITM Northing	 670498	Approximately 13.5km	Operational
3	Gortnahalla (single turbine)	ITM Easting ITM Northing	600024 662930	Approximately 13.4km	Operational
4	Ballincurry wind farm (Glengoole)	ITM Easting ITM Northing	625280 651645	Approximately 14.7km	Under Construction
5	Gurteen Lower wind farm	ITM Easting ITM Northing	627374 653337	Approximately 15.3km	Operational
6	An Cnoc wind farm	ITM Easting ITM Northing	631928 655231	Approximately 19km	Operational
7	Ballybay wind farm	ITM Easting ITM Northing	633243 656850	Approximately 20.4km	Operational
8	Kill Hill Wind farm	ITM Easting ITM Northing	614633 643140	Approximately 16.5km	Operational
9	Patrick Costello Wind Turbine (single turbine)	ITM Easting ITM Northing	596248 656284	Approximately 17.1km	Operational
10	Hollyford Wind farm	ITM Easting	595285	Approximately 18.6km	Operational

#	Wind Farm	Coordinates		Distance from Brittas	Status
		ITM Northing	655052		
11	Glenough Wind farm	ITM Easting ITM Northing	595268 655070	Approximately 18.6km	Operational
12	Ballinveny Wind farm	ITM Easting ITM Northing	603159 673998	Approximately 14.65km	Operational
13	Ballinlough Wind farm	ITM Easting ITM Northing	599225 675472	Approximately 18.44km	Operational
14	Upperchurch Wind farm	ITM Northing ITM Easting	594703 660533	Approximately 17.05km	Under Construction
15	Borrisbeg Wind farm	ITM Easting ITM Northing	613223 675090	Approximately 12.88km	Awaiting decision
16	Killoran Wind Farm	ITM Easting ITM Northing	221935 166970	Approximately 9.28km	Operational
17	Graigaman Wind Farm	ITM Easting ITM Northing	227562 153648	Approximately 16.4km	Operational

Note: Status includes operation, under construction, awaiting decision or appealed.

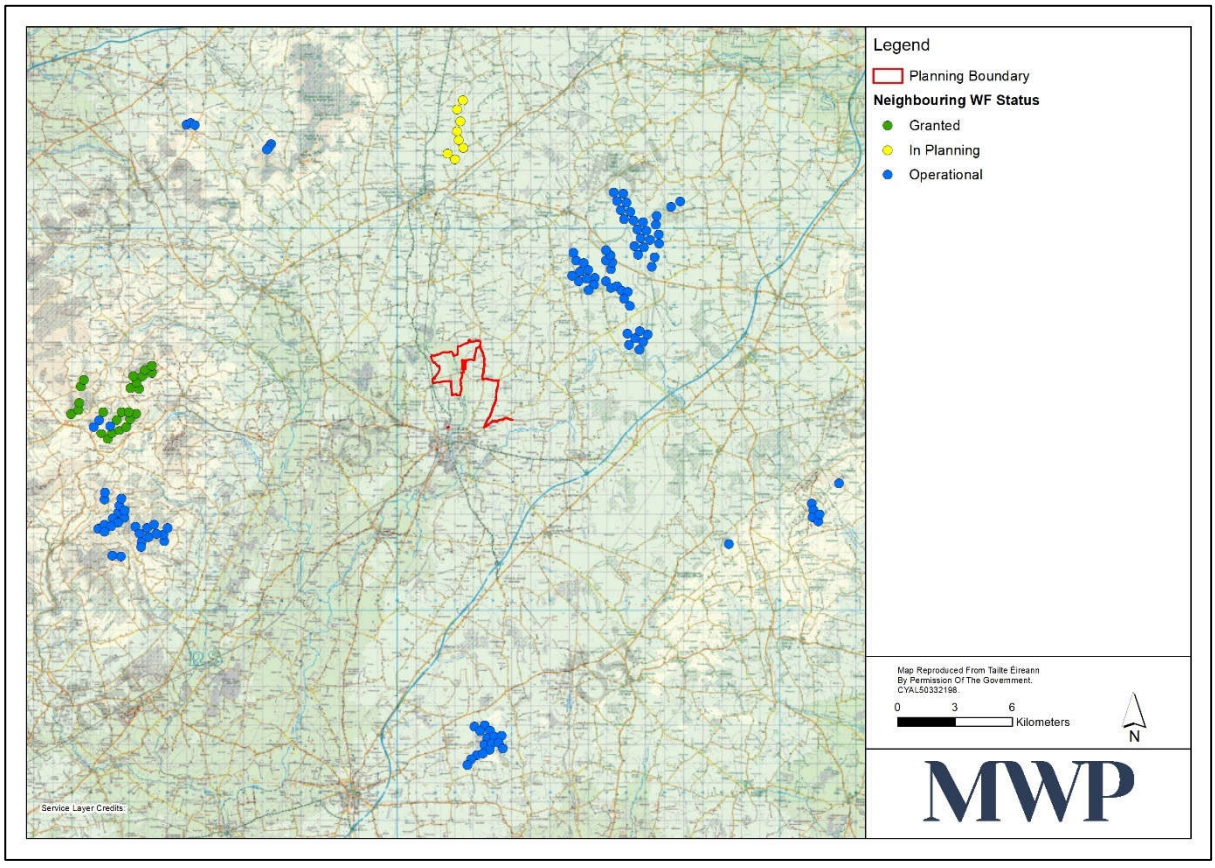

Figure 1-2: Wind Farm developments within 20km of proposed project

1.6.4.6.4 Other Renewable Energy Developments

Other renewable energy projects that have been identified within 20km to the proposed project include several solar farms and bioenergy processing facilities.

There are six solar farms within 20km of the proposed project (see list in Table 1-6). The nearest proposed solar farms to the proposed project are the ENGIE solar farm located 4km south of Brittas WF in Thurles town and Engie solar farm approximately 5km south-west of the proposed Brittas WF in the townlands of Rahelty and

Shanballyduff, Co. Tipperary (planning ref 19601012). These projects were granted planning permission in 2020 and 2021. Two other solar farms further afield are currently seeking planning permission. These include:

- The proposed Renewable Energy Systems Ltd 88.5 ha solar farm outside Nenagh and +/- 30km northwest of the proposed Brittas WF. (Planning application 2460074 submitted in May 2023); and
- EEPV6 Ltd solar farm just outside Tipperary town and 39km south-west of the proposed Brittas WF. (This was permitted.) (Planning application 2360765 submitted in Sept 2023).

Table 1-6: Existing and Permitted Solar Farms in proximity to the proposed project.

#	Description	Planning Decision Date	Address	Distance from Site (km) and Direction
1	ENGIE 37.6ha site	Permitted Date: 2020	Ballycarrane, Southern Boundary of Thurles town, Co. Tipperary	4km from Brittas
2	Proposed Solar Farm (ENGIE)	Grant Date: 14/4/2021	Rahelty, Shanballyduff, Co. Tipperary	5km Southwest of Brittas
3	Soleirtricity Solar Farm 77ha solar farm	Decision Date: 7/2021	Cooleeny, Derryfada and Kooran townlands adjacent to Lisheen Mine Site, Co. Tipperary	7.5km West of Brittas
4	Dew Valley Foods Unlimited 9.3ha solar farm	Permitted Date: 2023	Holycross, Co. Tipperary	8km Southwest of Brittas
5	Elgin 129ha site	Application Date: 03/2024	Dualla, Co. Tipperary	18km South of Brittas
6	Templederry Energy solar Farm	Decision Date: 10/ 2016	Moyneard, Moyne, Co. Tipperary	5.04km East of Brittas

There are five existing or permitted bioenergy facilities in Co. Tipperary (see Table 1-7). These projects make use of renewable resources (organic waste) from agriculture, forestry and the marine sources to produce food, feed, materials and energy, while reducing waste, to support the achievement of a sustainable and climate neutral society.

In addition, the National BioEconomy campus at Lisheen (former mine) 9.4km north-east of the proposed Project is proposed to be used to pilot and demonstrate various bioenergy technologies and facilities. Potential cumulative or in-combination effects that the proposed project may have with the above projects are described in the relevant chapters throughout the EIAR.

Table 1-7: Bioenergy Projects in proximity to the proposed Brittas Project

#	Description	Planning Decision Date	Address	Distance from Site (km) and Direction
1	National BioEconomy campus proposed to be used to pilot and demonstrate various bioenergy technologies and facilities		Lisheen (former mine), Co. Tipperary	9.4km Northeast of Brittas
2	Glanbia Ireland DAC Biorefinery facility	Permitted Date: 5/2019	Killoran, Moyne Thurles, Co. Tipperary	10km east north-east of Brittas
3	Starrus Eco Holdings Ltd biological treatment facility	Permission Date: 10/2023	Ballybeg, Littleton, Co. Tipperary	10km south south-east of Brittas
4	Derryville Environmental Solutions Anaerobic Digestive Facility	Permitted Date: 19/7/2021	Moyne, Thurles, Co. Tipperary	10km east north-east of Brittas

#	Description	Planning Decision Date	Address	Distance from Site (km) and Direction
5	NaringTech Limited BioProducts Campus	Decision Date: 11/2022	Derryville, Co. Tipperary	9.81km Northeast of Brittas

1.6.4.6.5 Agriculture

The proposed project is located in a rural agricultural area where livestock farming dominates. It is proposed that all agricultural activities in the area where the project infrastructure is proposed to be constructed will cease for the duration of the construction and commissioning phase. These areas will be cordoned off during the 18-month construction period. Agricultural activities within the wider site and study area will continue and will be separated from construction activities by appropriate stock proof fencing. The potential for cumulative effects on agriculture are assessed in Chapter 05 Population and Human Health of the EIAR.

1.6.4.6.6 Forestry

It is proposed that the 1.4 ha of commercial forestry that will be removed for the proposed project will be replanted on site along the edges of existing forests and hedgerows to improve ecological corridors. It is not proposed to replant outside of the project site and planning boundary. As indicated in Figure 1-3, the forests in the proposed project area are small scale commercial forests. All commercial felling and thinning activities associated with the affected forests will stop during the construction phase.

The proposed replanting on site will ensure there is no net loss of forestry in Tipperary County. As indicated in Figure 1-3, the Thurles/Templemore area of the county has very little forestry relative to other parts of the county. The developer commits to not commencing the project until both felling, and afforestation licenses are in place, and this ensures the afforested lands are identified, assessed and licensed appropriately by the relevant consenting authority.

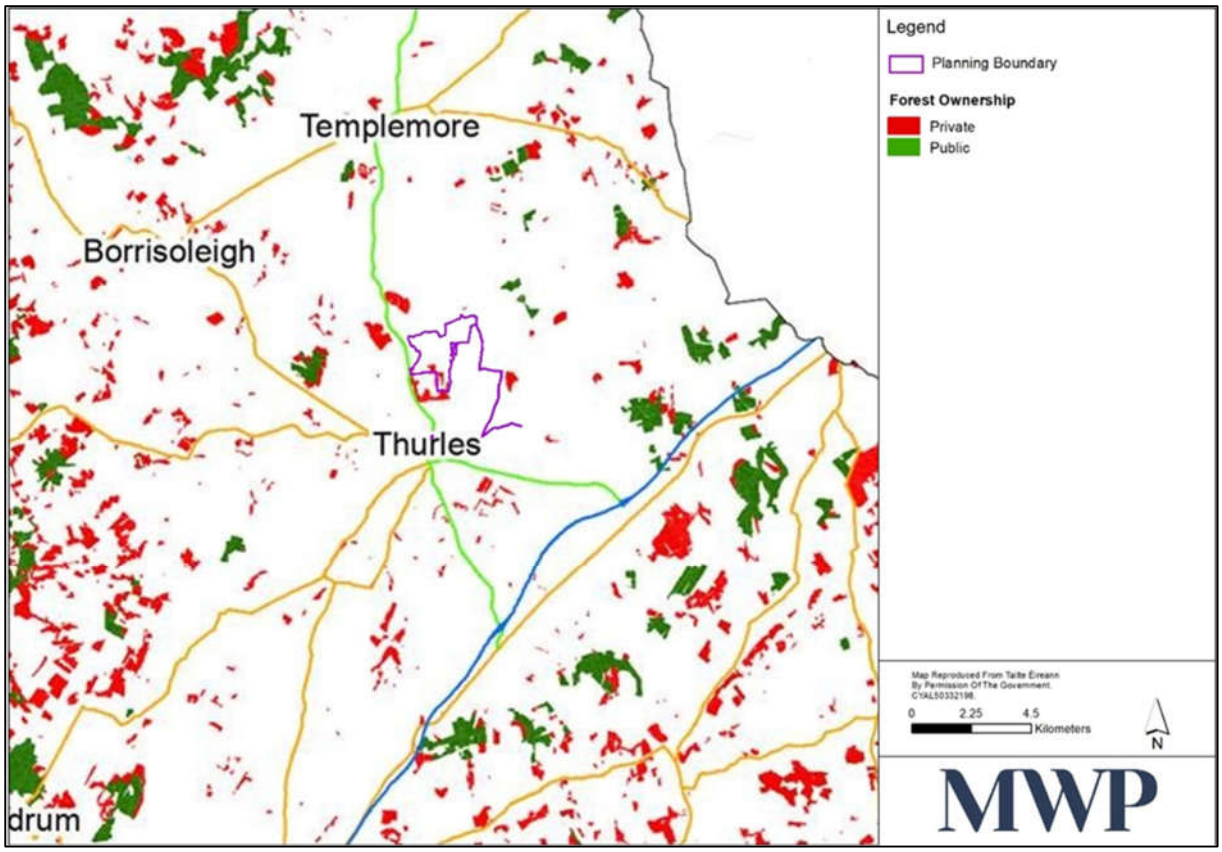

Figure 1-3: Extract from Tipperary 2017 Forestry Map

1.7 Project Team

Malachy Walsh and Partners (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. Specialist MWP consultants involved were:

Ken Fitzgerald, Maura Talbot, Paddy Curran, Conor McLoughlin, Kate Cain, Roman Poutkalis, Zeba Hassib, Kieran Barry, Valerie Heffernan, and Ilyaas Adams.

Further specialist sub-consultants were engaged as follows:

- Louise Gannon and Amy Adwan – Woodrow/APEM – Ecology;
- Mike Trewby – Woodrow/APEM - Ecology;
- Laurence Dunne – Archaeology;
- Jamie Ball (CSR) – Visual;
- Innovision – Photomontages; and
- Gary Duffy - Enfonic – Noise.

Details of the project team is presented in Table 1-8.

Table 1-8: Expertise of EIAR Team

EIAR Chapter/Role	Consultant	Qualification	Competencies
Project Manager	Ken Fitzgerald (MWP)	Diploma in EIA Diploma in Planning Diploma in Coastal Zone Management Degree in Surveying Diploma in Construction Economics Associate/Project Director	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	Maura Talbot	Chartered Environmentalist Masters (Geography), BA Honours (Geography), BA Honours (Economics), BA	Maura is a Chartered Environmentalist (IES/SocEnv) with 25+ years of experience working as a Senior Environmental and Socio-Economic Specialist Consultant and joined MWP in April 2022. She has managed and contributed to environmental impact assessments for a wide variety of development and infrastructure projects in Southern Africa and Ireland. She has experience facilitating stakeholder engagement processes and undertaking qualitative and quantitative socio-economic baseline and monitoring surveys, Project Evaluations, Due Diligence Assessments, Environmental Audits and Resettlement Action Plans (as per IFC & WB guidelines). She also has considerable environmental and socio-economic research and university teaching experience.
02 Project Description	Maura Talbot	Chartered Environmentalist Masters (Geography), BA Honours (Geography), BA Honours (Economics), BA	
03 Civil Engineering	Paddy Curran	B.E. (Hons) in Civil Engineering Master's of Science in Soil Mechanics (MSc DIC)	Paddy is an Associate Engineer at MWP and has 15 years' experience in civil engineering, particularly in the area of Geotechnical Engineering. He has worked on all stages of the project life cycle from feasibility through to commissioning on a large variety of projects. His experience includes delivering the geotechnical investigation/interpretation, ground modelling, design and construction support for a number of Irish and International marine, renewable energy, port and coastal projects. He has also worked on the planning stages of a large number of projects which included environmental impact assessment.
	Conor Mcloughlin	BE (Hons) Civil MIEI Project Manager	Conor is a Civil Engineer and Project Manager with 10 years' engineering experience in several different construction sectors including precast engineering, land development, major motorway projects, 3 waters and most recently within Renewable Energy. His expertise covers sustainable urban drainage systems, contract management, project management, financial reporting, mentoring, wellbeing and team bonding, client, and contractor relationships through excellent communications. In NZ he worked on large scale motorway PPP schemes and extensive 3 waters projects, including water treatment plants and major urban flooding projects. In Ireland he has worked on large urban redevelopments in the greater Dublin region and on renewable energy projects across Ireland.
04 Alternatives	Maura Talbot	As above	As above
05 Population and Human Health	Zeba Haseeb	MSC Environmental Science, Bachelor's degree in Environmental Science,	Zeba is an Environmental Scientist with the Environment team at MWP. Zeba worked on a variety of projects conducting environmental assessments and supporting the delivery of a number of environmental deliverables including Environmental Impact Assessment (EIA) Screening Reports, Appropriate Assessment Screening Reports, feasibility studies, Construction Environmental Management Plans (CEMP), health, safety and

EIAR Chapter/Role	Consultant	Qualification	Competencies
			environment management and monitoring, socio-economic surveys, and Environmental Impact Assessment Reports (EIAR).
06 Biodiversity	Amy Adwan	BSc in Environmental Science.	Amy is a Senior Ecologist with APEM with extensive experience in the ecological sector in Ireland. Amy is a qualified ecologist experienced in a wide range of ecological survey techniques and methodology including bats, mammals, freshwater and habitats. Amy has worked on various projects relating to bats including extensive survey work, mitigation plans including the design of bat houses, derogation licences as well as Ecological Clerk of Works and compliance reporting. Amy holds a licence to disturb bats for survey work, a bat handling licence and a photography licence covering all species of bat in Ireland. Amy has also extensive experience in surveying mammal species for a wide range of developments, including road schemes, wind farms and housing projects.
	Louise Gannon (Woodrow/Apem)	B.Sc. in Environmental Science Member CIEEM	Louise is an ecologist with experience in carrying out protected species surveys for bats as well as the deployment of static bat detectors and reporting on the same. She also carries out bat call analysis to assess bat calls and activity. She has experience in carrying out otter, badger and red squirrel surveys. Louise is a licenced bat surveyor (DER/BAT 2024-27) and a Qualifying member of CIEEM.
07 Ornithology	Mike Trewby (Woodrow/Apem)	BSc Zoology & Botany PGDip Environmental Studies Member CIEEM	Mike is an ecologist with over 20 year's fieldwork and research experience. Mike has an expertise in avian studies and has completed environmental assessments for a range of wind farm projects. Mike is a full member of the Chartered Institute of Ecology and Environmental Management.
08 Land and Soil	Roman Puotkalis	MSc in Environmental Analytical Chemistry, BSc (Hons) in Environmental Science	Roman is an Environmental Consultant with over 3 years' experience on the Environment team at MWP. Roman works on a variety of development projects conducting environmental assessments and supporting the delivery of several environmental deliverables including baseline assessments, contaminated land remediation, waste classification, hydrogeological risk assessments and groundwater monitoring. He is also experienced in environmental data analysis and GIS mapping.
09 Water	Kate Cain	BSc Hons in Environmental Management	Kate Cain is an environmental consultant at MWP and has over 15 years of experience. Kate has authored EIA Screening reports, Environmental Impact Assessment Reports (EIAR), Detailed Site Assessments, Environmental Reports and Construction and Environmental Management Plans (CEMPs) for a wide range of projects. She has a strong background in hydrology and has undertaken water chapters and Water Framework Directive assessments for a wide range of projects.
10 Material and Assets	Valerie Heffernan	MSc - GIS and Remote Sensing BSc Biological Earth and Environmental Science	Valerie has worked as an environmental professional since graduating in 2015 and has been employed as an Environmental Scientist with MWP since 2018. She has considerable experience in renewable energy developments and has had input in a variety of project including solar farms, marine developments and wind energy. She is experienced in planning and environmental report input and in the preparation of Foreshore Licences.
11 Cultural Heritage	Laurence Dunne	BSc	For over twenty years, Laurence Dunne and his experienced staff have completed an extensive and diverse range of terrestrial and underwater projects in many environments and situations across a range of developments. Laurence Dunne Archaeology Ltd. has the expertise and competency to complete all aspects of archaeological assessment.
12 Noise and vibration	Enfonic – Gary Duffy	BEng, MIOA	Gary Duffy (Principal Consultant) is the managing director of Enfonic with over 25 years' experience as an acoustic engineer and consultant. He has extensive knowledge in the field of noise measurement, prediction, and impact assessment. He co-wrote the EPA's original guidance note on noise and represented the IOA on the technical advisory committee of the Department of the Environment's revision of Part E (Sound Insulation) of the Building

EIAR Chapter/Role	Consultant	Qualification	Competencies
	David Courtney	BEng, MIOA (Acoustic Consultant) Certificate in Environmental Noise Measurements	Regulations. He is a founder member of the Irish branch of the Institute of Acoustics and a sitting member of the current committee. He has considerably expertise in the assessment of wind turbine noise and conducted many similar impact assessments for EIARs. David Courtney undertakes all types of noise and vibration surveys in relation to wind turbines planning and compliance, IPPC & IE compliance, BS4142, BS5228 and BS8233 assessments, traffic noise, construction, building acoustics and occupational assessments. He also manages our long-term monitoring sites and provides technical support to our hire services. He has considerably expertise in the assessment of wind turbine noise and conducted many similar impact assessments for EIARs.
13 Shadow Flicker	Zeba Habeeb	BS Hons. (Envir. Sci.), MS . (Envir. Sci.)	As a consultant with MWP Zeba HAS worked on a variety of projects conducting environmental assessments and supporting the delivery of a number of environmental deliverables including Environmental Impact Assessment (EIA) Screening Reports, Appropriate Assessment Screening Reports, feasibility studies, Construction Environmental Management Plans (CEMP), health, safety and environment management and monitoring, and Environmental Impact Assessment Reports (EIAR). She has contributed to EIA's for wind farms, dams, mines, tourism, and residential developments.
14 Air Quality and Climate	Kieran Barry	BEng, PgDip Environmental Scientist	Kieran is an experienced Environmental Scientist. Kieran works on a variety of infrastructure projects conducting environmental assessments and supporting the delivery of a number of environmental deliverables including Environmental Impact Assessment (EIA) Screening Reports, feasibility and constraints studies, route option assessments and Environmental Impact Assessment Reports (EIAR).
15 Landscape and Visual	CSR Jamie Ball	BA Hons in Landscape Architecture	Jamie has ten years' experience specifically in Landscape and Visual Assessment (LVIA). He has worked on the LVIAs for a range of wind energy developments through Ireland, from single turbine developments to 21-turbine Strategic Infrastructure Developments. He is a member of the Irish Landscape Institute (MILI).
16 Traffic	Ilyaas Adams	BSc Eng. Hons Various Masters (level 9) Courses CEng – Traffic & Transportation PrEng (in SA)	Ilyaas Adams is a senior Chartered Traffic and Transportation Engineer with MWP. Ilyaas has gained both contracting and consulting engineering experience in the construction, management, and design of public transport networks, with a wide range of experience in planning, impact assessments and analysis of the operation of transport infrastructure.
17 Interaction of Effects	Maura Talbot	As above	As above
18 Schedule of Environmental Mitigation	Kieran Barry	BEng, PgDip Environmental Scientist	Kieran is an experienced environmental consultant with 8 years' experience working on environmental projects. Kieran works on a variety of infrastructure projects conducting environmental assessments and supporting the delivery of a number of environmental deliverables including Environmental Impact Assessment (EIA) Screening Reports, feasibility and constraints studies, route option assessments and Environmental Impact Assessment Reports (EIAR).

1.8 Difficulties Encountered

There were no difficulties encountered in the preparation of this EIAR. As is standard practice best available predictive modelling techniques where used were relevant to inform the assessment.

1.9 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) and the requirements of the Planning and Development Regulations 2001 (as amended). These drawings accompany the planning application and are referenced as relevant throughout the EIAR. The 1:50,000 and 1:25,000 mapping that was used to generate many of the figures in the EIAR are the copyright of Ordnance Survey Ireland (OSI licence number EN0015720).

1.10 Viewing and Purchasing of the EIAR

Copies of this EIAR including Non-technical Summary and the Appendices may be inspected free of charge or purchase by any member of the public during normal office hours at An Bord Pleanála, 64 Marlborough St, Rotunda, Dublin 1 and at the offices of Tipperary County Council, Civic Offices, Limerick Road, Nenagh, Co. Tipperary.

1.11 References

DHPLG. (2006). Wind Energy Development Guidelines. Department of the Environment, Heritage and Local Government.

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

DHPLG. (2019). Draft Revised Wind Energy Development Guidelines, Department of Housing Planning and Local Government.

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

EU. (2011). Directive 2011/92/EU. Assessment of the effects of certain public and private projects on the Environment.

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.

EC. (2017a). Environmental Impact Assessment of Projects: Guidance on Scoping. European Commission.

EC. (2017b). Environmental Impact Assessment of Projects: Guidance on the preparation of the EIA Report. European Commission.

Government of Ireland (2000). Planning and Development Act 2000 (as amended) (Act No. 30/2000).

Government of Ireland (2001). Planning and Development Regulations (2001) as amended