

# MWP

## Environmental Impact Assessment Report (EIAR)

### Chapter 01 Introduction

**Dernacart Wind Farm  
110kV Substation and Grid Connection**

**Statkraft Ireland**

**October 2024**

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**MWP, Engineering and Environmental Consultants**

**Address:** Reen Point, Blennerville, Tralee, Co. Kerry, V92 X2T

**www.mwp.ie**



## **1. Introduction**

Statkraft Ireland (the 'Applicant'), intends to apply for planning permission for development to facilitate a grid connection between the consented Dernacart Wind Farm, Co. Laois (Planning Ref ABP-310312-21) and the consented Bracklone 110kV substation (Planning Ref. 20/638) in Portarlinton, Co. Laois.

Proposed development comprises:

- A 110kV substation on greenfield lands within the townland of Barranaghs, Co. Offaly including new entrance to substation site from the R423
- circa 2.45km of underground electric cabling systems overlain with a 5.5m wide stone access track between the consented Dernacart wind farm site and the proposed 110kV substation
- circa 10.85km of 110kV underground electrical cabling within the public road network from the proposed 110kV substation to the consented Bracklone 110kV substation.

Following consultation with An Bord Pleanála, the Board has confirmed the development would be Strategic Infrastructure Development within section 182A of the Planning and Development Act 2000, as amended, and accordingly any application for approval of the development must be made directly to An Bord Pleanála.

Malachy Walsh and Partners (MWP) have been engaged by the Applicant to prepare an Environmental Impact Assessment Report (EIAR) to accompany the planning application.

The EIAR consists of a systematic analysis and assessment of the potential effects of the proposed project 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 implementation of the proposed project,
- determine whether the identified impacts could be significant,
- suggest mitigation measures for potential impacts where feasible.

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 also sets out the legislative background to the project and details the consultation undertaken with relevant stakeholders.

## **1.1 Development Background**

In February 2020 Statkraft Ireland made a planning application to Laois County Council for permission to construct a wind farm development in the townlands of Dernacart, Forest Upper and Forest Lower, Co. Laois (Laois Co. Co. Reg. Ref. 20/78). Permission for the windfarm was refused by the local authority and an appeal was lodged with An Bord Pleanála (ABP) in May 2021 (ABP Case Ref 310312-21). Permission was granted by the Board in January 2024 subject to conditions.

The permitted wind farm is comprised of up to 8 no. wind turbines with a tip height of up to 185m, turbine foundations, hardstanding areas, new access tracks and upgrading of existing access tracks, 1 no. substation including control buildings, meteorological mast, electrical and grid services equipment, underground electrical and communications cabling, drainage, sediment controls, temporary site compound, tree felling, roads, hardstands and associated works.

A grid connection did not form part of the planning application however an indicative grid connection option was included as part of the supporting planning documents and was assessed in accordance with EIA and Habitat Directives requirements. The Grid Connection considered at that time consisted of a c. 16.5km underground grid connection route from the on-site Wind Farm substation to the future Bracklone 110kV substation all of which was within the public road network.

Due to changes in EirGrid requirements in the intervening period since the application was made, the sizing of substation compound for which permission had been sought (and now granted) is no longer adequate and therefore a revised substation with a larger footprint is required.

Statkraft Ireland (the Applicant) is now applying to An Bord Pleanála for a grid connection which will allow the electrical energy generated from the proposed Dernacart Windfarm to be exported onto the national grid.

The grid connection now proposed involves a new relocated 110kV substation in place of the permitted Dernacart 110kV substation and a revised underground grid connection cable route to that previously anticipated. A full description of the Proposed Development is provided in Chapter 2 Description of the Proposed Development of this EIAR.

## **1.2 The Applicant**

Statkraft is a leading company in hydropower internationally and Europe's largest generator of renewable energy. The Group produces hydropower, wind power, solar power, gas-fired power and supplies district heating. Statkraft, which is also a global company in energy market operations, has 4,800 employees in 20 countries.

Statkraft entered the Irish market in 2018 and since then has almost tripled its workforce and tripled its development portfolio. In Ireland, Statkraft develops, owns, and operates renewable energy projects across the technologies of onshore wind, offshore wind, solar, battery storage and grid services. By the end of 2022, Statkraft Ireland is on course to have an overall portfolio of circa 4,000MW.

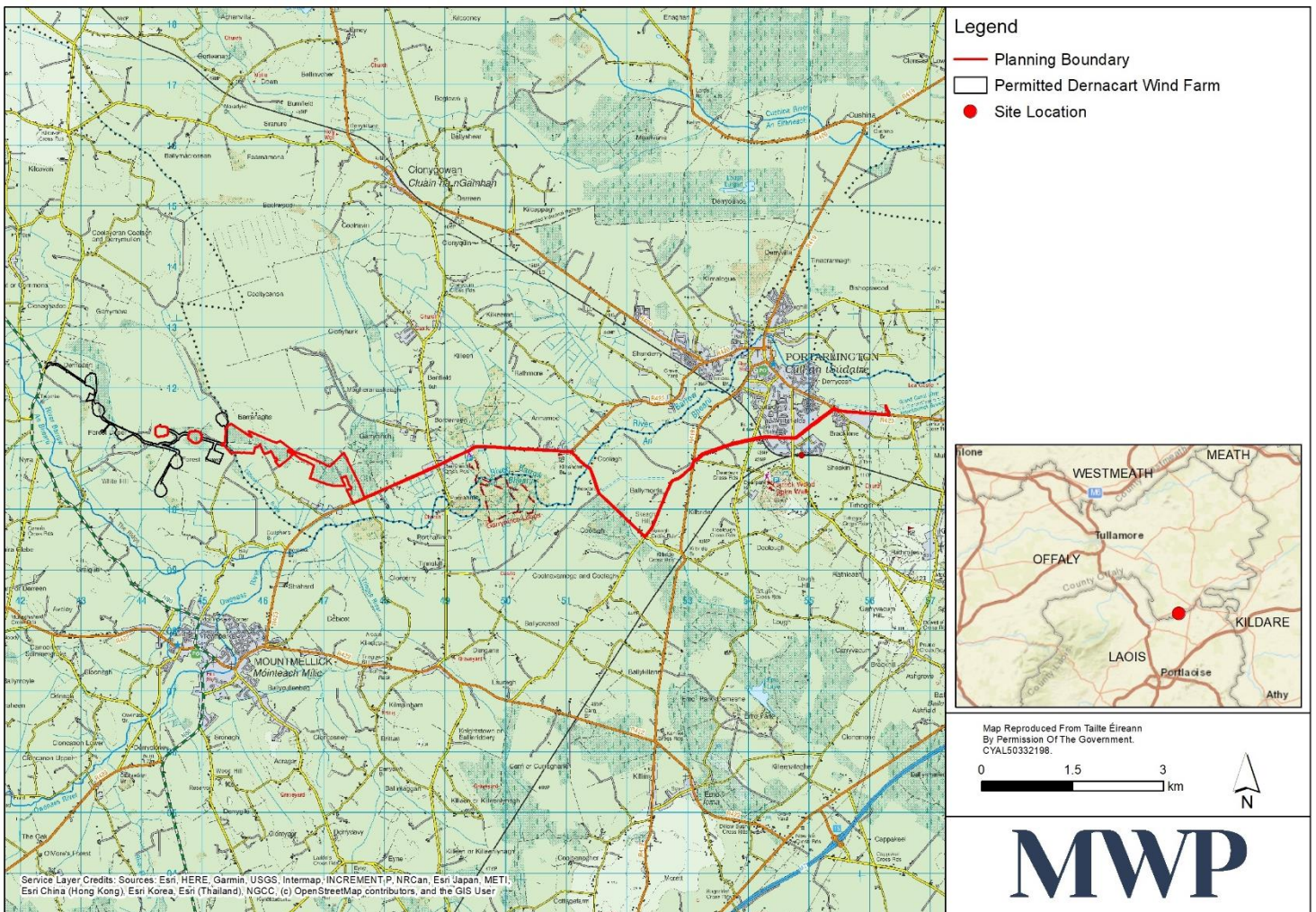
Statkraft is one of the biggest renewable energy developers in Ireland with over 4GW pipeline of offshore, onshore, solar and grid services projects. The Statkraft Ireland team, which is based in Cork and Tullamore, Co. Offaly, has constructed a portfolio of almost 350MW of wind projects across the country, operates over 500MW, and has an established track record in wind energy in Ireland.

### 1.3 Application Area

Figure 1.1 shows the proposed development lands as per the planning application. This area includes a total area of 90.8ha, which contains the development footprint and associated works area for which development consent is being sought.

The grid connection route will be entirely along the public road network which will be carried out under consultation with the local road authorities and under a road opening licence from the county council.

Figure 1.1 Application Area





## 1.4 EIAR Methodology

### 1.4.1 Legislative and Guidelines

Article 5 of the 2014 EIA Directive sets down the minimum information to be supplied in an Environmental Impact Assessment Report (EIAR) including those matters at Annex IV as follows;

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

This EIAR has been prepared to satisfy the requirements set out above.

In accordance with Article 3 of the 2014 EIA Directive, the following attributes of the receiving environment and their interactions will be addressed within this EIAR:

- (a) population and human health;
- (b) biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive;
- (c) land, soil, water, air and climate;
- (d) material assets, cultural heritage and the landscape;
- (e) the interaction between the factors mentioned in clauses (a) to (d),

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 Impact Assessment Reports, (EPA, 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 (August 2018); and
- European Commission’s Guidance on the preparation of the EIA Report (Directive 2011/92/EU as amended by 2014/52/EU) (2017)

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

## **1.4.2 Consultation**

Consultation with various statutory and non-statutory consultees was undertaken throughout the preparation of the EIAR to ensure external parties are given an opportunity to comment and input on the EIA Report's scope.

### **1.4.2.1 Meetings**

Consultation through meetings took place with the following parties:

- An Bord Pleanála (1<sup>st</sup> Pre Application Meeting 20<sup>th</sup> July 2023)
- An Bord Pleanála (2<sup>nd</sup> Pre Application Meeting 23<sup>rd</sup> October 2023)
- Offaly County Council Planning Department (15<sup>th</sup> February 2024)
- Offaly County Council Roads Department (5<sup>th</sup> March 2024)

### **1.4.2.2 Written Communication**

Written notification setting out an overview of the development was circulated to the following identified stakeholders. The notification invited feedback from the Consultee on any key issues and concerns which they consider should be addressed in the EIAR 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.

- Laois County Council Planning Department
- Laois County Council Roads Department
- National Parks and Wildlife Service (NPWS)
- Inland Fisheries Ireland
- Geological Survey of Ireland (GSI)

## **1.4.3 Criteria for Assessment of Likely Significant Effects**

The EIAR focuses on significant effects, if any, on the environment which can reasonably be expected to occur as a result of the Development.

The potential impacts of the 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 guidelines (EPA, 2022). This considers the overall character of effect with the sensitivity of the receptor/existing environment.



**Table 1.1 Impact Assessment Criteria (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  |
| 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)                   |
| 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).           |

#### 1.4.4 Scoping for Potential Cumulative Effects with other existing and/or approved projects

The requirement to consider cumulative effects is outlined in EU and national legislation. The EU Directive on the assessment of the effects of certain public and private projects on the environment (EIA Directive) (2011/92/EU as amended by Directive 2014/52/EU) states:

*‘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’,*

and,

*‘The description of the likely significant effects on the factors specified in Article 3(1) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.’*

A desk study was undertaken to identify other existing and proposed projects with which significant cumulative effects could plausibly occur with the proposed Dernacart Wind Farm substation and grid connection development. Publicly available information on existing developments and landuses, and/or approved developments (collated from planning applications and relevant development plans) were considered for each of the environmental topics included in the EIAR, to identify whether there was any potential for cumulative/in combination effects with the proposed development. The key criteria for this scoping exercise included consideration of the types of potential impacts associated with the proposed development, common resources affected, receptors impacted, project timeframes (where available) and scale of development.

**Table 1.2** below sets out the types of projects identified and considered as part of the cumulative appraisal for each of the specific environmental assessment included in the EIAR.

**Table 1.2 Scope and extent of other Existing/approved developments considered in the EIAR**

| Planning Reference     | Applicant                 | Description  | Location   | Planning Authority Decision                     |
|------------------------|---------------------------|--|--|---|
| 20/78<br>ABP 310312-21 | Statkraft Ireland         | Construct up to 8 no. wind turbines with a tip height of up to 185 metres and all associated foundations and hardstanding areas; 1 no. on-site electrical substation; all associated underground electrical and communications cabling; provision of new site access tracks and upgrading of existing access tracks and associated drainage; erection of 1 no. permanent meteorological mast of up to 110m in heights; works to facilitate the delivery of turbines adjacent to the N80 within the townlands of Dernacart and Forest Upper to include the laying of temporary surfacing; tree felling; and all associated site development works, ancillary works and equipment. | Dernacart, Forest Upper, Forest Lower, Co. Laois | Granted on Appeal, Conditional, 03/01/2024      |
| 22524                  | Bord Na Mona Powergen Ltd | The continued use of an existing guyed wind monitoring mast, with instruments, 100m in height for further period of 3 years.   | Garryhinch Bog, Co. Offaly                       | Granted, Conditional, 05/12/2022                |
| 315157 (ABP)           | Bord Na Mona Powergen Ltd | Proposed development of Garryhinch Wind Farm between 10 – 14 turbines  | Garryhinch Bog, Co. Offaly                       | Pre Application Consultation, Lodged 22/11/2022 |
| 19730                  | Liam McMahon              | Revision of permission 18/129 & 05/928- Construction of 50 no. residential units   | Portarlinton, Co. Laois                          | Granted, Conditional, 20/02/2020                |
| 20151                  | Ruairi Whelan             | Alter elevations of 19/257 – single storey office unit, parking, associated works.   | Canal Road, Portarlinton, Co. Laois              | Granted, Conditional, 31/07/2019                |
| 2360244                | Limitlane Ltd             | Construct 74 Unit Residential Development  | Canal Road, Portarlinton, Co. Laois              | Refused   |
| 20368                  | Droughill Builders        | Construct 7 unit residential   | Portarlinton, Co. Laois                          | Granted, Conditional, 30/06/2021                |
| 2360100                | Garryduff Properties Ltd  | Construct 36 Unit Housing development  | Portarlinton, Co. Laois                          | Awaiting Decision                               |
| 20249                  | Signal Infrastructure Ltd | Construct a 24 meter monopole tower carrying communications equipment  | Bracklone, Portarlinton, Co. Laois               | Granted, Conditional, 15/07/2020                |

| Planning Reference      | Applicant                                | Description   | Location                                       | Planning Authority Decision              |
|-------------------------|--|---|--|--|
| 20638                   | The Electricity Supply Board             | The proposed development will consist of construction of a 110kV/MV electricity station                                 | Bracklone, Portarlinton, Co. Laois             | Granted, Conditional, 02/12/2021         |
| 22764 (Appealed to ABP) | Eirgrid with the consent/approval of ESB | 112 structures associated with uprate of existing line.   | Bracklone, Lea, Tirhogar, Rathmiles, Rathleash | Decision due ABP (ref 318799) 13/05/2024 |
| 2360261                 | Neoen Renewables Ireland Ltd             | Consist of 136 no. battery storage units, 17 no. MV skids (PCS & MV/LV Transformer solution & supporting infrastructure | Bracklone, Portarlinton, Co. Laois             | New Application (02/02/2024)             |

**Figure 1.2 Other Approved Developments in the Wider Area**

| Planning Reference      | Applicant                         | Description   | Location                                       | Planning Authority Decision                     |
|-------------------------|-----------------------------------|---|--|---|
| 20409                   | Advanced Environmental Solutions  | Continued Use of site as waste processing facility  | Portlaoise, Co. Laois                          | Granted, Conditional, 24/12/2020                |
| 21394                   | Integrated Plastics Manufacturing | Construction of plastic and aluminium bottle/can recycling plant. Facility will accept up to 35,000 tonnes waste per annum. | Portlaoise, Co. Laois                          | Granted, Conditional, 23/07/2021                |
| 19530 (Appealed to ABP) | Bord Na Mona Powergen Ltd.        | Renewable Gas facility requiring an IE Licence.   | Portlaoise, Co. Laois                          | Granted, Conditional ABP ref 309293, 24/05/2022 |
| 317809 (ABP)            | Coolglass Wind Farm               | 13 turbines across Fossy Mountain and Wolfhill,   | Fossy Upper, Scotland, Brennanshill, Co. Laois | Refused   |
| PA0047 (ABP)            | Cloncreen Wind Farm               | 21 Wind Turbines & Associated works   | Cloncreen, Co. Offaly                          | Granted, Conditional, 03/05/2017                |
| 318203 (ABP)            | Ballinla Wind Farm                | 10 Turbines, Electrical Substation and Grid Connection  | Ballinla, Co. Offaly                           | Pre Application Consultation, Lodged 10/10/2023 |
| 310844 (ABP)            | Bord Na Mona Powergen Ltd         | Proposed Wind Farm between 13 and 17 turbines   | Lemanaghan, Co. Offaly                         | Pre Application Consultation, Lodged 15/07/2021 |
| 306706 (ABP)            | Bord Na Mona Powergen Ltd         | Proposed development 21 wind turbines   | Derrinlough, Co. Offaly                        | Granted, Conditional, 26/08/2021                |

| Planning Reference      | Applicant                    | Description  | Location                  | Planning Authority Decision                   |
|-------------------------|------------------------------|--|---------------------------|---|
| 17335 (Appealed to ABP) | Moanvane Wind Farm Ltd       | 12 No. wind turbines with a tip height of up to 169 meters and associated works                        | Moanvane, Co. Offaly      | Granted, Conditional, 21/11/2018              |
| 20605 (Appealed to ABP) | Pat Booth                    | Quarry activities within the site for the extraction and processing of sand and gravel                 | Stradbally, Co. Laois     | Permission Refused                            |
| 1544                    | Meenwaun Wind Farm           | Wind Farm, 5 turbines.   | Near Banagher, Co. Offaly | Granted, Conditional, 22/04/2015              |
| 316305 (ABP)            | Pinewood Wind Ltd            | Amend previously permitted wind farm, (ABP ref: 248518) 11 wind turbines and associated infrastructure | Knockardagur, Co. Laois   | Granted Conditional 19/09/2024                |
| 09453                   | Bord Na Mona Energy Ltd      | Mount Lucas Wind Farm (amended by planning ref: 11232) – 28 turbine                                    | Tullamore, Co. Offaly     | Granted, Conditional, 08/07/2010              |
| PM19.31947              | Green Wind Energy            | Yellow River Wind Farm – 29 turbines   | Rhode, Co. Offaly         | Amendments of decision on private development |
| 21598                   | Kilcush Solar Farm Ltd.      | Solar PV development 117.47 hectares, operational term 40 years  | Cushaling, Co. Offaly     | Granted, Conditional, 19/09/2022              |
| 22378 (Appealed to ABP) | Renewable Energy Systems Ltd | Solar PV Energy Development 73.9 hectares.   | Tullamore, Co. Offaly     | Granted, Conditional 26/06/2024               |
| 22387 (Appealed to ABP) | Elgin Energy Services Ltd    | Solar PV Energy Development 83.55 hectares.  | Tullamore, Co. Offaly     | Decision due ABP (ref 318001) 22/01/2024      |
| 22390 (Appealed to ABP) | Elgin Energy Services Ltd    | Solar PV Energy Development 39.23 hectares.  | Clondoolusk, Co. Offaly   | Granted, Conditional 15/07/2024               |
| 2198                    | Renewable Energy Systems Ltd | Solar PV Energy Development 60.53 hectares.  | Tullamore, Co. Offaly     | Granted, Conditional, 25/01/2022              |

### **1.4.5 EIAR Structure**

The EIAR is divided into 3 Volumes as follows:

- Volume 1: Non-Technical Summary
- Volume 2: Main Environmental Impact Assessment Report
- Volume 3: Appendices to the Main Environmental Impact Assessment Report

The detail of the three volumes of the EIAR is presented in the following sections.

#### **1.4.5.1 Volume 1: Non-Technical Summary**

The Non-Technical Summary provides an overview of the project and the EIAR in non-technical terms. The summary is presented similar to the grouped format structure which discusses each environmental topic separately.

#### **1.4.5.2 Volume 2: Main EIAR**

This document 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 as a separate Chapter. This structure was selected for the Main EIAR as it facilitates straightforward investigation of individual topics. This document is divided as follows:

- Chapter 1: Introduction
- Chapter 2: Description of the Proposed Development
- Chapter 3: Alternatives Considered
- Chapter 4: Population and Human Health
- Chapter 5: Biodiversity
- Chapter 6: Land and Soil
- Chapter 7: Water
- Chapter 8: Air Quality and Climate
- Chapter 9: Noise and Vibration
- Chapter 10: Cultural Heritage
- Chapter 11: Landscape and Visuals
- Chapter 12: Material Assets
- Chapter 13: Interaction of the Foregoing
- Chapter 14: Schedule of Mitigation

#### **1.4.5.3 Volume 3: Appendices to the EIAR**

The Appendices volume contains supporting information and reference documents to Chapters of the main EIAR Volume 2.

## 1.5 Project Team

Malachy Walsh and Partners were the lead Environmental and Engineering Consultants on this project and the final EIAR has been compiled by Malachy Walsh and Partners on behalf of the applicant.

The project team included a combination of competent engineering and environmental experts.

Contributing authors to the EIAR are presented in **Table 1.3**. Qualifications and competencies of the contributing authors to the EIAR are presented in **Table 1.4**

**Table 1.3 Contributors to the EIAR**

| EIAR Chapter                             | Author            | Company                  |
|--|-------------------|--------------------------|
| Chapter 1 Introduction                   | Caitríona Fox     | MWP                      |
| Chapter 2 Description of the Development | Caitríona Fox     | MWP                      |
| Chapter 3 Alternatives Considered        | Caitríona Fox     | MWP                      |
| Chapter 4 Population and Human Health    | Zeba Haseeb       | MWP                      |
| Chapter 5 Biodiversity                   | Fiona McKenna     | MWP                      |
| Chapter 6 Land and Soils                 | Paddy Curran      | MWP                      |
|  | Roman Puotkalis   | MWP                      |
|  | Sally Kelly       | MWP                      |
| Chapter 7 Water                          | Kate Cain         | MWP                      |
| Chapter 8 Air and Climate                | Claire Boylan     | MWP                      |
| Chapter 9 Noise and Vibration            | Kieran Barry      | MWP                      |
| Chapter 10 Landscape and Visuals         | Caitríona Fox     | MWP                      |
| Chapter 11 Cultural Heritage             | Maurice F. Hurley | Consultant Archaeologist |
| Chapter 12 Material Assets               | Aileen O'Connor   | MWP                      |
|  | Seamus Quigley    | MWP                      |
|  | Zeba Hasseb       | MWP                      |
| Chapter 13 Interaction of the Foregoing  | Aileen O'Connor   | MWP                      |
| Chapter 14 Schedule of Mitigation        | Zeba Hasseb       | MWP                      |
| Non- Technical Summary                   | Caitríona Fox     | MWP                      |



**Table 1.4 EIAR contributing authors and associated qualifications, memberships and competencies**

| Contributors    | Qualifications & Memberships                                     | Competencies   |
|-----------------|--|--|
| Aileen O’Connor | BSc(Hons), PGDip   | Aileen has over 13 years’ experience in the environmental field both in industry and consultancy work. Aileen is a Senior Environmental Consultant and holds a BSc(Hons) in Environmental Science and PGDip in Energy Management. Aileen is an experienced and competent environmental professional with a background in contaminated land assessment, licence compliance and waste management. Aileen has prepared and peer reviewed chapters of EIARs and has coordinated and delivered many environmental assessment reports including the preparation of Resource Waste Management Plans RWMPs and contributed to Material Assets Impact Assessments on a wide variety of projects during her career to date including renewable energy, marine, quarries, industrial and commercial developments. |
| Caitríona Fox   | B.A, M.Sc  | Caitriona is a Senior Environmental Consultant with over 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 Drumnahough Wind Farm, 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, population and human health impact assessment, landscape and visual impacts assessment, and material assets assessment for project EIAs   |
| Claire Boylan   | BBS, BSc (Env Mgt), DipSci, Adv Dip Planning & Environmental Law | Claire is an experienced Environmental Scientist at Malachy Walsh and Partners (MWP), having worked for 6 years in the environmental sector. Claire has written numerous air quality and climate assessment chapters for large scale planning applications such as LRD, quarries and commercial developments including EPA Licensed sites. Claire has worked on a variety of environmental licensing applications, conducted environmental assessments and supported the delivery of a number of environmental deliverables including Environmental Impact Assessment (EIA) Screening Reports, Appropriate Assessment (AA), Natura Impact Statements (NIS) and Environmental Impact Assessment Reports (EIAR).   |
| Fiona McKenna   | BSc Hons, Wildlife Biology                                       | Fiona is an Ecologist with Malachy Walsh and Partners (MWP) and has over 4 years’ experience in ecological surveying and report writing for impact assessments. She has contributed to numerous reports for Screening for Appropriate Assessment, Natura Impact Statements (NIS), Ecological Impact Assessment (EcIA) and Biodiversity chapters for EIAR. She has also authored and contributed to a number of reports for bat and ornithological survey work and is experienced in the collation of data and in field ecology survey techniques.  |

| Contributors     | Qualifications & Memberships                               | Competencies  |
|------------------|--|---|
| Kate Cain        | BSc in Envir. Management                                   | Kate is an Environmental Scientist with MWP and has 13 years' experience. She holds an BSc in Environmental Management. Kate has authored Environmental Impact Assessment Reports, Detailed Site Assessments, Remediation Plans, Appropriate Assessments, Environmental Reports and Construction and Environmental Management Plans for a wide range of projects  |
| Kieran Barry     | BEng, PG Dip, MIEEnvSc.                                    | Kieran is an experienced environmental consultant with 8 years experience working on environmental projects, including three years experience in the measurement, prediction, assessment, and control of environmental noise He has completed the Institute of Acoustics (IOA) Certificate of Competence in Environmental Noise Measurement course and is currently undertaking the Institute of Acoustics' Diploma in Acoustics and Noise Control.   |
| Maurice F Hurley | DLitt, MA, FSA, MIAI                                       | <p>Maurice F. Hurley has 35 years experience as a professional archaeologist. His career developed in tandem with the changing focus of Irish archaeology and his experience includes pioneering work on projects such as Director of the Cork-Dublin gas pipeline archaeology (published 1987). He was City Archaeologist for Waterford (1987-1991) and later Cork City where he undertook several major excavations, all of which are published. Maurice Hurley was the first Chairman of Institute of Archaeologist of Ireland Archaeologist. He served as a member of the Heritage Council of Ireland from 2000 to 2008, where he was Chair of the committees on archaeology and architecture. He served as a member of the Royal Irish Academy, National Committee for Archaeology (1996-1999).</p> <p>Since 2005 Maurice Hurley runs his own archaeology consultancy practice. He specialises in the Archaeology/Cultural Heritage components of Environmental Impact Assessments and in urban archaeology, where he has particular expertise on the complex interface between development and archaeology in the planning process. In recent years much of his focus has been centred on renewable energy projects, initially windfarms and more recently solar energy developments.</p> |
| Paddy Curran     | BE, MSc, DipPM, CEng, MICE, RoGEP<br>Geotechnical Engineer | Paddy is a Senior Engineer and has over 14 years experience in civil engineering, particularly in the area of Geotechnical Engineering. Project experience includes delivering the geotechnical investigation/interpretation, design and construction support for numerous wind farms, substations and grid developments. .   |
| Roman Puotkalis  | BSc (Hons), MSc  | Roman is an Environmental Consultant with MWP. He holds an MSc in Environmental Analytical Chemistry and BSc (Hons) Environmental Science from University College Cork. Roman has been involved in geo-environmental investigation/interpretation and hydrogeological assessment and investigations. Roman has written Land and Soils chapters for various projects such as wind farms, grid routes and power generating stations. This included assessment of environmental impact on Land, Soils, Geology, and Hydrogeology, as well as cumulative impacts with various other aspects of the environment. He has also worked on Phase 1 and 2 environmental site assessments for several projects including pharmaceutical facilities, substations, mines, and power stations.  |

| Contributors   | Qualifications & Memberships | Competencies  |
|----------------|------------------------------|---|
| Sally Kelly    | BSc(Hons), MSc               | Sally is an Environmental Scientist with over 20 years experience as a Project Manager in geo-environmental consultancy with significant involvement in the management of soil and groundwater remediation projects for both public and private sector clients. Sally has managed and compiled environmental reports for a variety of project types including wind energy, solar farms and commercial developments and has authored specialist land and soil reports for project EIAs.  |
| Seamus Quigley | BE CEng MIEI MCIHT           | Seamus Quigley has over 33 years' experience in transport planning and traffic engineering projects, including EIS/EIAR traffic and transportation chapters, traffic impact assessments, traffic management studies, mobility management plans, traffic modelling studies, feasibility studies and road safety audits. He is a Chartered Engineer with Engineers Ireland, and also a member of the Chartered Institution of Highways and Transportation. He joined Malachy Walsh and Partners in 2007, having spent over sixteen years with Atkins.   |
| Zeba Haseeb    |                              | 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 reports including Environmental Impact Assessment (EIA) Screening Reports, Appropriate Assessment Screening Reports, Population and Human Health Impact Assessment, Material Assets Impact Assessments, feasibility studies, Construction Environmental Management Plans (CEMP), Resource and Waste Management Plans (RWMP). She has contributed to EIA's for wind farms, dam, mines, tourism, and residential developments in a number of countries. |

## 1.6 Difficulties Encountered

There were no difficulties encountered in the preparation of this EIAR.

## 1.7 Note on Quotation

EIARs contain statements describing the positive and negative aspects of a proposed development. Selective quotation out of context is not advisable as a misinterpretation of the overall findings of the study may arise. Where possible, quotations should be taken from the conclusions of specialist reports.

## 1.8 Note on drawings and Graphics

Details of the proposed development are supported by the planning application drawings prepared by Malachy Walsh and Partners in compliance with our internal Quality Management System (accredited to ISO: 9001). A list of the planning application drawings are provided in EIAR Volume 3 Appendix B-1. 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).