

ENVIRONMENTAL IMPACT ASSESSMENT REPORT FOR THE DEMOLITION OF AGRICULTURAL STRUCTURES AND THE DEVELOPMENT OF A MATERIALS RECOVERY FACILITY AT DERRYARKIN, RHODE, CO. OFFALY

VOLUME 2 – MAIN BODY OF THE EIAR CHAPTER 1 - INTRODUCTION

Prepared for: **Oxigen Environmental Unlimited Company**



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Offaly County Council, Planning Dept. - Inspection Purposes Only



1. INTRODUCTION

1.1 Introduction

Oxigen Environmental Unlimited Company (herein referred to as ‘the Applicant’) intends to apply for planning permission to demolish existing agricultural sheds and structures and to develop a Materials Recovery Facility at a site in Derryarkin, Rhode, Co. Offaly. The proposed Materials Recovery Facility will accept a maximum of 90,000 tonnes of waste per annum including household, commercial and industrial (C&I), and construction and demolition (C&D) waste.

Fehily Timoney & Company (FT) has prepared this environmental impact assessment report (EIAR) on behalf of the Applicant to accompany the application for planning permission made to Offaly County Council (OCC) for the proposed development.

This chapter of the EIAR introduces the proposed development in the context of the application for permission, documents the procedure that was followed in preparing this EIAR, and provides detail on the competency and expertise of environmental impact assessors.

1.2 The Applicant



The Applicant for the proposed development is Oxigen Environmental Unlimited Company.

The Applicant is one of Ireland’s leading integrated waste management and recovery/recycling company and is dedicated to the diversion of waste from landfill through the recovery and re-use of valuable resources to create closed material life cycles in accordance with Circular Economy principles. The Applicant has the following Strategic Goals in place for the company:

1. To increase volumes of recyclables collected
2. To increase volume of secondary raw materials produced such as paper, metal, glass, wood, plastics, construction aggregates and organics
3. Maximise diversion of materials from landfill
4. Increase the generation of renewable power from waste streams

The applicant has a strong presence in the Midlands region. It operates a three Civic Amenity Facilities on behalf of Offaly County Council in Birr, Derryclure and Edenderry, Co. Offaly.

1.3 The Site

The proposed development site is located in the townland of Derryarkin, Rhode, Co. Offaly. The development site is 0.8 ha in size. The site is located 4 km south-south-east of Rochfortbridge, Co. Westmeath and 5.5 km north-west of Rhode, Co. Offaly. The site is 3 km south of the M6 motorway and approximately 2.2 km west of the R400. A site location map is presented in Figure 1-1.



The site was previously developed and used as an agricultural facility and is in a state of disuse. Several derelict agricultural structures are present on-site.

The site is located in a largely rural/agricultural setting with some industrial/commercial activity in the wider area.

A piggery operated by Skeagh Farms under an Industrial Emission Licence from the EPA (Licence Reference: P0938) is located immediately north/north-west of the development site. Access to this pig farm is via private access road which bounds the development site to the east and north.

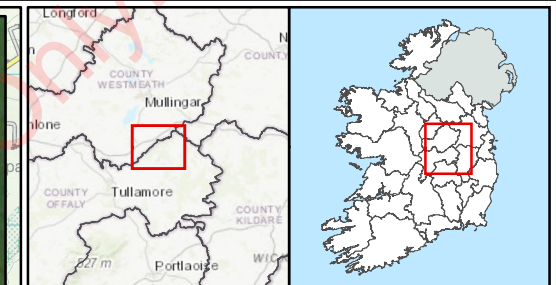
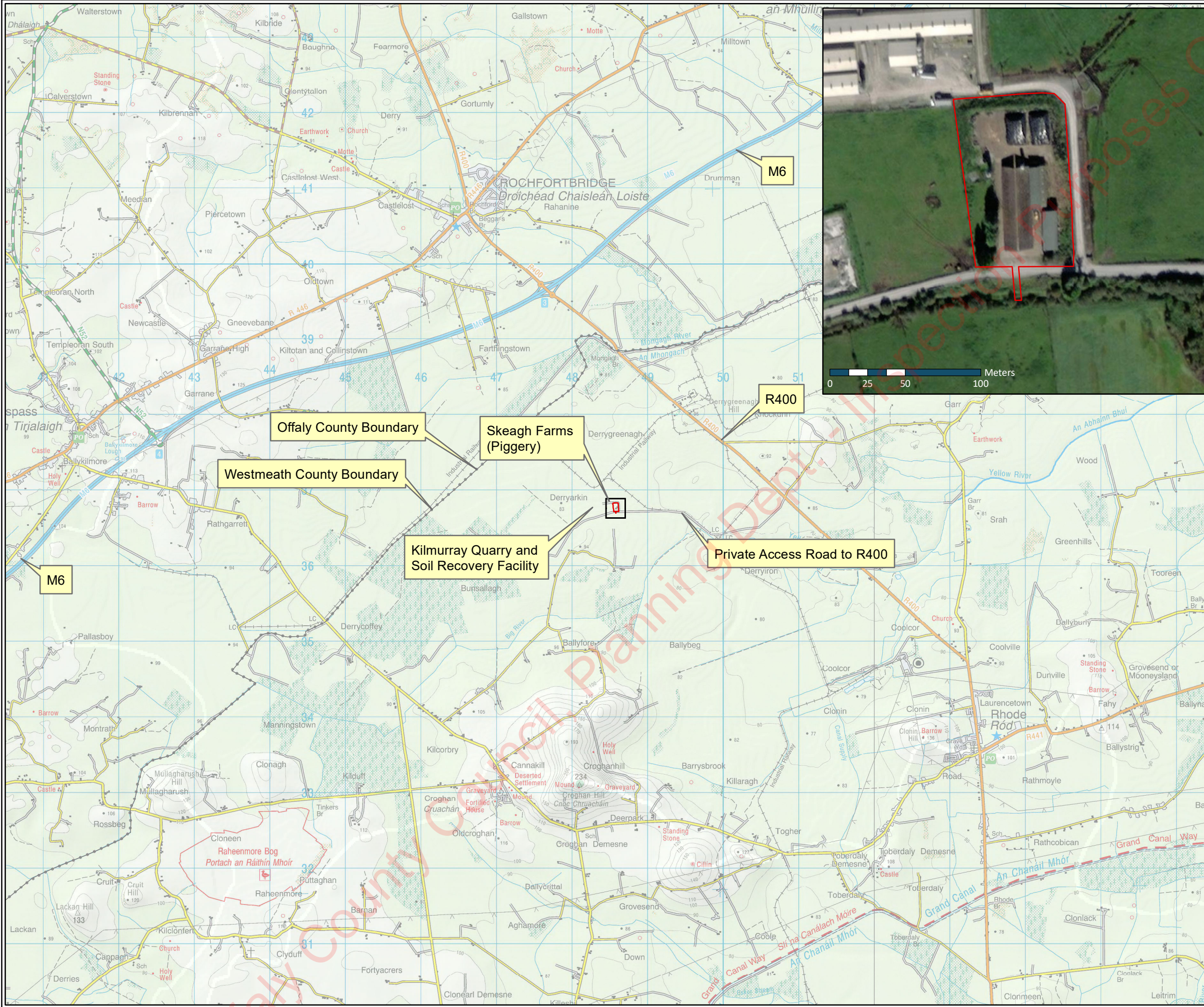
An active quarry / concrete batching facility / C&D / soil recovery facility is located c.80m west of the site (at its closest point). This facility is operated by Kilmurray Pre-Cast Concrete Ltd. Kilmurray Pre-cast Concrete Ltd were recently granted permission to expand quarrying operations at this facility.

The Yellow River Windfarm project, which has been granted planning consent, will be constructed in the local area, with construction expected to commence in late 2022. SSE Renewables are responsible for the construction and operation of this wind farm. The wind farm will consist of 32 wind turbines across a number of townlands, some of which will be located in relatively close proximity to the proposed site in the townland of Derryarkin to the north, west and south east.

The wider area surrounding the site is characterized by peatland and agricultural land in all cardinal directions. The agricultural land is a patchwork of small to large sized fields divided by hedgerows, which are used for both tillage and crop production and animal grazing. Areas of forestry are also found in the in the study area, with significant amounts of land forested by Bord na Móna to the north east of the development (the other side of the R400 regional road). Bord na Móna's Drumman timber storage, seasoning and chipping facility is situated ca. 1.5 km north east of the development site. A significant portion of surrounding lands also consist of peatlands which have been subject to peat extraction undertaken by Bord na Móna. Derryarkin Motocross Track is situated ca. 1.8 km north of the site at its nearest point.

The site is accessed via a site access road that connects to the R400 Regional Road ca. 2.2 km west of the site. The R400 connects to the M6 Motorway, 2.9 km north of the site.

The site is remote from sensitive receptors. The nearest sensitive receptor is a one-off dwelling located ca. 755 metres to the south of the proposed development site. Other one-off dwellings are located ca. 760 metres to the south west, 770 metres to the south and ca. 890 metres to the south west. There are no other sensitive receptors within 1 km of the proposed development site.



Legend

- Site Boundary
- County Boundary

PL2 / 22 / 490
 21 / 09 / 2022

TITLE:	Site Location
PROJECT:	Oxygen Derryarkin Materials Recovery Facility
FIGURE NO:	1.1
CLIENT:	Oxygen Environmental Unlimited Company
SCALE:	1:50000
DATE:	08/08/2022
REVISION:	0
PAGE SIZE:	A3





1.4 Cumulative Assessment

Cumulative assessment is an assessment of the changes to the environment that are caused by activities/projects in combination with other activities/projects. The potential significant effects of the proposed project are assessed in conjunction with other existing or proposed developments located nearby or in the vicinity of the developments in question. The potential combined environmental impacts can be accurately assessed in the event of the proposed developments proceeding.

Cumulative effects are changes to the environment that are caused by an action in combination with other actions and can arise from:

- the interaction between all of the different Projects in the same area;
- the interaction between the various impacts within a single Project.

The co-existence of impacts may increase or decrease their combined impact. Impacts that are not considered to be significant when assessed individually, may become significant when combined with other impacts.

The requirement for cumulative assessment derives from the EIA Directive, as amended, where Annex IV requires that the EIA should describe:

“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”.

In the context of an EIA, cumulative effects can be applied to two different aspects of a development.

Firstly, the various impacts of a particular project can interact in a manner which causes additional effects, which when taken together are greater than they appear when documented under separate topic headings.

Secondly, a project may magnify effects already associated with other built development.

This may mean that, when a development is proposed at a greenfield location which is devoid of other significant built development, its impact is acceptable. By contrast, where it is proposed in conjunction with other development, the cumulative effect may be much greater. In some cases, the impacts of these multiple developments collectively may exceed that which is tolerable or sustainable development.

In terms of assessing the potential for cumulative effects in this EIA, a review of other projects and existing operations within the Derryarkin townland and wider area was carried out. The projects that were identified for consideration in the cumulative assessment are identified and outlined in Appendix 1.1, Projects considering during Cumulative Assessment, in Volume 3 of this EIA.

1.5 Site Ownership

The Applicant is the full owner of the proposed development site delineated by the red line boundary shown in the Site Location Map (Drawing Reference: P2344-000-0001) which accompanies this planning application.





The Applicant also owns lands immediately to the south of the application site. These lands are delineated by blue line boundary in the accompanying Site Location Map.

1.6 The Proposed Development

The development will consist of the demolition of existing agricultural sheds and structures on-site and the construction and operation of a Materials Recovery Facility for the acceptance and processing of up to 90,000 tonnes per annum of household, commercial and industrial (C&I), and construction and demolition (C&D) waste.

Elements of the proposed development include the following. (1) The demolition of all existing site agricultural sheds and structures on-site (which cover an area of 1,417 m²). (2) The construction and operation of a Materials Recovery Facility, comprising: (a) A site entrance, (b) A weighbridge, (c) Trucking set down and parking areas, (d) Staff parking, comprising 24 parking spaces including disabled parking and EV charging, (e) A concrete yard area, (f) A fuel storage area, (g) External waste storage bays, (h) Skip / bin storage areas, (i) A perimeter boundary wall (4 m in height) and perimeter fencing (2.1 m in height), (j) A stormwater drainage and attenuation system, (k) An administration two-storey building (with an overall floor area of c. 396m² and c.7.35m in height), (l) A single storey Materials Recovery Facility (with an overall floor area of c. 2,850m² to a maximum height of c.13m), (m) A truck loading bay, (n) An on-site wastewater treatment system, associated percolation area and ancillary services, (o) An on-site ESB sub-station and adjoining electrical room (with a combined floor area of 61 m² and 2.175 m in height), (p) Solar panels (covering a total area of 737 m²) mounted atop the proposed Administration and Materials Recovery Facility buildings. The application is accompanied by an Environmental Impact Assessment Report and Natura Impact Statement.

The proposed development will accept up to 50,000 tonnes of waste per annum and operate under a Waste Facility Permit from Offaly County Council during Phase 1 of operations. The proposed development will accept up to 90,000 tonnes of waste per annum and operate under an Industrial Emissions licence from the Environmental Protection Agency during Phase 2 of operations.

For a more detailed description of the project components, including the built infrastructure proposed to be developed, construction phase activities and operational phase activities please refer to Chapter 4: Description of Existing and Proposed Developments contained in Volume 2 of this EIAR.

1.7 Proposed Development Design

To ensure the highest standards of environmental protection, the proposed development has been designed to operate in accordance with the following environmental protection standards:

- European Commission (2018) BREF on Waste Treatment
- European Commission (2018) BATC on Waste Treatment
- EPA (2011) BAT Guidance Note on the Waste Sector
- Commission Implementing Decision (EU) establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council.





1.8 Project Phasing

The construction of the proposed will be constructed over one phase which will be approximately 12 months in duration.

The operational phase of the Proposed Development Project will then be undertaken over two phases.

Shortly after the planning application for the proposed development is submitted to Offaly County Council, the applicant will submit both Waste Facility Permit (WFP) and Industrial Emissions (IE) Licence applications to Offaly County Council and the EPA respectively. More detail on these authorizations is provided in Section 1.9.

Currently, the WFP application review process takes approximately 3 months, whilst the IE licence application review process takes approximately 2 years. The applicant intends on applying for and operating a smaller scale of waste activity at the facility under a WFP whilst awaiting grant of an IE licence for the full scale of waste activities proposed at the facility under this planning application.

As such, Phase 1 of the operation will be regulated by the WFP, whilst Phase 2 of the operation will be regulated by the IE licence. Phase 1 of the operation is expected to be short term and temporary in nature.

Phase 1 of the operation will involve the acceptance and processing of up to 50,000 tonnes per annum of waste material on-site.

Whilst Phase 1 of the operation is being applied for and taking place, the applicant will prepare and submit a concurrent IE Licence application to the EPA to gain authorization for accepting a total of 90,000 tonnes of waste material on-site for processing ultimately.

Phase 2 of the operation will commence upon grant of the IE licence from the EPA, which is expected to occur sometime in 2024. This licence will replace the pre-existent Waste Facility Permit. 90,000 tonnes per annum of waste material will be accepted for processing over the course of Phase 2 of the proposed development.

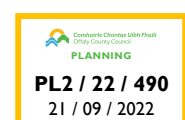
The reader is reminded at this juncture that this Planning Application is being made for, inter alia, the operation of a waste management facility which will accept a maximum of 90,000 tonnes per annum of waste material for processing, and that the Environmental Impact Assessment Report adjoining this application considers the proposed operation at its ultimate maximum operational capacity and impact.

Offaly County Council's Environment Section has been engaged with respect to the prospective Waste Facility Permit Application. The EPA have been engaged with respect to the prospective IE Licence application. Further detail on discussion with both respective competent authorities is contained in Chapter 6 of Volume 2 of this EIAR – Scoping and Consultation. The EPA agreed in principle with the applicant's proposed approach to gaining operational consent and regulating the two phases of proposed operations.

It is expected that the lifetime of the facility will subsequently be between 25 and 50 years.

1.9 Regulatory Control

The facility will be subject to regulatory control under relevant environmental and waste related legislation. Phase 1 of the operation will be subject to a Waste Facility Permit administered by Offaly County Council. Phase 2 of the operation of will be subject to an Industrial Emission Licence administered by the EPA.





1.9.1 Waste Facility Permit

The facility will operate under a Waste Facility Permit enforced by Offaly County Council initially.

This authorization will allow for the regulation and control of the proposed waste activities to be undertaken during Phase 1 of the operation. This will allow for the management and control of the proposed waste activities, and environmental aspects, impact and emissions associated with the activity. It will also facilitate facility and infrastructure management, record keeping and waste reporting, and accident prevention and emergency response mechanisms.

In time, this Waste Facility Permit will be replaced by an Industrial Emissions Licence enforced by the EPA.

1.9.2 Industrial Emission Licence

Phase 2 of the operation will be regulated under an Industrial Emissions Licence with the EPA.

This authorization will allow for the continued regulation and control of the proposed waste activities to be undertaken on-site. The following aspects of the proposed development will be controlled through this authorizations:

- Emissions to air and surface water;
- Monitoring requirements for emissions;
- Resource use and energy efficiency;
- Waste management control documentation;
- Waste acceptance and records;
- Storage and transfer of substances;
- Changes to operations and the physical fabric of the facility;
- Facility management including the requirement for an environmental management system (EMS);
- Infrastructure management;
- Accident prevention and emergency response including fire water retention; and,
- Operational controls.

1.9.3 Inapplicability of Animal By-Product Regulations

The proposed facility does not require an Animal By-Product authorisation from Department of Agriculture, Food and the Marine (DAFM) under the Animal By-product Regulations (Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (Animal by-products Regulation). Correspondence from DAFM confirming the inapplicability of these regulations has been issued to the applicant and is shown in Appendix 1.2.



1.10 Planning History

There have been no previous planning consents granted at the subject site. All existing agricultural development on-site has been confirmed to be exempted development by virtue of the fact the agricultural development in question constituted exempted development under the respective iteration of the Planning and Development Act in force at the time of its construction. For example, the main agricultural shed on-site, which is estimated to have been constructed in the early 1970's, constituted exempted development under Schedule 1, Part 3, Class 6 of the Local Government (Planning and Development) Act, 1963, (Exempted Development) Regulations, 1967, which was in force at the time of its construction.

1.11 Requirement for the Competent Authority to Conduct EIA

The European Union Directive 2014/52/EU (amending Directive 2011/92/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 appraisal of the environmental impacts of certain types of projects, as listed in the Directive, prior to development consent being given for the project. Throughout this EIAR, Directive 2011/92/EU, as amended by 2014/52/EU, on the assessment of the effects of certain public and private projects on the environment, shall be referred to collectively as "EIA Directive, as amended".

With respect to waste-related projects, the EIA Directive, as amended, requires that an EIA is required in relation to applications for development consent. Article 4(2) of the EIA Directive, as amended, stipulates that Member States are responsible for setting applicable thresholds in respect of EIA.

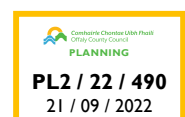
The requirement for EIA of certain types of proposed development is transposed into Irish legislation under the Planning and Development Act, as amended, and the Planning and Development Regulations 2001 to 2022, as amended (the "2001 Regulations"). Part 1 of Schedule 5 to the 2001 Regulations, as amended includes a list of projects which are subject to mandatory EIA based on, inter alia, their scale, nature, location and context.

Part 2 of the same Schedule 5 includes a list of projects where, if specified thresholds are exceeded, or where it is determined that there is potential for significant environmental impact, an EIA is also required. "Installations for the disposal of waste with an annual intake greater than 25,000 tonnes" fall into Part 2 of Schedule 5 and therefore, pursuant to section 176 of the 2000 Act and article 94 of the 2001 Regulations, an EIA of the proposed development is required to be carried out by the Competent Authority prior to making a decision to grant development consent.

Accordingly, the EIA of the proposed development will be undertaken by Offaly County Council, in accordance with the requirements of the EIA Directive, as amended, Part X of the 2000 Act and the relevant provisions of the 2001 Regulations, as amended.

1.12 EIAR Methodology and Structure

An EIAR presents relevant information such that an environmental impact assessment (EIA) can be undertaken to assess the potential effects of certain development projects on the environment. The EIA process is undertaken by the relevant Competent Authority.





The primary objective of an EIA is to ensure that projects which are likely to have significant effects on the environment are assessed and impacts avoided or reduced, where possible. This assessment process aims to achieve the most sustainable and environmentally friendly integration of a development with the local environment.

Firstly, the planning context, the background to the project including the need for the developments, the alternatives assessed, and the existing and proposed developments are described. The introductory sections of each Chapter set out the context as to the practical and dynamic process undertaken, to arrive at the scope of the proposed that will cause least impact on the environment.

Subsequent sections deal with specific environmental topics, for example, population, human health, air, water, noise, etc. These sections may involve specialist studies and evaluations. The methodology applied during these specific environmental assessments is a systematic analysis of the proposed developments in relation to the existing environment.

The broad methodology framework for these assessments is outlined below and is designed to be clear and concise and allow the reader to logically follow the assessment process through each environmental topic. In some instances, more specific topic related methodologies are outlined in the relevant sections of the EIAR.

The broad format used to carry out impact assessment under each environmental topic is as follows:

- Introduction;
- Assessment Methodology;
- Receiving Environment;
- Potential Effects;
- Mitigation Measures;
- Residual Effects;
- Interactions;
- References.

The advantage of using this structure is that it is easy to investigate each environmental topic and it facilitates easy cross-reference to specialist studies undertaken in the preparation of the EIAR.

The EIAR has been prepared in accordance with relevant EIA related legislation including:

- The EIA Directive (Directive 2011/92/EU as amended by Directive 2014/52/EU)
- Transposing national legislation, for example, the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, as amended.
- The Planning and Development Act, as amended, and the Planning and Development Regulations 2001 to 2022, as amended (the “2001 Regulations”)



The EIAR has been prepared in accordance with guidelines listed hereunder except where specific sectoral guidance was used e.g. traffic:

- EPA (2022), Guidelines on the Information to be contained in Environmental Impact Assessment Reports;
- Department of Housing, Planning and Local Government (2018), Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment.
- European Commission (EC) (2017), Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU);

Where specific sectoral guidance was used e.g. traffic, this guidance will be listed in the relevant sections of the EIAR.

1.12.1 EIAR Methodology

Introduction

The main aim of this EIAR is to provide information on the project to the public, prescribed bodies and the Competent Authority. To this end, Article 3(1) of the EIA Directive, as amended requires that significant effects are identified, assessed and described in an ‘appropriate manner’.

Article 5(1) sets the form – the information should be presented in an EIA Report that enables stakeholders and authorities to form opinions and to take decisions regarding the project. While there are no formal requirements concerning the format and the presentation of the report, this EIAR clearly sets out the methodological considerations and the reasoning behind the identification and assessment of significant effects.

Article 5(1) sets out what must be included as a minimum in the EIAR.

Annex IV to the Directive, expands on these requirements. In short, this includes the following:

- a description of the project: this is an introduction to the project, and includes a description of the location of the project, the characteristics of the construction, and the operational phases of the project, as well as estimates of the expected residues, emissions, and waste produced during the construction and operation phases;
- baseline scenario: a description of the current state of the environment, and the likely evolution thereof without the implementation of the project;
- environmental factors affected: a description of the environmental factors impacted by the project, with specific emphasis being placed on climate change, biodiversity, natural resources, and accidents and disasters;
- effects on the environment: this section addresses the concept of ‘significant effects’ and the importance of cumulative effects;
- assessment of alternatives: alternatives to the proposed developments are described and compared, with an indication of the main reasons for the selection of the option chosen provided;



- mitigation measures, i.e. features or measures to avoid, prevent or reduce, and offset adverse effects should also be considered;
- monitoring: monitoring measures proposed are included in the EIAR, where potentially significant adverse effects have been identified. This monitoring will be carried out during the construction and operation of a project;
- Non-Technical Summary, i.e. an easily accessible summary of the content of the EIA Report presented without technical jargon, hence understandable to anybody without a background in the environment or the project;
- quality of the EIAR: the experts responsible for preparing the EIA Report are competent.

The EIAR has been prepared in accordance with the requirements of Directive 2011/92/EU of the European Parliament as amended by Directive 2014/52/EU. Schedule 6 of the Planning and Development Regulations 2001, as amended, and Annex IV of the EIA Directive, as amended set out the contents of an EIAR. In addition, in the preparation of this EIAR a scoping of possible impacts of the proposed developments was carried out to identify impacts thought to be potentially significant, not significant or uncertain. Consultation with the relevant private and public agencies ensured that the most significant impacts and the areas of greatest concern were addressed during the EIA process. Details of the consultation carried out for the proposed developments are outlined in Chapter 6 Scoping and Consultation of Volume 2 of this EIAR.

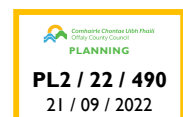
As set out in Schedule 6 of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018), the information to be contained in an EIAR is as follows:

1. The following elements:

- a) A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed developments;
- b) A description of the likely significant effects on the environment of the proposed development;
- c) A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development;
- d) A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment.

2. Additional information, relevant to the specific characteristics of the development or type of development concerned and to the environmental features likely to be affected, on the following matters, by way of explanation or amplification of the information referred to in paragraph 1:

- a) A description of the proposed development, including in particular:
 - i. A description of the location of the proposed developments;
 - ii. A description of the physical characteristics of the whole proposed development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;





- iii. A description of the main characteristics of the operational phase of the proposed development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and;
 - iv. An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during construction and operation phases.
- b) A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and their specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects;
- c) A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge;
- d) A description of the factors specified in paragraph (b)(i) (I) to (V) of the definition of ‘environmental impact assessment’ in section 171A of the Act likely to be significantly affected by the proposed development: population, human health, biodiversity (for example flora and fauna), land (for example land-take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape;
- e) (i) a description of the likely significant effects on the environment of the proposed development resulting from, among other things:
- (I) the construction and existence of the proposed developments, including, where relevant, demolition works,
 - (II) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources,
 - (III) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste,
 - (IV) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters),
 - (V) the cumulation of effects with other existing or approved developments, or both, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources,
 - (VI) the impact of the proposed developments on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the proposed developments to climate change, and;
 - (VII) the technologies and the substances used, and;
- (ii) the description of the likely significant effects of the factors specified in paragraph (b)(i)(I) to (V) of the definition of ‘environmental impact assessment’ in section 171A of the Act 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 proposed development, taking into account the environmental protection objectives established at



European Union level or by a Member State of the European Union which are relevant to the proposed development;

- f) A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved;
- g) A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of an analysis after completion of the developments), explaining the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset during both the construction and operational phases of the development;
- h) A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it. Relevant information available and obtained through risk assessments pursuant to European Union legislation such as the Seveso III Directive or the Nuclear Safety Directive or relevant assessments carried out pursuant to national legislation may be used for this purpose, provided that the requirements of the Environmental Impact Assessment Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for, and proposed response to, emergencies arising from such events.

Assessment Methodology

Specific topic related methodologies are outlined in each Chapter of Volume 2 of this EIAR. This includes the methodology used in describing the existing environment and assessing effects. The study area may vary for each specific topic and is therefore set out in each individual chapter.

Mitigation Measures

A schedule of commitments is included as Chapter 17 of Volume 2 of this EIAR. It includes all the mitigation measures outlined in this EIAR.

References

Reports and data sources referenced in the preparation of this EIAR are listed in each chapter.

1.12.2 EIAR Structure

The EIAR has been structured in accordance with the European Commission's Guidance Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU) published in 2022

The EIAR comprises four volumes:

- Volume 1:** Non-Technical Summary
- Volume 2:** Main Report
- Volume 3:** Appendices
- Volume 4:** Drawings





The following topics and related chapters are presented in this EIAR:

1. Introduction
2. Need for the Proposed Development
3. Alternatives
4. Existing and Proposed Development
5. Planning and Policy Context
6. Scoping and Consultation
7. Population and Human health
8. Biodiversity
9. Soils, Geology and Hydrogeology
10. Hydrology and Surface Water
11. Air and Climate
12. Noise and Vibration
13. Traffic and Transportation
14. Archaeological, Architectural and Cultural Heritage
15. Landscape and Visual Impact
16. Inter-relationships and Interactions
17. Schedule of Commitments

1.12.3 Assessment of Significant Effects – Evaluation Criteria

The identification and analysis of significant effects in this EIAR has been undertaken in accordance with best practice, legislation and guidance notes. The evaluation of significance considers the magnitude of the change and the sensitivity of the resource or receptor. Unless otherwise stated, this approach has been adopted throughout the EIAR.

The criteria for determining the significance of impacts and the effects are set out in Figure 1-2 taken from the EPA's guidance document.

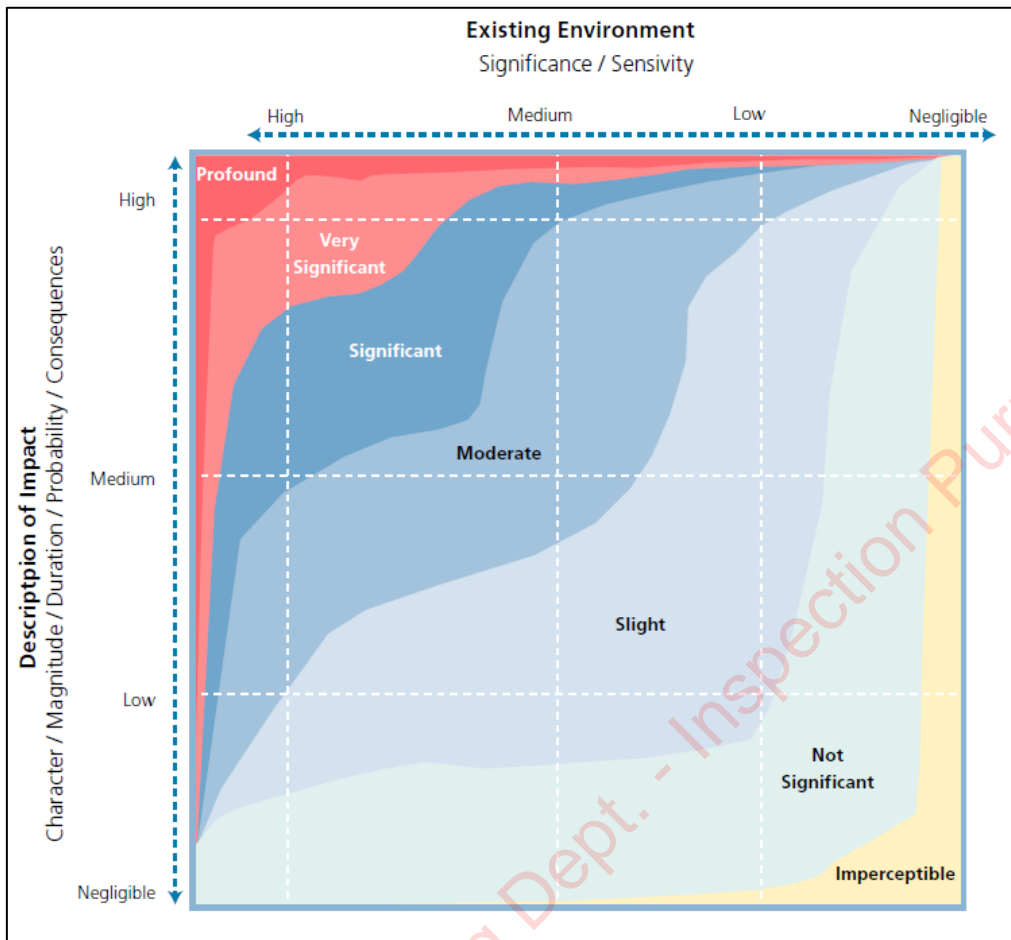


Figure 1-2: Description of Impacts

Definitions of impact (as defined in Table 3.4 of the EPA’s guidance document) are reproduced in the tables below and apply throughout this EIAR unless otherwise stated within a specific chapter.

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Table 1-1 defines the quality of effects from positive to negative on the environment:

Table 1-1: Quality of Effect

Type of Effect	Quality of Effect
Positive Effects	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error
Negative / adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).

Table 1-2 outlines the descriptions of significance of effects which range from imperceptible to profound effects:

Table 1-2: Describing the Significance of Effects

Classification	Criteria
Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baselines trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly most of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics.



Table 1-3 describes the terminology used to discuss the extent and context of effects:

Table 1-3: Describing the extent and context of Effects

Magnitude	Description
Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?).

Table 1-4 shows how likely an impact is to occur:

Table 1-4: Describing Probability of Effect

Probability	Description
Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Table 1-5 discusses the duration and frequency of effects. Momentary effects lasting from seconds to minutes will often be less concerning than long term and permanent effects, depending on their severity:

Table 1-5: Describing Duration and Frequency of Effects

Duration	Description
Momentary Effects	Effects lasting from seconds to minutes.
Brief Effects	Effects lasting less than a day.
Temporary Effects	Effects lasting less than a year.
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years.
Permanent Effects	Effects lasting over sixty years.
Reversible Effects	Effects that can be undone, for example through remediation or restoration.
Frequency of Effects	Describe how often the effect can occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).



Table 1-6 defines the types of effects that can potentially occur:

Table 1-6: Describing Types of Effects

Type	Description
Indirect Effects (a.k.a. Secondary or Off-site Effects)	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 Effects	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
Do-Nothing Effects	The environment as it would be in the future should the subject project not be carried out.
'Worst case' Effects	The effects arising from a project in the case where mitigation measures substantially fail.
Indeterminable Effects	When the full consequences of a change in the environment cannot be described.
Irreversible Effects	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
Synergistic Effects	Where the resultant effects is of greater significance than the sum of its constituents.

1.13 Appropriate Assessment

In compliance with the provisions of Article 6 of the Habitats Directive, as implemented by Part XAB of the Planning and Development Act 2000, as amended, in circumstances where a proposed plan or project is likely to have a significant effect on a European (or Natura 2000) site, either individually or in combination with other plans or projects, an Appropriate Assessment (AA) must be undertaken by the Competent Authority of the implications for the site in view of the site's conservation objectives.

European sites comprise both Special Protection Areas (SPAs) for birds and candidate Special Areas of Conservation (cSACs) for habitats and species. The Habitats Directive (Council Directive 92/43/EEC) formed a basis for the designation of SACs while SPAs are designated under the Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds, now Directive 2009/147/EC).

Article 6 of the Habitats Directive envisages a two-stage process, which is implemented in some detail by the provisions of sections 177U and 177V of the Planning and Development Act 2000, as amended.

A screening for appropriate assessment of an application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.



Plans or projects that can have no significant adverse effect on a European site are excluded, or screened out, at this stage of the process. Where screening concludes that the possibility of significant effects on a European site cannot be excluded, then it is necessary for the competent authority to carry out an Appropriate Assessment(AA) (Stage Two) for the purposes of Article 6(3). A report called a Natura Impact Statement (NIS) is produced for the purposes of the Stage Two AA. The NIS considers the potential impact of a project or plan on the integrity of a European site and on its conservation objectives.

In carrying out an Appropriate Assessment, the Competent Authority (in this case Offaly County Council) is required to make an examination, analysis, and evaluation, make findings, and reach conclusions and a final determination as to whether the proposed project would adversely affect the integrity of any relevant European site in view of its conservation objectives.

1.14 Contributors to the EIAR

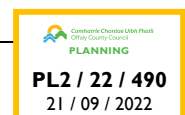
Fehily Timoney and Company (FT) is a consultancy based in Cork, Carlow and Dublin, specialising in civil and environmental engineering, planning and environmental science. The company has established a professional team specialising in EIA and Planning infrastructure development, particularly in energy and landfill. This team has the support of many in-house engineers, scientists and planners.

FT was retained by the applicants to undertake the detailed environmental appraisals and prepare the EIAR for the proposed developments, as well as preparing a planning application to accompany this EIAR for submission to Offaly County Council.

The competent experts involved in the preparation of the EIAR are outlined in Table 1-7 and a CV for each competent expert is included in Appendix 1.3, EIAR Contributor CV's, in Volume 3 of this EIAR.

Table 1-7: Contributors and Competent Experts to the EIAR

EIA Topic	Company	Name and Qualifications
Chapter 1 - Introduction	FT	Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 2 - Need for the Proposed Development	FT	Eoin O' Connor, Project Scientist, B.Sc. M.Sc. Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 3 - Alternatives	Ft	Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 4 - Planning and Policy	FT	Eoin O' Connor, Project Scientist, B.Sc. M.Sc. Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM





EIA Topic	Company	Name and Qualifications
Chapter 5 - Existing and Proposed Development	FT	Eoin O' Connor, Project Scientist, B.Sc. M.Sc. Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM James O' Neill, Principal Engineer, BEng, MSc, CEng., MCIWM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 6 - Scoping and Consultation	FT	Eoin O' Connor, Project Scientist, B.Sc. M.Sc. Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 7 - Population and Human Health	FT	Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 8 - Biodiversity	FT	Jason Guile, Senior Project Scientist, B.Sc. Jon Kearney, Principal Scientist, BSc MSc MCIEM Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 9 - Soils, Geology and Hydrogeology	FT	Declan Morrissey, Senior Project Scientist, B.Sc., M.Sc., MIAH Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 10 - Hydrology and Surface Water Quality	FT	Daniel Hayden, Project Scientist, B.Sc., M.Sc., MIAH, MCIWEM Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 11 - Air Quality and Climate	AWN Consulting Ltd / FT	Avril Challoner, Senior Air Quality Consultant, BEng, HDip, PhD, CSci, MIAQM Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 12 - Noise and Vibration	FT	Maureen Marsden, Project Scientist, MEng. MIAE Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 13 - Traffic and Transportation	Trafficwise / FT	Julian Keenan, Director, B.Eng, MIEI, MCHIT Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM



EIA Topic	Company	Name and Qualifications
Chapter 14 - Archaeology, Architectural and Cultural Heritage	Colm Flynn Archaeology / FT	Colm Flynn, Director, BA, MIAI Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 15 - Landscape and Visual Impact	MacroWorks / FT	Jamie Ball, Senior Landscape Architect, BA LA Hons, MILI Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM
Chapter 16 – Interactions and Interrelationships	FT	All personnel named above.
Chapter 17 - Schedule of Mitigation	FT	Bruna Felipe, project Engineer, BE (Hons) Richard Deeney, Senior Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM Bernie Guinan, Director, MSc, BSc. MCIWM

1.15 Difficulties Encountered

No difficulties were encountered in undertaking this EIA.

1.16 Viewing of the EIAR

Copies of this EIAR including the Non-Technical Summary, the Appendices and EIAR Drawings may be inspected free of charge or purchased by any member of the public during normal office hours at Offaly County Council.



1.17 References

- EPA (2022), Guidelines on the Information to be contained in Environmental Impact Assessment Reports;
- Department of Housing, Planning and Local Government (2018), Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment.
- European Commission (EC) (2017), Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU).

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