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PLANNING

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

VOLUME 1 – NON-TECHNICAL SUMMARY

Prepared for: Oxygen Environmental Unlimited Company



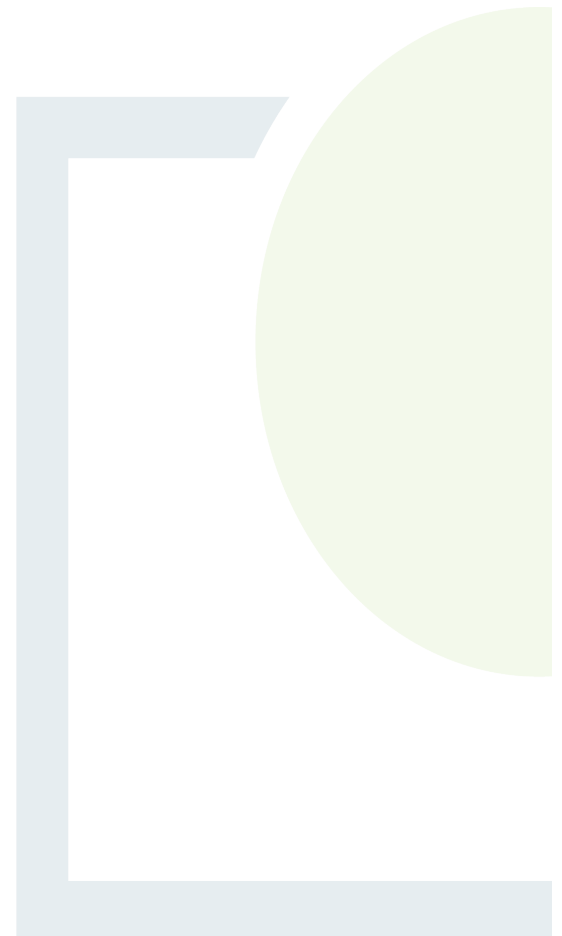
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VOLUME 1 – NON-TECHNICAL SUMMARY

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Abstract: Non-technical Summary of an Environmental Impact Assessment Report (EIAR) for the Demolition of Agricultural Structures and the Development of a Materials Recovery Facility at Derryarkin, Rhode, Co. Offaly.

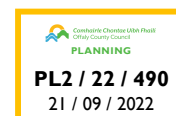
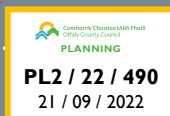
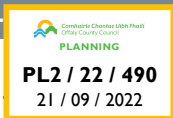


TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 The Applicant	1
1.2 The Site	1
1.3 Project Phasing	3
1.4 EIAR Process	3
1.5 Environmental Impact Assessment Report	4
1.5.1 Requirement for the Competent Authority to Conduct EIA	4
1.5.2 EIAR Methodology.....	4
1.5.3 EIAR Structure	5
1.6 Difficulties Encountered	6
1.7 Viewing of the EIAR	6
2. EXISTING AND PROPOSED DEVELOPMENT	7
2.1 Existing Development	7
2.2 The Proposed Development	7
3. NEED FOR THE PROPOSED DEVELOPMENT	9
4. ALTERNATIVES	10
5. PLANNING AND POLICY	12
6. SCOPING AND CONSULTATION	13
7. POPULATION AND HUMAN HEALTH	15
7.1 Introduction.....	15
7.2 Baseline Environment.....	15
7.3 Impact Assessment.....	15
8. BIODIVERSITY	17
8.1 Introduction.....	17
8.2 Baseline Environment.....	17
8.3 Impact Assessment.....	18
9. SOILS, GEOLOGY AND HYDROGEOLOGY	20
9.1 Introduction.....	20



9.2	Baseline Environment.....	20
9.3	Impact Assessment.....	21
10.	SURFACE WATER AND HYDROLOGY	22
10.1	Introduction.....	22
10.2	Baseline Environment.....	22
10.3	Impact Assessment.....	22
11.	AIR QUALITY AND CLIMATE	24
11.1	Introduction.....	24
11.2	Receiving Environment / Potential Effects.....	24
11.3	Mitigation Measures	25
11.4	Conclusion	25
12.	NOISE AND VIBRATION	26
12.1	Introduction.....	26
12.2	Baseline Environment.....	26
12.3	Impact Assessment.....	26
13.	TRAFFIC AND TRANSPORTATION	28
13.1	Introduction.....	28
13.2	Baseline Environment.....	28
13.3	Impact Assessment.....	28
14.	CULTURAL HERITAGE.....	31
14.1	Introduction.....	31
14.2	Baseline Environment.....	31
14.3	Impact Assessment.....	31
15.	LANDSCAPE AND VISUAL IMPACTS	33
15.1	Introduction.....	33
15.2	Baseline Environment.....	33
15.3	Impact Assessment.....	33
15.4	Conclusion	34
16.	INTER-RELATIONSHIPS AND INTERACTIONS	35




LIST OF FIGURES

Page

Figure 1-1: Site Location Map2

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PL2 / 22 / 490
21 / 09 / 2022



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.

1.1 The Applicant

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

1.2 The Site

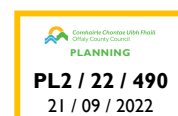
The proposed development site is located in the townland of Derryarkin, Rhode, Co. Offaly. The development site is 0.8 ha in size. The site is located 4 km south-south-east of Rochfortbridge, Co. Westmeath and 5.5 km north-west of Rhode, Co. Offaly. The site is 3 km south of the M6 motorway and approximately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

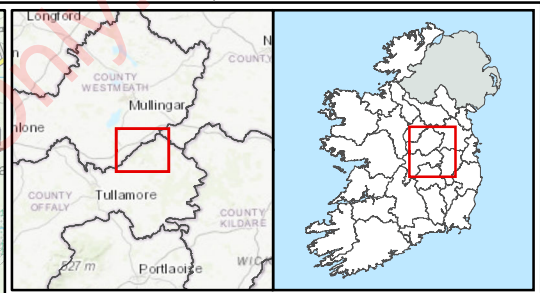
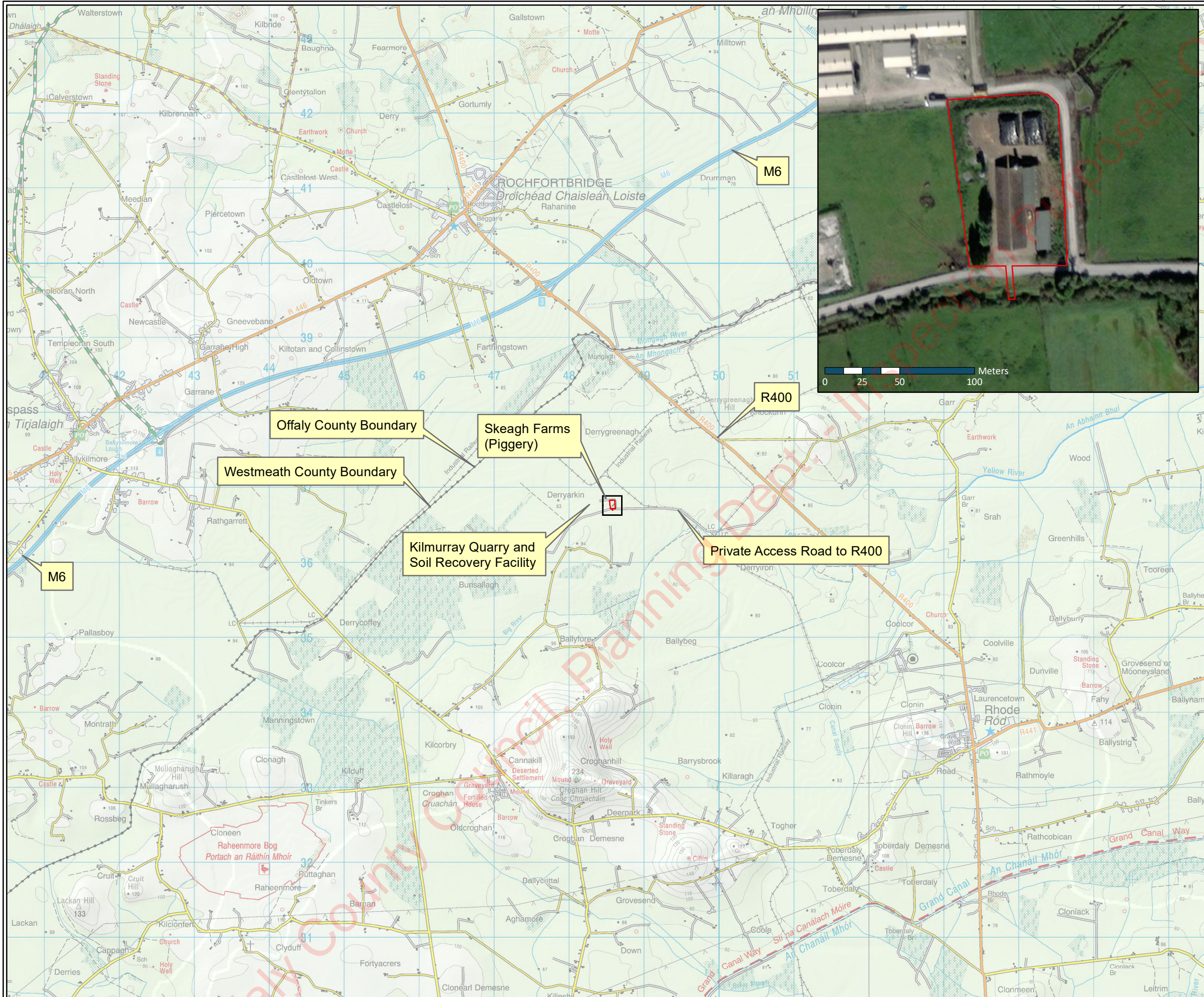
The site was previously developed and used as an agricultural facility and is in a state of disuse. Several derelict agricultural structures are present on-site. The site is located in a largely rural/agricultural setting with some industrial/commercial activity in the wider area (including a piggery to the immediate north/north west of the site, and an active quarry / concrete batching facility / soil recovery facility to the immediate west.

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.

A Site Location Map showing the development site location and surrounding context is shown in Figure 1-1.





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
REVISION:	0
DATE:	08/08/2022
PAGE SIZE:	A3





1.3 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.

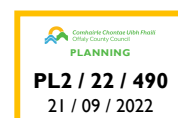
Phase 2 of the operation will commence upon grant of the IE licence from the EPA, which is expected to occur sometime in 2024. This licence will replace the pre-existent Waste Facility Permit. 90,000 tonnes per annum of waste material will be accepted for processing over the course of Phase 2 of the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

1.4 EIA Process

The purpose of this EIA is to provide a detailed description of the proposed development and outline potential impacts associated with the construction and operation of the development. Where adverse impacts have been identified, mitigation measures are proposed to reduce or eliminate the potential effects. This document provides a non-technical summary of the EIA including a description on the receiving environment, details on the proposed development and potential impacts, mitigation measures and residual impacts.

In addition to the EIA, an Appropriate Assessment Screening Report and Natura Impact Statement has been prepared for the proposed development, as required by Article 6 of the Habitats Directive.

The Competent Authority, in this case Offaly County Council, prior to making a decision to grant development consent must conduct their own EIA on the basis of this EIA in making their decision on whether permission for the development will be granted.





1.5 Environmental Impact Assessment Report

1.5.1 Requirement for the Competent Authority to Conduct 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 2 of the 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.

1.5.2 EIAR Methodology

The Environmental Impact Assessment Report (EIAR) is a report of the effects, if any, which a proposed development, if carried out, would have on the environment. The EIAR provides the competent authorities and the public with a comprehensive understanding of the project, the existing environment, the impacts and the mitigation measures proposed.

The Competent Authority is obliged to carry out an Environmental Impact Assessment (EIA). The obligations imposed on the Competent Authority by the EIA Directive are set out in Part X of the Planning Acts.

Article 3 of the 2014 EIA Directive states that an “environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:

- (a) population and human health;
- (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- (c) land, soil, water, air and climate;
- (d) material assets, cultural heritage and the landscape;
- (e) the interaction between the factors referred to in points (a) to (d)”

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 regulatory authorities.

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, 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 and policy context, the background to the project including the need for the development, consultation, the alternatives assessed, and the existing and proposed development is described.

This sets the reader in context as to the practical and dynamic process undertaken, to arrive at the layout and design of the proposed development that will cause least impact on the environment.

Subsequent sections deal with specific environmental topics, for example, human health and population, air and climate, hydrology and surface 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 development 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 methodology framework used in all sections includes:

- Introduction
- Assessment Methodology
- Receiving Environment
- Summary of Key Possible Impacts
- Mitigation Measures
- Predicted Impacts after Mitigation
- Monitoring
- Conclusion and Summary

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);

1.5.3 EIAR Structure

The EIAR has been structured according to the grouped format structure referenced Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports, EPA 2017. The detailed information in respect of each environmental aspect is provided in Volume 2 Main EIAR and each of those sections is dealt with in summary form in this Non-Technical Summary.



The EIAR is broken down into the following sections:

- A description of the existing and proposed development.
- Subsequent sections deal with specific environmental topics for example, biomass supply chain and sustainability impact assessment, noise, air, water etc. The grouped format examines each topic as a separate section referring to the existing environment, impacts of the proposed development and mitigation measures.
- A concluding section which provides a summary of the key impacts and mitigation measures and provides an overall conclusion to the EIAR.

The advantages of using this type of format are that it is easy to examine each environmental topic and it facilitates easy cross-reference to specialist studies undertaken as part of the assessment.

The EIAR comprises of four volumes:

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

1.6 Difficulties Encountered

There were no technical difficulties encountered during the preparation of this EIAR.

1.7 Viewing of the EIAR

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



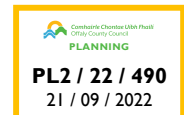
2. EXISTING AND PROPOSED DEVELOPMENT

2.1 Existing Development

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

The following structures are on the site:

- 1 no. portal frame agricultural shed with concrete slatted floor, and underground slurry storage tank (c. 990 m² in area);
- 1 no. 4 bay shed unit (c. 148 m² in area);
- Covered access passage between portal frame agricultural shed and 4 bay shed unit;
- 1 no. steel frame hay shed (c. 235 m² in area);
- Open concrete hardstand yard area (north of sheds) (c. 1,932 m² in area);
- 1 no. existing pump house;
- 1 no. existing overground ground fuel oil storage tank;
- 1 no. feed silo;
- 1 no. above ground, raised water storage tank;
- 1 no. stone soakaway (c. 33 m² in area);
- 2 no. covered pits (one along the western boundary and one toward the north west of the site within the concreted yard);
- Concrete hard surfaces between all shed units;
- Earthen bund along north-western, northern and north-eastern boundaries of the site (c. 118m in length);
- Overhead power lines traversing along the eastern boundary external to the site, in the south eastern corner of the site and along the western boundary of the site;
- Post and wire fencing along western, northern and eastern boundary.



2.2 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.

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3. NEED FOR THE PROPOSED DEVELOPMENT

The need for this facility is influenced by several factors.

- Waste management policy promoting the need for the maximization of waste recovery and recycling to support the objective of a Circular Economy minimising waste disposal to landfill;
- Increasing waste generation and demand for waste management capacity;
- Need for waste management infrastructure to facilitate achieving waste management recovery targets;
- Specific need for MSW Pre-treatment capacity;
- Commercial objectives of the Applicant to manage all the wastes it collects in a self-sufficient, efficient and cost-effective manner.

The proposed development specifically relates to increasing the national capacity for the:

- Construction and Demolition (C&D) waste sorting and processing to enhance recovery and recycling;
- Recovery and recycling of timber waste;
- Bulk loading and onward transfer of Dry Mixed Recyclables (DMR) to enhance recovery and recycling;
- MSW waste sorting and processing to enhance recovery and recycling;
- Pre-treatment of MSW to produce Refuse Derived Fuel (RDF) that will be further treated at third party, off-site thermal recovery facilities, including waste to energy facilities and indigenous cement kilns. This will ensure the diversion of this waste from disposal at landfill facilities.

The proposed development will contribute to meeting waste management needs defined by Waste Management Policy.

The proposed development will contribute toward meeting municipal waste and C&D waste management capacity needs.

The proposed development will support achieving Waste Management targets defined nationally under the Waste Framework Directive and Landfill Directive, including targets to increase MSW recycling and reduce landfilling of waste.

The proposed development will contribute to meeting MSW pre-treatment capacity needs on a national scale. The proposed development will facilitate the applicant achieving its commercial objective and will improve waste management capacity nationally in accordance with the tenets of self-sufficiency and proximity as defined in Waste Management Legislation and Policy.



4. ALTERNATIVES

The assessment of alternatives an important part of the environmental impact assessment process and is a legal requirement for the preparation of EIA. It can assist in minimising the project's significant effects on the environment by identifying whether there are reasonable alternative approaches to achieving the project's objectives. In line with the 2014 EIA Directive (Directive 2014/52/EU) the assessment of alternatives in this EIA provides:

"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. [Article 5(1)]"

The following project alternatives were considered in the EIA:

- The 'Do Nothing' Alternative
- Alternative Project Locations – where the option of constructing the proposed waste facility at a different site was considered
- Alternative Designs – where alternative site layout and designs were considered.
- Alternative Processes – this alternative considers alternative waste processing activities at the proposed development.

'Do Nothing' Alternative

The 'Do Nothing' scenario involves the Applicant not progressing with the development of a Materials recovery Facility on-site. The site, and structures present within its confines, will remain as is in this scenario. The site will remain in a state of disuse and disrepair and will continue to be unsightly to those present in areas surrounding the site that have views onto the site. The land use value associated with the site will remain very low. Asbestos containing material in existing buildings on-site will remain in-situ.

Project benefits will not be accrued in a 'Do Nothing' scenario. The benefits associated with improving waste management and recovery/recycling capacity nationally will not be realized. The socio-economic benefits associated with the proposed development will not be realized. The 'Do Nothing' scenario will prevent the realization of job creation associated with the project, both during its construction phase and operational phase. Potential economic benefits to the local economy and business associated with providing and supplying services, goods and materials to the proposed development during either its construction or operational phases will not be realized either.

Alternative Project Locations

The Applicant considered several potential site locations for the proposed development prior to selecting the proposed site. The process of selecting the most suitable site in the Midlands for the development of a Materials Recovery Facility was very extensive and has lasted since 2011.





Several alternative sites were ruled out for consideration based on environmental and economic criteria, including the following possible developments sites at the following locations:

- Barnan, Daingean, Co. Offaly;
- Derryclure, Tullamore, Co. Offaly;
- Capincur, Tullamore, Co. Offaly;
- Axis Business Park, Tullamore, Co. Offaly;
- Flynn’s, Newtown, Mullingar, Co. Westmeath;
- Clonmore, Mullingar Business Park, Co. Westmeath;
- Bayroad Business Park, Mountmellick, Co. Laois.



Following an extensive site selection process, the Applicant determined that the subject Derryarkin site was most suitable for the development of a Materials Recovery Facility of all the sites considered. The site was significantly better than other alternative sites considered, having regard to the planning and environmental sensitivities and constraints associated with these alternative sites. The Derryarkin site was ultimately selected on the basis of economic criteria (e.g. purchase and development of the site into a waste facility represented good economic value), business criteria (e.g. the site is situated in a location that is ideal for facilitating the acceptance and processing of waste collected by the Applicant in the Midlands region), and environmental criteria (e.g. the site is in a remote location away from sensitive receptors that is characterized by industrial/intensive land use and which is served by a good road network).

Alternative Designs

It was initially envisaged that the proposed facility would accept a maximum of 50,000 tonnes of waste per annum. Following consideration of demand for waste management capacity in the Midlands region and surrounding regions to be served by the facility, it was determined that the facility would at a capacity up to 90,000 tonnes of waste acceptance per annum at its maximum operational capacity (i.e. during Phase 2 of the operations).

The site layout was developed via a reiterative design processes between the Applicant and Fehily Timoney and Company. Ultimately, the chosen proposed layout was deemed to be the most suitable layout having regard to operational criteria (e.g. process flows) and environmental criteria (e.g. installation of solar panels to reduce facility reliance on fossil fuel derived energy).

Alternative Processes

No other processing operations were considered for the proposed facility. Facility processing operations were designed in a manner that ensures the facility can accept and process the variety of waste types collected by the Applicant in the Midlands region and surrounding regions. The array and type of processes that are proposed for the facility on-site will facilitate the effective management of waste in line with relevant public policy on the circular economy and waste hierarchy principles.

Conclusions on the Alternatives Assessment

Overall, it is concluded the proposed development as designed and envisaged maximizes benefits to the Applicant, the local area and wider region compared to the alternatives considered. Conversely, it is concluded that the proposed development achieves the minimum possible environmental impact on surrounding environmental receptors compared with the alternatives considered.



5. PLANNING AND POLICY

It is considered that the proposed development is in compliance with all relevant planning, waste management and climate related policies and objectives

In terms of European policy, the proposed development will ensure compliance with Waste Framework and Landfill Directive and transposing legislation obligations. The proposed development will support and promote the management of waste as 'high up', the waste hierarchy as possible in accordance with EU Waste Law principles.

The proposed development complies with National Waste Policy including the recently published National Waste Action Plan for the Circular Economy. Current national waste policy will be supported in several ways by the proposed development, namely through the proposed development facilitating the maximisation of waste recovery and recycling, and through contributions to the achievement of the self-sufficiency and proximity principles in Ireland.

The proposed development supports relevant policy objectives defined in all three regional waste management plans.

The proposed development supports the achievement of EU, national and local climate policy objectives.

National planning policy, outlined in Project Ireland 2040 and the National Development Plan, will be supported by the proposed development through the provision of an effective and efficient waste management facility, which is identified as essential in the promotion of balanced regional development.

The proposed development will support relevant policy objectives defined in the Regional Economic and Spatial Strategy for the Eastern Midlands Region.

A range of policy objectives including climate and planning related policy objectives outlined in the Offaly County Development Plan 2021 – 2027 are supported by the proposed development. The promotion of waste recovery and recycling practices is an important goal identified in the Development Plan. This aim will be supported by the proposed development.



6. SCOPING AND CONSULTATION

The purpose of the EIA scoping process is to identify the key points and issues which are likely to be important during the environmental impact assessment (EIA) and to eliminate those that are not. The scoping process identifies sources or causes of potential environmental effects, the pathways by which the effects can happen, and the sensitive receptors, which are likely to be affected. It defines the appropriate level of detail for the information to be provided in the EIA. The primary focus of scoping is to define the most appropriate assessment of significant effects related to the proposed intensification.

EIA related scoping and consultation for this project consisted of three main elements, as below:

- Stakeholder Engagement;
- Pre-application Consultation with Offaly County Council and the EPA;
- Review of Offaly County Council Internal EIA Scoping Assessment.

Stakeholder Engagement

A consultation letter was sent out to 46 no. recipients on the 20th of May 2021. The recipients included relevant statutory consultees (as defined in Article 28 of the Planning and Development Regulations, as amended), non-governmental organisations (NGOs) and key stakeholders.

In total, 20 no. scoping responses were received. Copies of all substantive responses (bar 6 instances where the stakeholder only states that the stakeholder consultation letter will be brought to the Ministers attention) are included in Appendix 6.2 of Volume 3 of this EIA. The responses received were fully considered and where appropriate, the topics raised were included within the EIA.

Pre-application Consultation with Offaly County Council and the EPA

Pre-application consultations were undertaken with Offaly County Council and the EPA.

A pre-planning meeting took place with Offaly County Council on 20th November 2020. At this meeting, the project was discussed with the Planning and Environmental Departments, as well as the contents of the EIA and planning application. The Council advised on a number of environmental matters that needed to be considered and evaluated in the prospective EIA (E.g. Views from Croghan Hill, Whooper Swans in the local area).

A second pre-planning meeting took place with Offaly County Council on 18/02/2022. The focus of this meeting was mainly Roads and Traffic related issues, and how a recent planning application for the expansion of Kilmurray precast Concrete Ltd.'s quarry situated to the immediate west of the subject development site (Planning Application Reference: 21247) should be considered in the Traffic and Transport Assessment forming part of this EIA.

A pre-application consultation meeting with the EPA was undertaken on 09/03/2022. The focus of this meeting was the applicant's proposal to carry out operations under a Waste Facility Permit during Phase 1 of the project, before carrying out Phase 2 operations under an IE Licence. Other matters falling within the scope of authority of the EPA were also discussed during this matter (E.g. emissions to the environment, control and management of activities and prevention of emissions of significance).





Review of Offaly County Council Internal EIAR Scoping Assessment

Offaly County Council prepared their own internal Scoping Report of the proposed development, which the Applicant considered when designing the proposed development. This was issued to the Applicant for their information on the 5th of April. This Scoping Report stated the following:

- That the EIAR to accompany the planning application for the proposed development was to be prepared in accordance with EIA related provisions contained in the Planning and Development Regulations 2001, as amended
- An assessment of cumulative impact associated with the proposed development will need to be carried out as part of the EIA process.
- That two consultation responses were received when carrying out the Scoping Exercise, one from Transport Infrastructure Ireland and one from Geological Survey Ireland (The content of these response accorded exactly with the responses made directly to the Applicant by these bodies, detailed in Section 6.2).
- The Local Fire Authority will require a Fire Prevention and Mitigation Plan to be developed for the proposed facility ultimately.

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7. POPULATION AND HUMAN HEALTH

7.1 Introduction

This chapter has been prepared to examine the potential effects of the development of the proposed Materials Recovery Facility at Derryarkin, Co. Offaly on the Population and Human Health in the local environment.

A walkover survey of the site and a desk-based study and an evaluation of each proposed development and their impact upon aspects relating to Population and Human Health was undertaken. Following this, mitigation measures and residual impacts were identified. The Population and Human Health Chapter was then completed. The following relevant population and human health aspects have been identified, Population, Land Use, Economic Activity and Employment, Human Health and Safety and Recreation, Amenity and Tourism.

7.2 Baseline Environment

The site is located in a largely rural/agricultural setting with some industrial/commercial activity in the wider area (including a piggery to the immediate north/north west of the site, and an active quarry / concrete batching facility / soil recovery facility to the immediate west of the site).

The area in which the development site is located is sparsely populated with interspersed one-off housing. The nearest population centre is the village of Rochfortbridge which is situated ca. 4 km to the north and which is designated as a Tier 4 Local Service Town under the Westmeath County Development Plan 2021 - 2027. The village of Rhode is situated ca. 5.5 km to the south east of the development site and is designated as a Tier 5 village under the Offaly County Development Plan 2021 – 2027.

7.3 Impact Assessment

With the adoption of mitigation measures, including the associated mitigation measures defined in interrelated EIA topic Chapters which are relevant to human health, it is not envisaged that the proposed development will have any significant effect on any population or human health element.

The proposed development will result in a few negligible to slight, slight, slight to moderate, moderate and significant positive effects on population and human health elements including positive effects on employment, local population, local business and in terms of promotion of the circular economy. Post-mitigation significant impacts are summarized below:

'Do Nothing' Impact

- Significant, long-term impact on local population and economy due to a deficit in regional waste management capacity.

Residual Operational Phase Impacts

- Significant, positive, long-term impact upon employment generation;
- Very significant, positive, long-term impact in terms of promoting the circular economy.



The safe removal and management of Asbestos present in derelict structures on-site will have a long-term, moderate, positive impact in terms of human health and safety, given that the risk associated with the presence of this material on-site will be removed.

The proposed development will not have any significant cumulative or interacting impact on Population and Human Health with the adoption of the proposed mitigation measures.

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8. BIODIVERSITY

8.1 Introduction

A series of ecological surveys were undertaken at the proposed development site, including habitat, botanical, bird and mammal surveys (including bats). Based on the results of these studies, this assessment considered potential direct, indirect, cumulative and residual impacts of the proposed development during construction operation and decommissioning phases on the existing ecological receptors within the proposed project site and the wider study area and proposes appropriate mitigation measures to reduce and/or avoid potential impacts.

8.2 Baseline Environment

An assessment of the baseline ecological environment was undertaken. Sites of European importance and National importance which are designated for their ecological value, and which may be affected by the proposed development were identified. Key sites included the following:

- River Boyne And River Blackwater SAC (002299);
- River Boyne And River Blackwater SPA (004232).

The development site is hydrologically connected to these sites via the drainage channel to the south and the Yellow River.

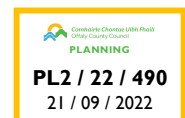
A total of six habitats and habitat mosaics have been identified within the proposed development planning boundary:

- agricultural grassland / neutral grassland (GA1 / GS1);
- recolonised bare ground (ED3);
- earth bank (BL2);
- buildings and artificial surfaces (BL3);
- treeline (WL2), and
- dry meadow and grassy verges / drainage ditch (GS2 / FW4).

No Flora (Protection) Order (2022) species or red listed species were identified during surveys of the study area. Flora species identified present are common and widespread.

Only badger have been recorded within a 1km grid square overlapping the study area at c. 200m south. The closest otter record is c. 1.1km west of the proposed development which is hydrologically connected to the development site.

The riparian habitat along the drainage ditch is suitable for otter and the earth banks along the northern boundary have limited suitability for badger.





The treeline has limited suitability for red squirrel and pine marten and the overgrown scrub ground flora has limited suitability for hedgehog. The treeline undergrowth and grassland have suitable foraging grounds for pygmy shrew.

There are no records of bat species within 2km of the proposed development. No bat evidence or sightings were recorded during an on-site survey undertaken on 17th June 2021.

A total of 38 Red or Amber-listed species as per Gilbert *et al.* (2021) bird species have been recorded within the wider area. There were no observations of whooper swans using the proposed development site to roost or feed during the vantage point surveys and no other species were observed within the boundary of the proposed development site during the survey undertaken on 17th June 2021.

8.3 Impact Assessment

The baseline biodiversity of the proposed development site has been identified, assessed and evaluated, and an evaluation made of potential significant impacts conducted for the construction, operational and decommissioning phases of the proposed development.

Construction phase and operational phase activities have the potential to affect the receiving ecological environment.

Mitigation measures have been developed which avoid and minimise impacts on biodiversity, however. Following the full implementation of these measures, the residual impacts on biodiversity vary from Imperceptible to Not Significant. A list of key mitigation measures that will be implemented to protect local ecology is set out below:

Construction Phase Mitigation Measures

- The area of Dry Meadow and Grassy Verges temporarily removed during the construction of the surface water outfall point will be reinstated upon completion.
- The construction site will not be lit at night (with the exception of low-level switchable safety lighting). Construction works will take place predominantly during the hours of daylight to minimise disturbances to faunal species at night. All lighting systems will be designed to minimise nuisance through light spillage. Shielded, downward directed lighting will be used, and all non-essential lighting will be switched off during the hours of darkness. Lighting will be directed away from the drainage ditch and surrounding landscape.
- The clearance of the site, including the buildings, treeline and vegetation, should only be undertaken outside of the bird breeding season (March 1st to August 31st inclusive). This will help protect nesting birds. Where this is not possible due to construction program constraints, the buildings, treeline and vegetation will be inspected for nesting birds by a suitably qualified Ecologist no more than 48hrs in advance of the felling / clearance works and advise if bird species are present.
- Construction phase mitigation measures to protect the receiving surface water environment and therefore aquatic ecology present in receiving surface water bodies will be fully implemented.



Operational Phase Mitigation Measures

- Operational phase mitigation measures to protect the receiving surface water environment and therefore aquatic ecology present in receiving surface water bodies will be fully implemented.
- All lighting systems will be designed to minimise nuisance through light spillage. Shielded, downward directed lighting will be used and all non-essential lighting will be switched off during the hours of darkness. Lighting will be directed away from the drainage ditch and surrounding landscape.

The proposed development will not have any significant cumulative or interacting impact on Biodiversity with the adoption of the proposed mitigation measures.

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9. SOILS, GEOLOGY AND HYDROGEOLOGY

9.1 Introduction

This chapter has been prepared to examine the potential significant effects of the proposed development on Soils, Geology and Hydrogeology present in the receiving environment at and surrounding the proposed development site.

The potential significant effects of the proposed development are assessed, having taken account of mitigation measures to reduce or eliminate any residual effects on receiving Soils, Geology and Hydrogeology.

9.2 Baseline Environment

The subsoils present at the proposed development site were taken from the GSI 1:50,000 Quaternary Geology of Ireland map (GSI, 2021) and comprise of 'cut over raised peat' (Cut). Other deposits in the study area include 'gravels derived from limestones' (GLs) west and southwest of the proposed development site and 'till derived from limestones' (TLs) northeast of the proposed development site.

The intrusive site investigations completed within the proposed development site generally encountered concrete, made ground/fill or topsoil ranging from 0.1 to 0.8m in thickness overlying clayey and/or fine to coarse sandy gravel with occasional to many cobbles to a maximum depth of 12.0m BGL. Layers of silt, clay, sand and clay were noted at some locations.

No peat was noted during the site investigation, but shallow soils in TP1, TP3 and TP4 were noted as 'organic' or containing 'organic matter' to 1.1m.

Soils during the site investigation were closer to the GSI description of 'gravels derived from limestones' located west and southwest of the site.

The Groundwater Vulnerability is classified by the GSI as 'Moderate' at the proposed development site due to the presence of low permeability deposits (peat). GSI mapping indicates a total thickness of overburden of 5 to 10 metres (GSI, 2021).

There is 1 no. Public Supply Source Protection Area in the study area. This is situated at Toberydaly 4.4 km south of the site. Based on a review of the current GSI groundwater database, there are no Group Water Schemes (GWS) within the site boundary or study area.

Groundwater sampling was undertaken by FT on 22nd June 2021. Based on this monitoring it was determined that there are no issues with existing groundwater quality on-site.



9.3 Impact Assessment

Construction phase activities such including demolition and site clearance, earthworks and excavations and temporary material stockpiling have the potential to affect soils, geology and hydrogeology at and surrounding the site.

Operational phase activities, such as waste handling and storage, and diesel fuel storage on-site, also have the potential to affect soils, geology and hydrogeology at and surrounding the site.

The following key mitigation measures to protect the receiving soils, geology and hydrogeology environment will be implemented as part of the proposed development:

- 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.
- The construction works will be designed, overseen and checked by geotechnical and civil engineers, suitably qualified and experienced in excavation and earthworks design and construction methodologies.
- A Construction Environmental Management Plan (CEMP) has been prepared for the proposed development and is included in Appendix 4.3 of Volume 3 of this EIA. Measures for the protection of soils, geology and hydrogeology are defined in this CEMP.
- All Asbestos containing materials will be stripped and removed prior to demolition in accordance with the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006, and the relevant HSA Guidance documents.
- Control and mitigation measures for the protection of surface water from silt run-off are defined in the Chapter 10 Hydrology and Surface Water Quality of this EIA. These measures will prevent the accidental discharge of polluting material to surface waters in turn impacting groundwater.
- Oil spill protection measures and emergency spill response procedures will be implemented during the construction and operational phases of the proposed development.
- Most of the waste handling, storage and processing will take place indoors under cover. A relatively small quantity of wastes will be stored in external waste storage bays; however these will drain to an appropriate collection tank. This foul water will be dispatched off-site for proper and safe disposal at an appropriately authorized wastewater treatment facility.

The impact on soils, geology and hydrogeology associated with the construction and operational phases of the proposed development has been determined to be imperceptible with the adoption of the mitigation measures proposed.

The proposed development will not have any significant cumulative or interacting impact on Soils, Geology or Hydrogeology the adoption of the proposed mitigation measures.





10. SURFACE WATER AND HYDROLOGY

10.1 Introduction

This chapter has been prepared to examine the potential effects of the proposed development on the hydrology in the local environment.

10.2 Baseline Environment

The proposed development is located within the Athboy Groundwater Body (GWB).

The aquifer type within the Athboy GWB is mostly (ca. 97%) classified as LI - Locally important bedrock aquifer which is moderately productive only in local zones. There are small amounts of PI - Poor aquifer, generally unproductive except for local zones (ca. 1.2%) and Lm - Locally important aquifer, generally moderately productive (ca. 2%) in the GWB.

The Groundwater Vulnerability is classified by the GSI as 'Moderate' at the proposed development site due to the presence of low permeability deposits (peat). GSI mapping indicates a total thickness of overburden of 5 to 10 metres (GSI, 2021).

The site of the proposed development is situated within the Boyne waterbody catchment (Catchment ID - 07_11). It encompasses 66% of Co. Meath with small areas of Co. Cavan and Co. Louth to the north, Co. Westmeath to the west, Co. Offaly and Co. Kildare to the south. The total catchment area is estimated at 2,693 km² with a main channel length of 113km.

The proposed development site is within the Yellow River sub-catchment.

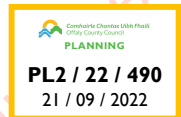
The Yellow River drains an estimated catchment area of 44.5 km² in Co. Offaly to the west of Edenderry which includes Rhode and Castlejordan. This catchment includes the area drained by the Yellow River and all streams entering between its confluence with the River Boyne approximately 4.6 km north-west of Edenderry town. The Yellow River / Boyne confluence delineates the county boundaries between Offaly, Meath and Kildare.

The WFD risk status of the Yellow River waterbody is "At Risk". The water quality is Poor due to less than Good biological status and elevated phosphate and ammonia. Peat extraction significant impacts water quality throughout this subcatchment. In addition, urban wastewater treatment and urban diffuse pollution is likely to be also impacting Yellow (Castlejordan) sub-catchment.

10.3 Impact Assessment

Construction phase activities such including demolition and site clearance, earthworks and excavations and temporary material stockpiling have the potential to affect hydrology and surface water quality

Operational phase activities, such as waste handling and storage, and diesel fuel storage on-site, also have the potential to affect hydrology and surface water quality.





The following key mitigation measures to protect the receiving soils, geology and hydrogeology environment will be implemented as part of the proposed development:

- 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.
- The construction works will be designed, overseen and checked by geotechnical and civil engineers, suitably qualified and experienced in excavation and earthworks design and construction methodologies.
- A Construction Environmental Management Plan (CEMP) has been prepared for the proposed development and is included in Appendix 4.3 of Volume 3 of this EIAR. Measures for the protection of soils, geology and hydrogeology are defined in this CEMP.
- A comprehensive set of sediment control measures will be implemented during construction to prevent the entrainment of sediment in surface water and the run-off of this surface water to the drainage channel to the south of the site. Siltation of surface waters will impact receiving surface water quality.
- A comprehensive set of cement control measures will be implemented during construction to prevent the entrainment of cement in surface water and the run-off of this surface water to the drainage channel to the south of the site. Cement is highly alkaline and may negatively impact receiving surface water quality.
- A comprehensive set of mitigation measures will be implemented during outfall construction works to prevent these works impacting the drainage channel to the south of the site. Measures such as the use of silt fence and drip trays will serve to protect the drainage channel during these near and in-stream works.
- Oil spill protection measures and emergency spill response procedures will be implemented during the construction and operational phases of the proposed development.
- Most of the waste handling, storage and processing will take place indoors under cover. A relatively small quantity of wastes will be stored in external waste storage bays; however these will drain to an appropriate collection tank. This foul water be dispatched off-site for proper and safe disposal at an appropriately authorized wastewater treatment facility.

The residual significance of the effects of the proposed development on the receiving surface water environment, including the receiving surface water drainage channel, and the downstream Yellow River and River Boyne, will be negligible taking account of mitigation measures.

The proposed development will not have any significant cumulative or interacting impact on Hydrology and Surface Water with the adoption of the proposed mitigation measures.



11. AIR QUALITY AND CLIMATE

11.1 Introduction

AWN Consulting Ltd were commissioned by Fehily Timoney to carry out an air quality, climate and odour emissions impact assessment from the proposed Development of a Materials Recovery Facility at Derryarkin, Rhode, Co. Offaly.

The assessment has been conducted in the context of current relevant standards and guidance and identifies any requirements or possibilities for mitigation. The modelling study includes a determination of whether the odour emissions from the site, will lead to ambient concentrations which are in compliance with the criterion of 1.5 OU_E/m³ as a 98th percentile of the hourly average concentrations and to identify the location and maximum of the worst-case ground level odour concentrations. The potential for construction phase impacts with respect to dust nuisance, health and ecology impacts have also been assessed. In addition, the impact of the construction and operational phase vehicle movements associated with the development has been assessed with respect to odour, air quality and climate impacts.

11.2 Receiving Environment / Potential Effects

In terms of the existing air quality environment, baseline data and data available from similar environments indicates that levels of nitrogen dioxide, carbon monoxide, particulate matter less than 10 microns and also less than 2.5 microns and benzene are well below the National and European Union (EU) ambient air quality standards.

Embodied Carbon

The construction phase of the proposed development will result in a number of GHG emissions from various sources. Embodied carbon is carbon dioxide emitted during the manufacture, transport and construction of building materials, together with end-of-life emissions. The total construction phase embodied emissions totals 1,437 tonnes CO₂e, this is 0.004% of Ireland's 2030 GHG emission target. The predicted impact to climate during the construction phase is temporary and negative but, overall, not significant.

Construction Dust

There are no sensitive human or ecological receptors within the study area with respect to construction phase dust impacts. In order to maintain good practices, some high-level dust mitigation measures are recommended to be put in place during the construction phase in accordance with the low-level risk designation from IAQM (IAQM 2016).

Traffic Modelling

The potential impact due to construction and operational traffic is assessed with respect to the potential for an air quality impact on nearby (within 200 m) sensitive receptors (i.e. residential properties, schools, hospitals, sensitive ecology) or regional climate impact by an 'affected' road link as per UK DMRB guidance (UK Highways Agency, 2019a and UK Highways Agency 2019b) guidance. No likely significant effects due to construction or operational traffic.



The greatest potential effect on air quality during the construction phase is from construction dust emissions, particulate matter less than 10 microns emissions, particulate matter less than 2.5 microns emissions and the potential for nuisance dust.

Operational Power Demand

The operational phase power demand will be 354MWh annually, 29% of which can be generated by the onsite solar panels. Using the provisional 2020 carbon intensity this will result in 74 Tonnes CO₂ annually however this will reduce as the renewables percentage on the national grid is increased in line with the 2030 target of up to 80% renewables on the national grid as per the 2021 Climate Action Plan.

In addition to operational electricity, there is an operational demand for 65,520 litres of diesel annually. The 2019 Report on Diesel and Alternative-Fuel Bus trials (DTTS 2019) 1 MJ of diesel emits 73.3 g/CO₂. Each MJ of Diesel is equal to 0.0278 litres. This results in emissions of 0.134 Tonnes CO₂ annually.

However, the proposed development has the potential to have a residual benefit with respect to climate by diverting waste from landfill and therefore reducing the wastes embodied carbon.

Odour Dispersion Modelling

An odour dispersion modelling was carried out using the United States Environmental Protection Agency's regulatory model AERMOD to assess the additional effect of the operational phase of the proposed development.

Details of the 98thile of 1-hour mean odour concentrations at the worst-case off-site location are given over an historical five-year period ranging from 2016 to 2020 based on the USEPA approved AERMOD model (version 21112). The worst-case scenario for the 98thile of 1-hour concentrations occurs in 2017 where the maximum off-site concentrations is less than 1% of the guideline value at the worst-case receptor

11.3 Mitigation Measures

Mitigation measures in relation to traffic-derived pollutants have focused on improvements in both engine technology and fuel quality with vehicles over recent years significantly cleaner than those prior to this period.

To minimise dust emissions during construction, a series of mitigation measures have been prepared in the form of a Dust Minimisation Plan. When the dust minimisation measures set out in the Plan are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors.

11.4 Conclusion

The impact on odour, air quality and climate because of the proposed development is not significant and thus no residual impact is anticipated. In accordance with the EPA Guidelines (EPA 2022) the likely effects are considered overall Not Significant and Long-Term. The proposed development will not have any significant cumulative or interacting impact on Air and Climate as such.



12. NOISE AND VIBRATION

12.1 Introduction

This chapter has been prepared to examine the potential significant effects of the proposed development on noise in the local environment, referred to in this chapter as the study area.

12.2 Baseline Environment

The study area includes all noise sensitive locations within 1km of the site boundary as this includes the nearest residential dwellings to the proposed development. There are four residential noise sensitive locations within 1km of the site boundary. The nearest noise sensitive receptor is a one-off dwelling situated ca. 755 metres to the south of the proposed site.

Other one-off dwellings are located ca. 760 metres to the south west of the site and 770 metres to the south of the site and ca. 890 metres to the south west of the site. There are no other sensitive receptors within 1 km of the proposed development site.

An attended noise survey was undertaken during the daytime on the 30th June 2021 and during the evening and night-time periods on the 24th to 25th August 2021, at two noise monitoring locations to the south west and south of proposed site to obtain a detailed representation of the ambient and background noise levels at these NSL's in the study area.

12.3 Impact Assessment

Construction noise levels have been predicted at the nearest noise sensitive locations to the proposed site using data from *BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1 Noise*. This standard sets out sound power levels and L_{Aeq} noise levels for plant items normally employed on construction sites, which enables construction noise from the works to be predicted.

For this assessment it has been assumed that for each of the main activities, all plant will operate simultaneously.

If all of the construction activities were to occur simultaneously the total cumulative noise is predicted to be 55.6 dB at the nearest noise sensitive location. This is within a 65dB L_{Aeq} , 1hr noise limit which is set for construction activities. Construction phase activities are predicted a **temporary, slight, adverse impact** on the surrounding noise environment. Construction phase activities will not exceed relevant Construction Noise limits and will not have any significant adverse impact on the receiving noise environment.

The main activities during the operation of the proposed development are waste acceptance, processing, storage and onward transfer. A detailed description of these activities is provided in Chapter 4 Existing and Proposed Development of this EIAR.



A summary of the main activities during Phase 2 of the proposed development are shown below:

- The acceptance, bulk loading and onward transfer of DMR;
- The acceptance, shredding and onward transfer of timber waste;
- The acceptance, processing and onward transfer of C&D / C&I skip wastes;
- The acceptance, processing / pre-treatment, and onward transfer of MSW.

Prediction modelling has been undertaken to assess the impact of development noise on the baseline noise environment. This assessment considered the facility operating at its maximum capacity (i.e. Phase 2 operations). Noise was predicted at the four surrounding noise sensitive locations (NSL's), as detailed in the Baseline Environment section above.

Predicted noise will increase noise levels experienced during the day-time at NSL's, however the impact of this increase in noise levels will be **Slight** given that the specific noise from the site experienced at NSL's is predicted to be significantly below the EPA prescribed day-time noise limit value at NSL's of 55 dB L_{Aeq} .

Predicted noise will increase noise levels experienced during the evening at NSL's, however the impact of this increase in noise levels will be **Slight** given that the specific noise from the site experienced at NSL's is predicted to be significantly below the EPA prescribed evening noise limit value at NSL's of 50 dB L_{Aeq} .

Predicted noise will increase noise levels experienced during night-time at NSL's, however the impact of this increase in noise levels will be **Slight** given that the specific noise from the site experienced at NSL's is predicted to be significantly below the EPA prescribed night-time noise limit value at NSL's of 45 dB L_{Aeq} .

The proposed development will not have any significant cumulative or interacting impact on Noise with the adoption of the proposed mitigation measures.

Noise emanating from existing Kilmurray Quarry and Skeagh Farms Piggery operations in the vicinity of the site has been considered when carrying out baseline monitoring as part of this assessment.

The cumulative noise from an adjacent proposed Yellow River Windfarm and the proposed development site have been assessed. The windfarm comprises 29 No. turbines and was granted permission in 2014. The site is due to be operational in 2023, with construction commencing in late 2022. The cumulative effect of proposed development noise in combination with wind farm noise is predicted to be slight during day, evening and night-time given that cumulative noise levels will be significantly below EPA day, evening and night-time noise limits at the nearest relevant sensitive receptor.



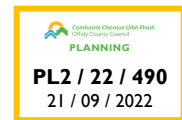
13. TRAFFIC AND TRANSPORTATION

13.1 Introduction

Chapter 13 '*Traffic and Transportation*' is a Traffic Impact Assessment prepared by Trafficwise Ltd. and provides details of the traffic characteristics of the existing and permitted local developments and the proposed development at Derryarkin, Rhode, Co. Offaly and provides a comprehensive review of the potential significant traffic effects of the proposed development. Chapter 13 sets out the existing and baseline traffic environments and forecasts travel demand characteristics of the proposed development and provides an assessment of the existing, baseline and forecast impact on the receiving environment and assesses the ability of the transportation network to accommodate the traffic arising both directly and indirectly.

The scope for the traffic assessment is informed by consultation with Offaly County Council Roads and Transportation Section and Transport Infrastructure Ireland. The approach to the study accords with policy and guidance both at a national and local level. The adopted methodology accords with current best practices and guidance as published by Transport Infrastructure Ireland and this is the primary reference for the assessment of the magnitude and significance of the forecast traffic impact of the proposed development on the receiving transport network.

13.2 Baseline Environment



The proposed development site is located on the southern side of the R400 Regional Road and is provided with direct vehicular access to a private access road which in turn connects to R400 at a priority junction with Local Road L10091 approximately 4km southeast of M6 Junction 3 (Rochfortbridge). From R400 the proposed development site is located approximately 2.47km along the private access road that is signed for '*Kilmurray Sand & Gravel*' and '*BD Flood Readymix*'. All traffic generated by the proposed development during both the construction and operational phases of the site will be accommodated by the private access road and R400 junction.

13.3 Impact Assessment

It is proposed that development generated HGV will use the R400 and extended regional and national road network except in the case of potential local refuse collection or skip collection. The haul routes and volume of development traffic using them is based upon the current commercial activities of the Applicant and the macro picture of haul route operation is considered representative. The 4km section of Regional Road R400 between the site and M6 will carry more than half of all materials imported and practically all exported material. Road Safety Authority collision records suggest that no significant clustering of collisions and no significant trends in the type of traffic collisions and there are no location specific adverse road safety performance issues of direct relevance to the proposed development access or haul routes.

Chapter 13 considers the proposed development receiving 90,000 tonnes of materials per annum in all scenarios. The development is forecast to generate a daily volume of 43-63 smaller (3-12t) HGV importing materials and 14 larger (15-25t) HGV exporting. The higher values of traffic generation are used in the road network capacity assessments. The maximum number of employees on site is forecast to be 24 persons.



The road network assessments examine cumulative effects and include for specific local developments other than the proposed development including those already in operation or granted planning permission but yet to be implemented. Other future development (yet to be planned) that may give rise to the generation of new traffic on the receiving roads network is included for by the application of TII published growth rates for National Roads to all traffic on all routes within the study area.

The forecast increase in total traffic flows on the link roads within the study scope are below 10% and thus sub-threshold in all cases. The forecast increase in total traffic flows on the immediate receiving environment of Regional Road R400 is generally 2% save for the link road section between the private access road serving the site and M6 Junction 3 which is shown as likely to experience a daily increase in traffic flow in the order of 6%.

Regional Road R400 interchange with M6 Junction 3 is not heavily trafficked and from observation alone can be seen to operate well within capacity. The recorded network traffic flows show an uncongested free flowing road network environment. The forecast peak hour traffic generation of the proposed development results in a sub-threshold incremental increase in traffic flows and it follows that the proposed development will not give rise to capacity problems at M6 Junction 3 or junctions on R400. The peak hour volume of traffic throughput at other local junctions is not significant. The forecast volume of traffic generation is not such as to be of concern with respect to capacity and this is confirmed by the detailed traffic modelling of definitive scenarios both with and without the proposed development.

The results of the detailed modelling analyses serve to confirm that the existing motorway interchange at M6 Junction 3 has sufficient capacity to accommodate the traffic arising from both permitted and proposed development. Considering forecast network traffic growth and the development of both permitted and proposed developments the existing junction is shown to operate with the optimum level of service and with considerable residual capacity in both the year of opening and future assessment years. Comparing the results of the junction capacity models for the various 'do-nothing' and 'do-something' scenarios demonstrates that the impact of the proposed development is not significant.

Prior to the operational phase, construction traffic will be generated by the proposed development. All concrete and stone input materials will be sourced from the adjoining Kilmurray quarry site. All inert demolition related waste material generated during construction will be reutilized on-site as fill or removed from the site and transported to the adjacent Kilmurray Construction and Demolition (C&D) / Soil Recovery Facility so none of this construction traffic needs to use the public road. The primary generators of traffic on the public road network during construction will be construction staff and the delivery of construction materials. Based on similar projects it is estimated traffic impact on network capacity during construction will be a fraction of that during the operational phase and thus not significant.

The potential significant effects of the proposed development are assessed having taken account of mitigation measures to reduce or eliminate any residual impacts on the surrounding and receiving transport network. The assessments provided in Chapter 13 examine and confirm that the traffic generated by the proposed development does not have the potential to give rise to a premature or unacceptable reduction in the level of service available to road users on national or regional roads or their junctions in the vicinity of the proposed development. Analyses confirm that the proposed development can proceed complementary to safeguarding the capacity, safety and operational efficiency of the receiving national and regional road network.



As part of the application permitted under Planning Reg. Ref PL2/21/247 (Kilmurray Precast Concrete Ltd.) and specifically in response to Item 1 of the Request for Further Information dated 21-Jun-2021 the applicant proposed to undertake various improvement works to the existing junction of the private access road with R400 (Junction 2 R400/L10091). The grant of a permission for that development does not guarantee that a developer will act on that permission, and it follows therefore that the Planning Authority cannot rely upon the permission alone to ensure the implementation of the proposed junction improvement works. Under Planning Reg. Ref PL2/21/247 Offaly County Council determined that the proposed junction improvement works are required to accommodate that development. From pre-planning discussions with Offaly County Council it is understood that, for the same reasons the current proposed development warrants the same level of improvement. For the avoidance of doubt the current proposal includes the same proposed junction improvements.

The proposed development will not have any significant cumulative or interacting impact on Traffic and Transport having regard to the traffic forecasting carried out, which considered other projects in the area which may have an in-combination effect with the proposed development.

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14. CULTURAL HERITAGE

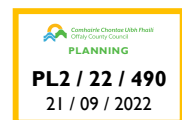
14.1 Introduction

This chapter has been prepared to examine the potential significant effects of the proposed development of a new materials recovery facility at Derryarkin, Co. Offaly, on the archaeological, architectural and cultural heritage resource in the local environments. The potential significant effects of the proposed developments are assessed, having taken account of mitigation measures to reduce or eliminate any residual effects on the surrounding archaeological, architectural and cultural heritage.

14.2 Baseline Environment

The site of the proposed development is a disused farm comprising dilapidated farm buildings, underground tanks, concrete yards and grassy areas. The proposed development will see the construction of new buildings, services, and associated landscaping and site works, at the location of the disused farm complex.

14.3 Impact Assessment



As a result of carrying out this assessment, the following potential archaeological, architectural and cultural heritage direct, indirect, construction, operational, decommissioning, cumulative, interactive and residual effects have been assessed.

If the proposed developments were not to proceed, there would be no effect on the archaeological, architectural or cultural heritage resource. This assessment has identified that Construction Phase works pose some risk to unknown (subterranean) archaeology. The construction work for this development will involve the mechanical deconstruction of existing buildings, and the excavation of existing ground materials down to and through geologically deposited strata. This Construction Phase work poses an imperceptible risk of impacting on subterranean archaeology. The risk of this impact occurring is considered to be low.

It is considered that the proposed development will not cause any operational effects on the archaeological and architectural resource.

There will be no effects on the archaeological, architectural or cultural heritage resource during the decommissioning phase of the projects.

Due to the absence of additional effects, either as a result of proposed, present or foreseeable future development in the area, and the character of the existing environment, it is considered there will be no cumulative effects on the archaeological, architectural or cultural heritage resource.

It is considered there will be no interactive effects on the archaeological, architectural or cultural heritage resource.

It is recommended that archaeological monitoring of all groundworks associated with the proposed development be carried out. Monitoring will be carried out under licence to the Department of Housing, Local Government and Heritage and the National Museum of Ireland.



Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring. There are no mitigation measures required to offset the reversible imperceptible operational phase visual effect of the proposed development on the archaeological and architectural resource.

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15. LANDSCAPE AND VISUAL IMPACTS

15.1 Introduction

A Landscape and Visual Impact Assessment (LVIA) of a proposed Materials Recovery Facility at a site in Derryarkin, Croghan, Co. Offaly was prepared. The LVIA described the landscape context of the proposed development and assessed the likely landscape and visual impacts of the proposed development on the receiving environment. Although closely linked, landscape and visual impacts were assessed separately.

15.2 Baseline Environment

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape and visual context brought about by the development will be assessed. The baseline survey found that the landscape of the study area is, for the most part, relatively flat and/or gently undulating, with much of the surrounding landscape comprising of ostensibly flat peatbogs. The predominant land use within the study area is that of agricultural farmland, followed by large cutaway peat bogs, many of which are in advanced state of regeneration. In terms of the immediate surrounds of the site, this is an area of low landscape value, owing to highly mechanised and altered land conditions and/or lack of integrity. Access to the site is via dead-end private access road from the R400 regional road (which is located approximately 2.2 km east of the site), while there are no residences along this private access road, nor within 700m of the site. The site is made up of dilapidated, large and mostly obsolete agricultural buildings and structures. In terms of planning policy context, within the current Offaly country development plan, the site is located in a 'Low Sensitivity Area.'

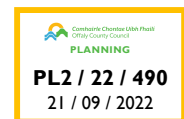
Landscape Impacts

15.3 Impact Assessment

In terms of landscape value and sensitivity, the study area was found to be a robust and ever-evolving working landscape with sections that are intensively managed. A degraded, post-industrial character is evident in the immediate surrounds of the site, where quarrying is located to the east and west of the site, with a large piggery to its immediate north. In terms of the site, it is characterised by an agri-industrial tone of decay, being made up of dilapidated, large and mostly obsolete agricultural buildings and structures of no architectural or heritage value, with wider margins of the site regenerating in scrub vegetation. For these reasons and several other, the sensitivity of the receiving landscape was Low.

In terms of construction phase landscape impacts, there will be intense construction-related activity within and around this area, including approach roads. These impacts are likely to last for approx. 12 months duration, and will include, among other activities, the demolition and removal of the existing agri-industrial buildings and structures within the site and the gradual emergence of the proposed buildings/structures, and associated works. On balance, it was deemed that the overall significance of construction stage landscape impacts was considered to be Slight.

In terms of operational phase landscape impacts, the proposed development will represent the replacement of one set of relatively large agri-industrial buildings and structures with a comparably scaled set of industrial buildings and structures. For such reasons, the overall significance of operational stage landscape impacts was considered to be Slight-imperceptible.





Lastly, owing to similar factors that influenced the operational stage landscape impacts, the potential for cumulative landscape impacts arising as a result of the proposed development in combination with existing development in the study area will not be significant.

As there are no residences within approx. 700m of the site and no public receptors within 1.5km, the most sizeable visual impact during the construction phase is likely to arise from HGVs transporting materials to and from this area. Thus, visual impacts arising from the proposed development during the construction phase are highly unlikely to be significant.

In terms of operational/residual phase visual impacts, six viewpoint location were selected from a range of distances, angles and contexts from within the public sphere of the study area (i.e., not private property), in accordance with best LVIA practise. Owing to the location of the site, this meant that there were no public receptors within 1.5km of the site. Thus, the resulting visual impact was accordingly affected by the well selected, well screened nature of this relatively remote and inaccessible (to the wider public) site. In terms of, visual sensitivity of these six selected viewpoints, these ranged from ‘Low,’ in the case of a busy motorway corridor, to ‘High-medium,’ in the case of the summit of Croghan Hill.

In terms of the resulting visual impacts, there was a particularly low significance of visual impact arising from the six viewpoints: that of an ‘imperceptible’ impact upon the inherent visual amenity of the scene, in all six instances. This was a combination of the relatively modest visual sensitivity of most receptors, combined with the particularly low level of magnitude of visual impact that chiefly derived from the considerable distance the site is to all public receptors. Indeed, this is a strikingly low degree of likely visibility for any scheme, let alone one of this nature, and is an apt reflection of the well-considered siting, design and location of the proposed development.

15.4 Conclusion

Overall, it was considered that the proposed development is an appropriate contribution to the receiving environment, and it will not result in any significant landscape or visual impacts. Indeed, the visual impacts likely to be generated from the proposed development are all at the lowest possible end of the spectrum. The proposed development will not have any significant cumulative or interacting impact on landscape character or visual amenity as such.



16. INTER-RELATIONSHIPS AND INTERACTIONS

This chapter has been developed to identify potential interrelationships and interactions between environmental aspects addressed in this EIAR i.e. interactions between one environmental aspect and another environmental aspect which can result in an environmental impact. The previous chapters have described the potential impact of the proposed development under a variety of different topic headings. The purpose of this Chapter is to take a more holistic view of the inter-relations and interactions between different aspects of the project and topics discussed in other chapters. This ensures that there is adequate coverage in this EIAR of the potential for the development to cause overall effects and cumulative impacts.

A summary of potentially significant interactions is presented below:

- Potential, accidental, aqueous emissions from the proposed development (e.g. foul water discharges, release of fuels or oils) may negatively impact receiving grounds and groundwaters. This may affect the quality status of affected ground and groundwater which in turn can affect the health of humans who source their drinking water from potentially affected groundwaters.
- Potential, accidental, aqueous emissions from the proposed development (e.g. foul water discharges, release of fuels or oils) may negatively impact the receiving surface water environment. Such impacts may negatively affect the quality status of the receiving waters downstream, which in turn may negatively impact upon the recreation and amenity value attained by humans who downstream surface waters including bathers, anglers and water sports enthusiasts.
- Dust, odour and climate impacts associated with the construction and operational phases of the proposed development may have a negative impact on human receptors.
- Noise generation during the construction and operational phases of the proposed development has the potential to negatively impact upon sensitive human receptors.
- The proposed development will generate traffic during both the construction and operational phases of the proposed development. Increased traffic movements have the potential to; impact on the structural integrity of the road, cause increased congestion, present increased health and safety risks (associated with road traffic accidents) and generate excessive noise at sensitive human receptors.
- Groundworks undertaken during the construction phase of the proposed development have the potential to have negative effect on any previously unrecorded archaeological remains that may exist within the development site.
- Environmental pathways exist between land, groundwater and surface water. Pollution affecting one medium at or around the proposed development site has the potential to disperse or migrate to another (i.e. polluting material can be discharge from a site to lands before making its way into groundwater and then surface water, and vice versa. In turn, such pollution may impact upon Population and Human Health and/or Biodiversity elements.
- HGV and plant movements along the road to the south (between the site and the drainage ditch) could allow the migration of silt-laden run-off into adjacent watercourses via surface water pathways (e.g. wheel rutting), which in turn may have a negative impact on aquatic ecology.



In summary, it has been determined that there will be no significant, negative, residual environmental impacts associated with impact interactions as a result of the proposed development with the adoption of the various mitigation measures proposed. The reader is asked to refer to Chapter 17 – Schedule of Commitments, of Volume 2 of this EIAR which presents proposed mitigation measures in full.

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