DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

EIAR FOR THE DEVELOPMENT OF A HEALTHCARE WASTE MANAGEMENT FACILITY AT BLARNEY BUSINESS PARK

Volume 2- Main Body of the EIAR
Chapter 1 - Introduction

Prepared for:

SRCL Ireland Ltd (T/A Stericycle)

Stericycle®
We protect what matters.

Date: **November 2025**

Document No:

P23268-FT-EGN-XX-RP-EN-0001

Unit 3/4, Northwood House, Northwood Crescent,
Northwood, Dublin, D09 X899, Ireland

T: +353 1 658 3500 | E: info@ftco.ie

CORK | DUBLIN | CARLOW

www.fehilytimoney.ie

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

1.1 Introduction

SRCL Ireland Ltd (trading as and hereinafter referred to as 'Stericycle' or the 'Applicant') propose developing a Healthcare Waste Treatment and Transfer Facility at an existing vacant light-industrial/warehouse building located at Block 8003, Blarney Business Park, Shean Upper, Blarney, County Cork, T23 EYH5.

Following consultations between the Applicant and An Bord Pleanála (now named and hereinafter referred to as 'An Coimisiún Pleanála' or the 'Commission' or 'ACP') under Section 37B of the Planning and Development Act, 2000 as amended, the Commission served notice under Section 37B(4)(a) that it is of the opinion that the proposed development falls within the scope of paragraphs 37A(2)(a) and (b) of the Act (See Case Reference: ABP-321861-25). Accordingly, the Commission determined that the proposed development is 'Strategic Infrastructure' within the meaning of Section 37A of the Planning and Development Act, 2000, as amended.

The planning application for the proposed development is being made to An Coimisiún Pleanála.

Fehily Timoney & Company (FT) has prepared this Environmental Impact Assessment Report (EIAR) on behalf of the Applicant.

This purpose of this chapter of the EIAR is to introduce and provide information on the following:

- The background to the proposed development;
- the Applicant
- the development site and surrounding context;
- the proposed development;
- an overview of environmental assessment required for the proposed development;
- the approach and methodology for completing the EIAR;
- the approach to assessing cumulative effects on the environment under the EIAR;
- contributors to the EIAR and their expertise;
- difficulties encountered during the process of completing the EIAR;
- how the EIAR can be accessed and viewed;
- the glossary of technical terms used in the EIAR; and,
- a list of abbreviations used in the EIAR.

1.1.1 Statement of Authority

This chapter was primarily written by Richard Deeney of Fehily Timoney and Company (FT). Richard is Principal Environmental Scientist who works in the Circular Economy and Environment group at Fehily Timoney at FT. He has ca. 13 years of experience. He is vastly experienced in the coordination and completion of planning applications; EIA, including EIA Screening, EIA Scoping and the production of Environmental Impact Assessment Reports (EIARs); Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) of plans and programmes; IE/IPC/Waste Licensing and Compliance; and Sustainability and Climate Action consultancy. He leads an Environmental Science team that delivers projects in these areas. He is an expert project manager who has led and successfully delivered a wide range of strategic and complex projects. He has expertise in assessing the effects of plans and projects on a wide breadth of environmental topics.

1.2 The Applicant

Stericycle provides essential healthcare waste management solutions in Ireland and internationally and are a Subsidiary of WM Inc. WM are a publicly traded US-headquartered market leader in waste management. Stericycle have a strong track record supporting the public and private sector in providing sustainable, resilient healthcare waste management services.

Stericycle holds a national contract with the Health Services Executive (HSE) to manage all the healthcare waste generated by HSE providers across the country and has successfully provided these services from two sites in the Dublin area for over twenty years.

Stericycle carries out all its waste management activities under a Quality Management Systems (certified to ISO 9001: 2015), an Environmental Management Systems (certified to ISO 14001: 2015) and Occupational Health and Safety Management Systems (ISO 45011: 2018).

1.3 The Development Site and its Surrounding Context

The proposed development site is located at Blarney Business Park in the north-west of the Cork City area (ca. 7.2 km north-west of Cork City Centre). It is directly east of the settlement of Blarney.

Blarney Business Park is an established business park characterised by commercial, light-industrial and industrial land use. Construction of the Business Park commenced in the mid-2000's. In 2018, Blarney Business Park was acquired by the developer JCD Group Ireland and it has been developed significantly since then.

The proposed development site is ca. 1.32 hectares and is located at the centre of the business park. A light-industrial/warehouse building and associated site infrastructure has been constructed on-site.

The site and business park can be accessed directly from the N20 Cork to Limerick Road, which runs to the immediate west of the site. The Cork to Limerick railway line runs directly north of the business park.

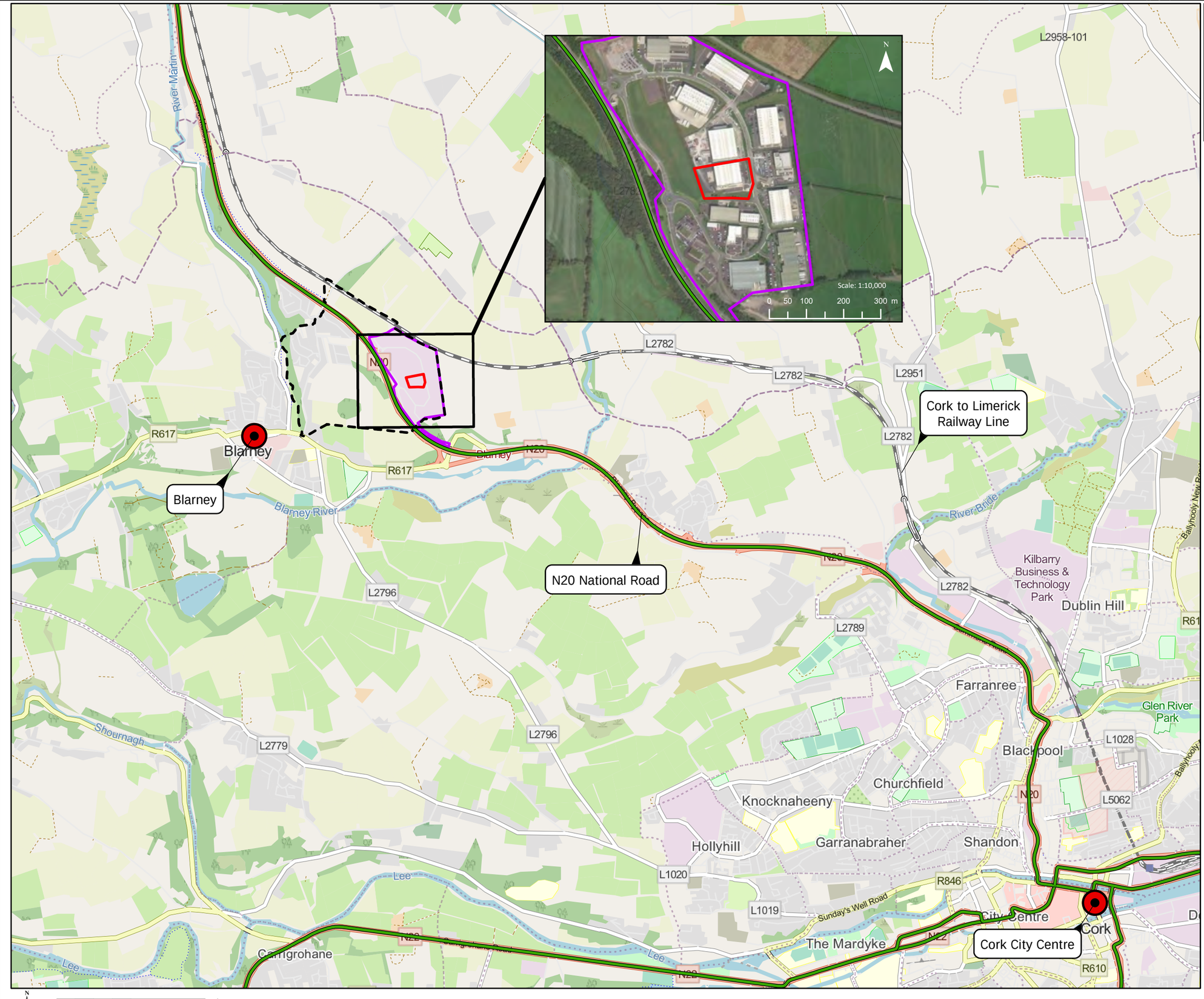
The Shean Upper Stream is situated ca. 230 m south-west of the site. This drains in a southerly direction into the Clogheenmilcon Fen ca. 690 m to the south the site. Clogheenmilcon Sanctuary Walk travers the area of the fen. The fen drains into the Blarney River at a point ca. 930 m to the south-west of the site.

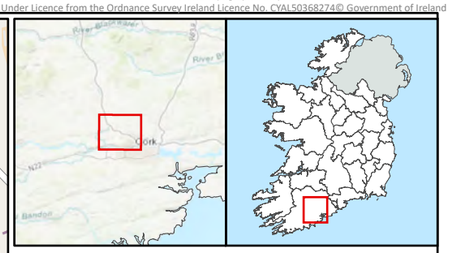
Dispersed rural one-off housing and agricultural land delineated by hedgerow surrounds the business park in all cardinal directions. Areas of forestry are present in the area surrounding the business park, to the west, south-west and south. Ring Wood is situated 415 m to the west of the site.

Residential estates and associated land use that lie within the settlement of Blarney are situated to the north-west, west and south-west of the site. The nearest sensitive human receptors to the site are residential dwellings situated at Aisling Geal 470 m north-west of the site.

A Site Location and Context Map depicting the site and its surrounding context is presented in Figure 1-1.

Path: R:\Map Production\2023\P23-268\Workspaces\P23_268_Fig_1_1_Site_Location_Map_20250516.aprx
Requested By: | Checked By: | Approved By: |





Legend

- Site Boundary
- Blarney Business Park
- Townland Boundary (Shean Upper)
- National Primary Road

TITLE:	Site Location and Context		
PROJECT:	Proposed Healthcare Waste Management Facility Block 8003, Blarney Business Park, Co. Cork		
FIGURE NO:	1.1		
CLIENT:	Stericycle		
SCALE:	1:50,000	**REVISION:**	0
DATE:	16/05/2025	**PAGE SIZE:**	A3

FEHILY TIMONEY
Cork | Dublin | Carlow
www.fehilytimoney.ie

1.4 Site Ownership

The entire area of the development site is owned by Progressive Capital Investments ICAV Sub-Fund 2. The Applicant has entered into a Lease Agreement to occupy and use the site with the site owner. A Letter of Consent for the making of this planning application is provided by the site owner. This Letter of Consent is provided in Appendix 1.1 of Volume 3 of this EIAR.

1.5 The Proposed Development

The proposed development will comprise the installation and operation of Healthcare Waste Treatment and Transfer Facility at the proposed development site. The facility will accept up to 15,000 tonnes of packaged healthcare waste per annum for management and will provide healthcare waste management capacity for the southern and western regions of Ireland. The proposed development constitutes a change of use of the site.

The following additions/alterations to existing infrastructure on-site will be made to facilitate the proposed development:

1. The installation of plant and facilities inside the existing light-industrial/warehouse building on-site to accommodate healthcare waste management operations and associated commercial activities.
2. The installation of a multi-flue stack (1.5 m x 2.0 m) at the existing roof of the building.
3. Modifications to increase the height of 2 x rear station doors from 3.0 m to 4.0 m.

Waste management activities on-site will be undertaken entirely within the existing building on-site.

1.6 Overview of Proposed Waste Management Activities

The following waste management activities will be undertaken at the proposed facility:

- The reception, storage, handling and treatment (using steam disinfection and mechanical shredding) of health care waste;
- the reception, storage, handling and re-packaging of healthcare and hazardous waste;
- the transfer of treated/re-packaged waste off-site; and,
- the automated management of reusable sharps containers.

All waste management operations will be carried out inside the existing building on-site. There will be no waste storage, handling or processing in the external yard area.

1.7 Design of the Proposed Development

The proposed waste facility development has been designed and will be operated in accordance with the following environmental protection standards relevant to waste management facilities:

- European Commission – Reference Document on Best Available Techniques for Energy Efficiency (BREF Document), 2009;
- EPA – BAT Guidance Note on Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery – December 2011;
- European Commission - Best Available Techniques (BAT) Reference Document for Waste Treatment (BREF Document), 2018;
- Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council, 2018;
- European Commission - JRC Reference Report on Monitoring of Emissions to Air and Water from IED Installations, 2018.

These documents prescribe techniques to be applied at waste facilities to achieve high levels of environmental protection.

1.8 Regulatory Control of the Proposed Development

Waste management activities associated with the proposed development will be regulated under an Industrial Emissions (IE) Licence granted by the Environmental Protection Agency (EPA).

This authorisation 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 authorisation:

- control of emissions to air and sewer;[1]
- control of noise emissions;
- monitoring of emissions and the receiving environment;
- resource use and energy efficiency;
- waste acceptance and quarantine;
- waste storage, handling and processing operations;
- waste records;
- the condition of the site;
- changes to the operations and the physical fabric of the facility;
- facility management including the requirement for an environmental management system (EMS);
- environmental management techniques;
- infrastructure management and maintenance;
- accident prevention and emergency response including fire water retention; and,
- operational controls.

[1] The EPA are required to obtain consent from Uisce Eireann under Section 99E of the Environmental Protection Agency Act 1992 (as amended) before granting an IE licence that allows for a discharge of emissions to sewer managed by Uisce Eireann.

1.9 Environmental Impact Assessment

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.'

With respect to waste-related projects, the EIA Directive 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, 2000 (as amended)(herein referred to as the 'Act') and the Planning and Development Regulations 2001 (as amended) (herein referred to as 'the 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. The proposed development only involves the acceptance of up to 15,000 tonnes of waste per annum. The proposed development has been determined to be Strategic Infrastructure however, therefore, the planning application is required to be accompanied by an EIAR in accordance with Section 37E(1) of the Act.

Accordingly, this EIAR has been produced and accompanies the planning application for the proposed development, and an EIA for the proposed development will be undertaken by An Coimisiún Pleanála as part of the planning process.

1.10 Appropriate Assessment

Appropriate Assessment (AA) is a process, conducted under Article 6 of the Habitats Directive (92/43/EEC), to evaluate the implications of a plan or project, either alone or in combination with other plans or projects, on European sites considering their conservation objectives.

A project must be evaluated for its implications on European sites before consent can be given for the project. Consent for a project can only be given after it is determined that the project will not adverse effect the integrity of European sites, considering their conservation objectives.

European sites in Ireland comprise Special Areas of Conservation (SACs), which have been designated for habitats and species of importance under the Habitats Directive (92/43/EEC), and Special Protection Areas (SPAs), which have been designated for bird species of importance under the Bird Directive (2009/147/EC).

The provisions of Article 6 of the Habitats Directive (92/43/EEC) do not apply where the proposed plan or project is *'connected with or necessary to the management of the site.'* In this case, the proposed development is not directly connected with or necessary to the management of any European site and as such as assessment of the implications of the project on European sites must be carried out.

Article 6 of the Habitats Directive envisages a two-stage process relating to Appropriate Assessment.

Screening for Appropriate Assessment must be carried out for development projects by the competent authority to determine whether a proposed development, individually or in-combination with other plans or projects, is likely to have a significant effect on the European Sites, in view of the sites' conservation objectives.

Appropriate Assessment must be carried out for a development project where the competent authority determines that a development, individually or in-combination with other plans or projects, is likely to have a significant effect on the above European Sites, in view of the sites' conservation objectives. The purpose of an Appropriate Assessment is to determine whether the development will have adverse effects on the integrity of European sites.

A Report to Inform AA Screening accompanies this planning application. An evaluation of the implications of the proposed development in this instance has been completed and is presented in this report. It has been concluded that the proposed development, individually or in-combination with other plans or projects, is not likely to have a significant effect on the listed European Sites, in view of the sites' conservation objectives.

The Competent Authority (An Coimisiún Pleanála in this case) shall have regard to this report when undertaking Screening for AA for the proposed development. This report shall inform any AA Screening Determination made.

1.11 EIAR Methodology and Structure

1.11.1 Overview

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 development, the alternatives assessed, and the existing and proposed development are described. The introductory sections of each chapter set out the context as to the practical and dynamic process undertaken.

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

- Introduction
- Statement of Authority
- Assessment Methodology
- Baseline Environment
- Potential Impacts
  - 'Do Nothing' Impacts
  - Construction Phase Impacts
  - Operational Phase Impacts
  - Decommissioning Phase Impacts
  - Cumulative Impacts
  - Impact Interactions
  - Summary of Potential Impacts
- Mitigation Measures
  - Mitigation by Design and Best Practice
  - Construction Phase Mitigation
  - Operational Phase Mitigation
  - Decommissioning Phase Mitigation
- Residual Impacts
  - Summary of Residual Impacts
- References

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);
- the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended); and,
- other transposing national legislation, including the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 and the European Union (Planning and Development) (Habitats and Environmental Impact Assessment) Regulations 2022.

This EIAR has been prepared in accordance with guidelines listed hereunder except where specific sectoral guidance was used (e.g. for traffic impact assessment, noise impact assessment etc):

- EPA (2022), Guidelines on the Information to be contained in Environmental Impact Assessment Reports.
- 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, this guidance will be listed in the relevant chapters of the EIAR.

1.11.2 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 development 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 development was carried out to identify impacts thought to be potentially significant, not significant or uncertain. Consultation with the relevant stakeholders 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 development 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, 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 development;

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 development;

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) 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 development, 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 development, 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 development on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the proposed development to climate change, and;
vii. the technologies and the substances used, and;
viii. 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 development), 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 18 of Volume 2 of this EIAR. It includes all the mitigation measures defined in this EIAR.

References

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

1.11.3 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).

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. Description of Existing and Proposed
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 Quality
12. Climate
13. Noise and Vibration
14. Traffic and Transportation
15. Archaeological, Architectural and Cultural Heritage
16. Landscape and Visual Impact

17. Material Assets – Utilities and Waste
18. Inter-relationships and Interactions
19. Schedule of Commitments

1.11.4 Assessment of Significant Effects

The identification and analysis of significant effects in this EIAR have 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.

The general criteria for determining the significance of impacts and the effects are set out in Figure 1-2 taken from the EPA's Guidelines on the Information to be contained in Environmental Impact Assessment Reports. This assessment approach has been adopted for many EIA topics addressed within this EIA. Some EIA topics have been assessed using different topic-specific guidelines, however. These topic-specific guidelines will be defined in the respective EIAR topic chapters.

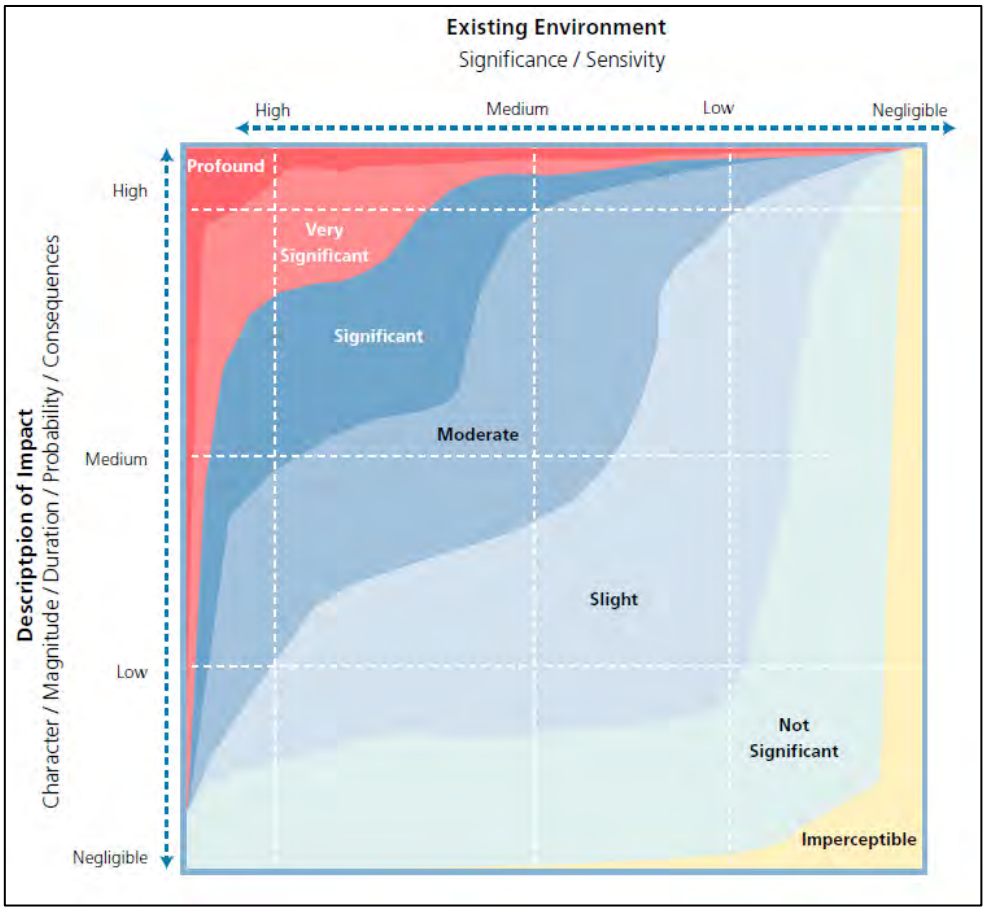


Figure 1-2: Description of Impacts

Definitions of impact (as defined in Table 3.4 of the EPA's Guidelines on the Information to be contained in Environmental Impact Assessment Reports.) are reproduced in the tables below and apply throughout this EIAR unless otherwise stated within a specific chapter.

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.

1.12 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 development located nearby or in the vicinity of the development in question. The potential combined environmental impacts can be accurately assessed in the event of the proposed development 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 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 EIAR 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 EIAR, 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 EIAR, a review of other planned projects within Shean Upper townland and all surrounding townlands over the last 5 years was carried out. Planned projects and principal plans that have the potential to have a cumulative impact in-combination with the proposed development have been identified and are listed in Appendix 1.2, Projects and Plans considered during the Cumulative Assessment, in Volume 3 of this EIAR.

1.13 Contributors to the EIAR

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

FT was retained by the Applicant to undertake the detailed environmental appraisals and prepare the EIAR for the proposed development, as well as preparing a planning application to accompany this EIAR for submission to An Coimisiún Pleanála.

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 Curricula Vitae, 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	Sangamitra Dutta, Project Environmental Scientist, B.Sc., M.Sc., MIEMA. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 2 - Need for the Proposed Development	FT	Sangamitra Dutta, Project Environmental Scientist, B.Sc., M.Sc., MIEMA. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 3 - Alternatives	FT	Sangamitra Dutta, Project Environmental Scientist, B.Sc., M.Sc., MIEMA. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 4 – Existing and Proposed Development	FT	Sangamitra Dutta, Project Environmental Scientist, B.Sc., M.Sc., MIEMA. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 5 – Planning and Policy Context	FT	Sangamitra Dutta, Project Environmental Scientist, B.Sc., M.Sc., MIEMA. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 6 - Scoping and Consultation	FT	Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 7 - Population and Human Health	FT	Eimear Daly, Project Environmental Scientist, B.Sc., M.Sc. John Cullen, Senior Environmental and Acoustic Engineer, B.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 8 - Biodiversity	FT	Donna O' Halloran, Senior Ecologist, B.Sc., M.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.

EIA Topic	Company	Name and Qualifications
Chapter 9 - Soils, Geology and Hydrogeology	FT	Declan Morrissey, Principal Environmental Scientist, B.Sc., M.Sc., MIAH. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 10 - Hydrology and Surface Water Quality	FT	Sangamitra Dutta, Project Environmental Scientist, B.Sc., M.Sc., MIEMA. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 11 - Air Quality	AWN Consulting Ltd./FT	Jovanna Arndt, Principal Air Quality Consultant, B.Sc., PhD. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 12 - Climate	FT	Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 13 - Noise and Vibration	FT	John Cullen, Senior Environmental and Acoustic Engineer, B.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 14 - Traffic and Transportation	Trafficwise/FT	Julian Keenan, Director, B.Eng, MIEI, MCHIT Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 15 - Archaeology, Architectural and Cultural Heritage	FT	Paul Nolan, Senior Project Scientist, B.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 16 - Landscape and Visual Impact	FT	Paul Nolan, Senior Project Scientist, B.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.
Chapter 17 – Material Assets – Utilities and Waste	FT	Paul Nolan, Senior Project Scientist, B.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.

EIA Topic	Company	Name and Qualifications
Chapter 18 – Interactions and Interrelationships	FT	All personnel named above. Interacting impacts compiled and assessed by Eimear Daly, Project Environmental Scientist, B.Sc., M.Sc., John Cullen, Senior Environmental and Acoustic Engineer, B.Sc. and Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIESP, Ass.MIAQM.
Chapter 19 - Schedule of Mitigation	FT	Eimear Daly, Project Environmental Scientist, B.Sc., M.Sc. Richard Deeney, Principal Environmental Scientist, B.Sc., CEnv., MIES, MIEMA, Ass.MIAQM. Bernie Guinan, Director, M.Sc., B.Sc. MCIWM.

1.14 Difficulties Encountered

No difficulties were encountered in undertaking this EIA.

1.15 Viewing of the EIAR

Copies of this EIAR including the Non-Technical Summary, the Appendices and Planning Drawings may be inspected free of charge or purchased by any member of the public during normal office hours at An Coimisiún Pleanála, 64 Marlborough St, Rotunda, Dublin 1, D01 V902.

The planning application and EIAR documentation are also available to review on the following website associated with the SID planning application being made.

- SID Website – www.stericycle-sid.ie

1.16 Glossary

A glossary has been prepared for the EIAR. This can be found in Appendix 1.4. This explains the main, recurring terms used throughout this EIAR. Additional explanation of environmental topic-specific terms can also be found in the chapters comprising this EIAR.

1.17 Abbreviations

A list of abbreviations has been prepared for the EIAR. This can be found in Appendix 1.5. This list presents the main, recurring abbreviations used throughout this EIAR. Additional environmental topic-specific abbreviations can also be found in the chapters comprising this EIAR.

1.18 References

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

FEHILY TIMONEY

DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

www.fehilytimoney.ie