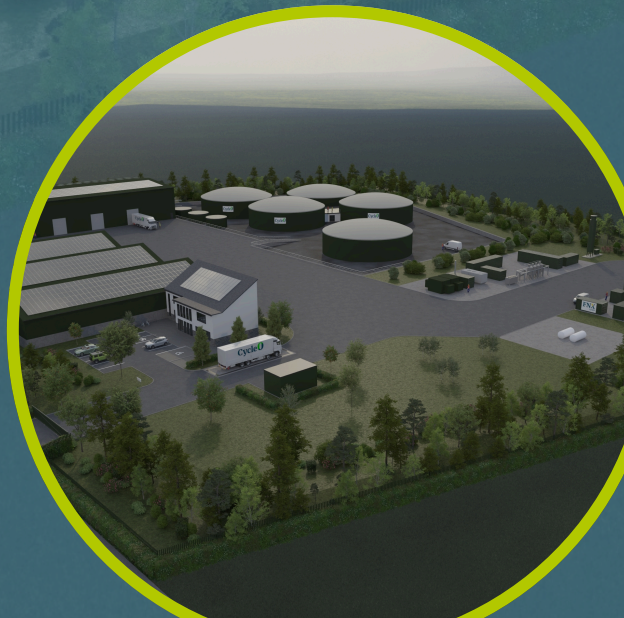
Environmental Impact Assessment Report (EIAR)

Anaerobic Digestion Facility

CLIENT
CycleØ IE Limited



ORS

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1 Introduction

1.1 Introduction

Cycle0(IE) Limited (the Applicant) are pleased to submit this EIAR in support of a planning application for the construction and operation of a Renewable Biogas Facility at a site in Cappanihane, Bruree, Co. Limerick.

The Proposed Development, spanning approximately 5.29 hectares, is designed to process up to 90,000 tonnes annually of locally sourced agricultural manures, slurries, dairy processing residues, and crop-based feedstocks. Its primary objective is to produce grid-quality biomethane (renewable natural gas), which will be transported via a virtual pipeline for injection into the Gas Networks Ireland (GNI) distribution system. This renewable natural gas (RNG) will directly replace conventional natural gas, contributing to the Government's target of generating 5.7 TWh of domestic biomethane annually.

The facility will also produce a nutrient-rich, biobased fertiliser, offering a sustainable alternative to conventional, fossil fuel-derived fertilisers. Additionally, the facility is designed to capture and recover biogenic carbon dioxide (CO_2).

The development will consist of the following:

- Construction of 2 no. primary digesters (with an overall height of c. 9.1m), a pump house (with a gross floor area (GFA) of c. 279.8 sq.m), and 2 no. post digester tanks (with an overall height of c. 9.1m), located in the northeastern section of the site.
- Construction of 2 no. prepits (c. 4.8m in height), a pasteurisation buffer tank (c. 4.8m in height), and a pasteurisation unit (with a maximum height of c. 4.2m), located west of the primary digesters, within the northern section of the site.
- Construction of a digestate storage tank (c. 11.3 in height) located centrally on site, to the south of the primary and post digester tanks.
- Construction of a digestate treatment building and a feedstock reception building (with a height of c. 12m and a GFA of c. 2,797.2 sq.m) with odour abatement system (with a height of c. 11.0m to odour abatement stack), located in the northwestern section of site.
- Construction of combined heat and power (CHP) unit (c. 2.6m in height and c. 5.6m in height to flue, with a GFA of c. 38.53 sq.m), a biogas boiler (c. 2.6m in height and c. 5.6m in height to flue, with a GFA of c. 12.74 sq.m), a backup boiler (c. 2.6m in height), a gas treatment system (c. 4.2m in height), a biomethane compression system (c. 4.2m in height), and a safety flare (c. 11.3m in height), located south of the digestate storage tank, in the south-east section of the site.
- Construction of a CO_2 liquefactor (with an overall height of c. 10.7m to top of storage vessels), a propane tank compound accommodating 2 no. propane tanks (c. 1.6m in height), and an ESB substation (with a GFA of c. 23.5 sq.m and a height of c. 3.4m), located in the south-eastern section of the site.
- Construction of roofed silage clamps (with a GFA of c. 2,424 sq.m and a height of c. 8.7m) and a fuel storage tank (c. 2m in height), located in the western section of the site.
- Construction of a two storey office building (with a GFA of c. 327.4 sq.m and a height of c. 11m) within the western section of the site, adjacent to the site entrance.
- Alterations to the adjacent local road including a new site entrance and access arrangements, provision of a passing bay, boundary setbacks and replacement planting,

and road improvements to allow for improved access and safety.

- Associated and ancillary works including parking (8 no. standard, 3 no. EV and 1 no. accessible parking spaces and bike storage for 10 no. bikes), a new site entrance and gate, a weighbridge, solar PV arrays at roof level, wastewater treatment equipment, bunding and surface treatments, attenuation pond, boundary treatments, lighting, services, lightning protection masts, drainage, landscaping, and all associated and ancillary works.

A detailed description of the Proposed Development is provided in **Chapter 2 – Project Description** of this EIAR.

1.2 The Applicant

Cycle0 (IE) Limited

CycleØ (IE) Limited is an end-to-end biomethane provider delivering innovative solutions to slow the pace of global warming. CycleØ focus on capturing methane from the agri-food, industrial and municipal sectors and upgrading it to biomethane for vehicle use or grid injection. As experts in biomethane, CycleØ develop, build, own and operate plants to the benefit of farmers, the local communities and in support of local decarbonisation targets.

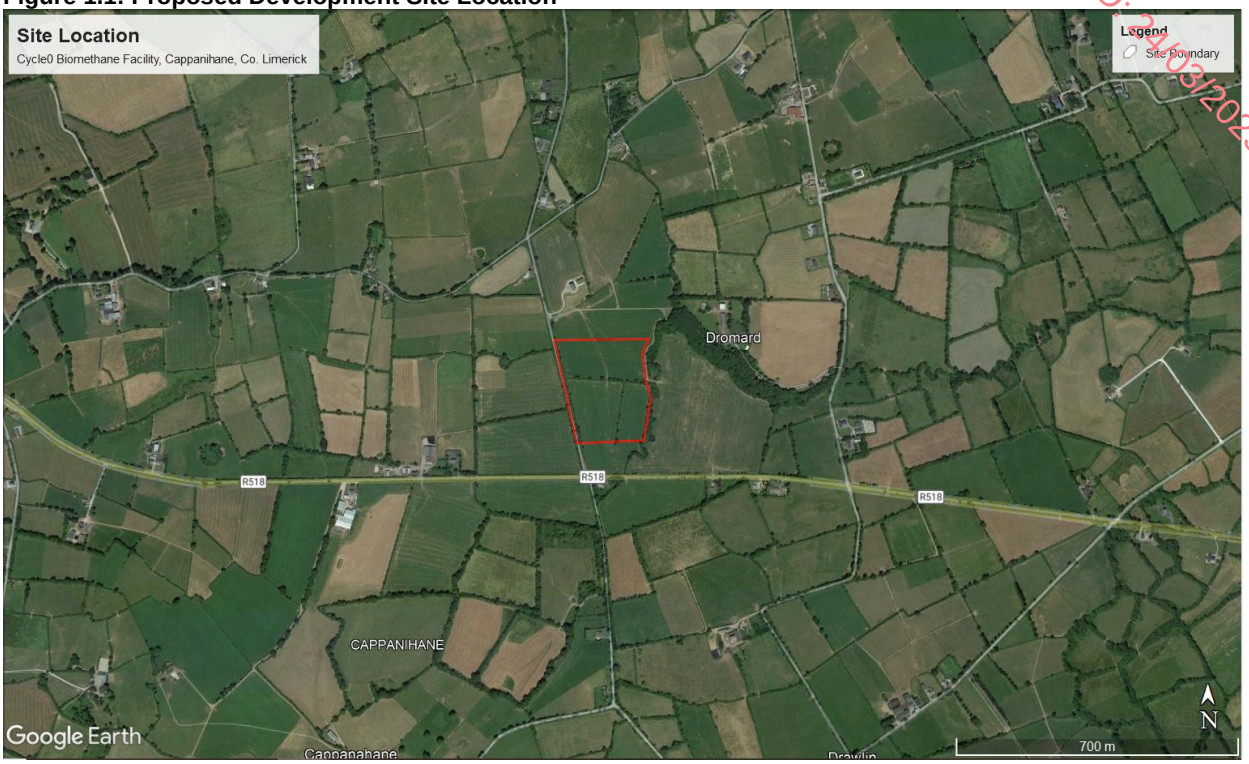
CycleØ are fully committed to developing four projects in Ireland to help achieve the 5.7TWh biomethane target set out in the government climate action plan 2030 and the biomethane strategy, published in 2024.

1.3 The Proposed Development Site

The Proposed Development site (herein referred to as ‘the site’) is located in the townland of Cappanihane approximately 13km west of Kilmallock, Co. Limerick, 20km east of Newcastle West, Co. Limerick and 25km southwest of Limerick City. The approximate grid reference location for the centre of the site is R 48890 31642, ITM: 548844, 631675.

The site location is depicted in **Figure 1.1**.

Figure 1.1: Proposed Development Site Location



The total site area measures *ca*. 5.29ha. The site is currently used as agricultural pastureland and bounded to the north, south, east, and west by further agricultural pastureland.

The site is located along the Road/R518 regional road which links O'Rourke's Cross and Lees Cross, Co. Limerick. An unmarked local road is located immediately west of the site. The Proposed Development will be accessed via the local road.

Further site-specific details and existing environmental conditions relevant to each assessment topic are outlined in detail within **Chapters 5.0** to **14.0** of this EIAR.

1.4 Environmental Impact Assessment

The European Union (EU) Directive 2011/92/EU, amended by EU Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (the 'EIA Directive'), requires Member States to ensure that a competent authority carries out an assessment of the likely significant effects of certain types of projects, as listed in Directive prior to development consent being given for the project.

EIA is a process for anticipating and predicting the effects on the environment caused by a project. It is defined in Article 1(2)(g) 4 of the amended Directive as a process consisting of:

1. The preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);
2. The carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;
3. The examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;

4. The reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and
5. The integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.

The 'EIA Directive' 2014/52/EU, as amended, was transposed into Irish planning legislation by the Planning and Development Acts 2000 to 2019 and the Planning and Development Regulations 2001 to 2019.

In accordance with the relevant legislation, the EIA of the Proposed Development will be undertaken by Limerick City and County Council as the Competent Authority.

1.5 Environmental Impact Assessment Screening

Screening is the term used to describe the process of determining whether a Proposed Development requires an EIA, by reference to mandatory legislative threshold requirements or by reference to the type and scale of the Proposed Development and the significance or the environmental sensitivity of the receiving baseline environment.

Annex I to 'EIA Directive' 2014/52/EU, as amended, requires as mandatory the preparation of an EIA for all developments listed therein. Projects listed in Annex II to the Directive are not automatically subjected to EIA, however Member States can decide to subject such developments to an assessment on a case-by-case basis or according to thresholds and/or criteria, for example size, location and potential impact.

In Ireland, Schedule 5 (Part 1 and Part 2) of the Planning and Development Regulations 2001-2019, as amended, transposes Annex I and Annex II to the 'EIA Directive' 2014/52/EU, as amended.

In the context of the Proposed Development, the most relevant project type in Schedule 5 of the Planning and Development Regulations 2001-2019, as amended, is identified in Part 2, Class 11 (b) Other Projects:

(b) Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule.

It is therefore concluded that there is a mandatory requirement to undertake an EIA of the Proposed Development. Accordingly, an EIA of the Proposed Development is required to be conducted by the Competent Authority, Limerick City and County Council, prior to deciding on development consent.

1.6 Environmental Impact Assessment Scoping

The purpose of EIAR Scoping is to identify the information to be contained in an EIAR and the methodology to be used in gathering and assessing that information. It should provide focus for the EIAR, enabling the EIA to be appropriately tailored to the likely significant impacts on the environmental factors set out in Article 3(1) of amended Directive.

Article 3(1) prescribes a range of environmental factors which must be addressed. The EIAR 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 scoping exercise based on the nature of the Proposed Development has been conducted to identify the key issues that may be considered likely to have a significant effect on the environment. The scoping exercise was based upon the available baseline information on the site and the feedback received during the pre-application consultation meetings held with Limerick City and County Council. The recommendations of consultees have further informed the scope of the assessments undertaken and the contents of the EIAR.

The following environmental topics have been identified for assessment in the context of the Proposed Development:

- Population & Human Health
- Biodiversity
- Lands, Soils & Geology
- Hydrology & Hydrogeology
- Air, Odour & Climate
- Noise & Vibration
- Landscape & Visual
- Traffic & Transportation
- Archaeology & Cultural Heritage
- Material Assets
- Interactions of the above

1.7 Environmental Impact Assessment Report Methodology

This EIAR has been prepared in line with the Planning and Development Act, 2000 S.I. No. 30/2000, as amended, and associated Regulations having regard to the following guidelines.

- 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)
- EPA (2022) *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*;
- EPA (2015) *Advice Notes on Current Practice (in the preparation on Environmental Impact Statements)*; and
- Department of Housing, Planning and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment*.

Further specific reference documents are cited within the environmental topic chapters of this EIAR, as appropriate.

1.7.1 Baseline Assessment

Annex IV(3) of the 'EIA Directive', as amended, requires 'a description of the relevant aspects of the current state of the environment, referred to as the baseline scenario, and an outline of the likely evolution thereof without implementation of the project 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'.

The Baseline Assessment is an assessment of the current state of the environment and how this is likely to evolve without the proposed project but having regard to existing and approved projects and likely significant cumulative effects – in other words the 'do nothing' scenario.

Within each technical chapter, the standard recognised methodology used in establishing the baseline scenario is documented in detail to enable replicable monitoring in the future, so that the future assessment results can be appropriately compared.

1.7.2 Identification of Potential Receptors

A receptor is defined in the EPA Guidelines 2022 as "any element in the environment which is subject to impacts". The environmental impact will depend on the relationship between the source, the available pathway and the sensitivity of the receptor identified. Topic specific receptors have been identified in each technical chapter.

1.7.3 Identification of Likely Significant Impacts

Where appropriate, the evaluation of effects on the environment has been evaluated according to the criteria outlined in **Table 1.1** as referenced in the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022).

Each effect is considered in terms of its quality, significance, extent, duration and frequency, and where possible type. The use of standardised terminology for the classification of effects ensures that the EIAR employs a systematic approach to impact assessment, which is replicated across all environmental topics covered within the EIAR.

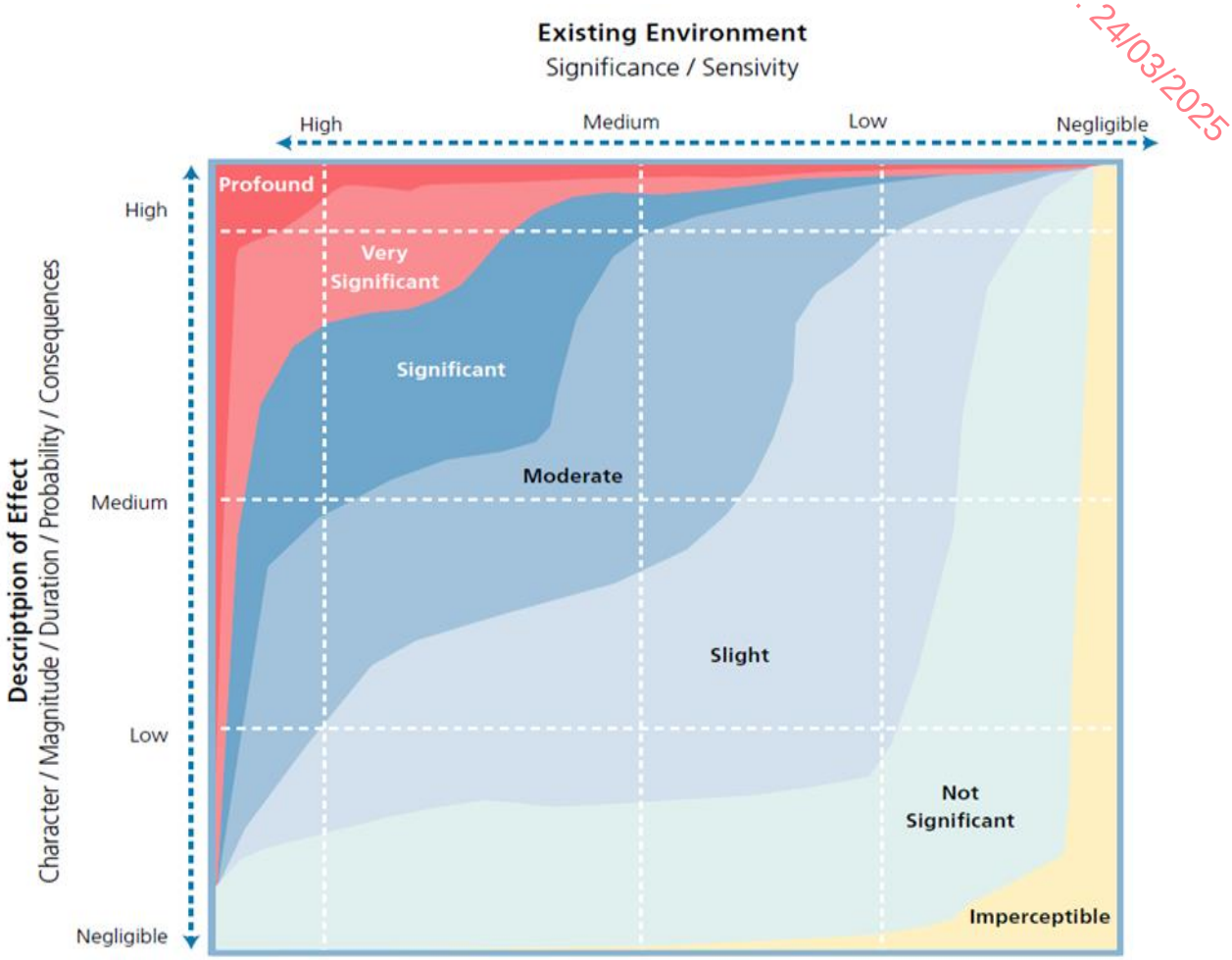
Table 1.1: Description of Effects (EPA, 2022)

Quality of Effects	**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).
Describing the Significance of Effects	**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 baseline 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 alters most of the sensitive aspects of the environment.
	Profound Effects An effect which obliterates sensitive characteristics.
Describing the Extent and Context of Effects	**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?)
Describing the Probability of Effects	**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.
Describing the Duration and Frequency of Effects	**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.

Describing the Types of Effects	**Reversible Effects** Effects that can be undone, for example through remediation or restoration.
	Frequency of Effects Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
	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 insignificant 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 effect is of greater significance than the sum of its constituents (e.g., combination of SOx and NOx to produce smog).

Figure 1.2 illustrates how comparing the character of the predicted effect to the sensitivity of the receiving environment can determine the significance of the effect.

Figure 1.2: Determining Significance (Source: EPA, 2022)



1.7.4 Mitigation and Monitoring

Annex IV(7) of the EIA Directive, as amended, requires that the EIAR should include '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 a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced, or offset, and should cover both the construction and operational phases.

Mitigation by Avoidance has been incorporated into the design of the Proposed Development, as described in **Chapter 3 – Consideration of Alternatives.** Additional mitigation by prevention and reduction, with planned monitoring measures that have been proposed for each environmental topic are set out in each technical chapter within this EIAR.

A summary schedule of all proposed mitigation and monitoring measures is included in **Chapter 16 – Schedule of Mitigation**.

1.7.5 Residual Impacts

The residual impacts are the final predicted or intended effects which occur after the proposed mitigation measures have been implemented. Residual impacts that remain once additional

mitigation has been implemented are discussed in each technical chapter within this EIAR.

1.7.6 Cumulative Effects

Cumulative effects take account of the addition of many minor or significant effects to create larger, more significant effects. As outlined in the EPA Guidelines 2022, while a single activity may itself result in a minor effect, it may, when combined with other impacts (minor or significant), result in a cumulative impact that is collectively significant. A single effect which may, on its own, have a significant effect, may also have a reduced and insignificant impact when combined with other effects. Cumulative effects are assessed and discussed within each technical chapter in this EIAR.

1.7.7 Interactions between Environmental Factors

Interactions between effects may arise from the reaction between effects of the Proposed Development on different aspects of the environment which may exacerbate the magnitude of those effects. Such interactions are assessed and are presented in **Chapter 15 - Interactions** of this EIAR.

1.8 EIAR Structure

The information to be provided by the applicant within the EIAR must, at least, address the matters detailed in Article 5(1)(a) to (f) of the 'EIA Directive', as amended, outlined below:

a) A description of the project comprising information on the site, design, size and any other relevant features of the project;
b) A description of the likely significant effects of the project on the environment;
c) A description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
d) A description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, considering the effects of the project on the environment;
e) A non-technical summary of the information referred to in points (a) to (d)
f) Any additional information specified in Annex IV of the Directive/Schedule 6 to the 2001 Regulations, as amended, relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.

The EIAR has been prepared to address the matters outlined above and structured in accordance with the following best practice guidelines:

- 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)
- EPA (2022) *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*;
- EPA (2015) *Advice Notes on Current Practice (in the preparation on Environmental Impact Statements)*; and
- Department of Housing, Planning and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment*.

This EIAR is presented in four volumes as follows:

- Volume I: Non-Technical Summary
- Volume II: Environmental Impact Assessment Report
- Volume III: Appendices to the Environmental Impact Assessment Report
- Volume IV: Drawings

Volume II: Environmental Impact Assessment Report is presented as 16 chapters, as outlined in **Table 1.2** below.

Table 1.2: Chapter Structure

Chapter	Title	Author	Organisation
1.0	**Introduction & Methodology** Sets out the background to, and location of, the Proposed Development, as well as providing details on the EIA process.	Dominick Doherty	**ORS** Block A | Marlinstown Office Park | Mullingar | Co. Westmeath | N91 W5NN
2.0	**Project Description** Describes the context of the Proposed Development, the design, and physical nature of the development and its use, including operational processes.	Oisín Doherty Sarah Bergin	**ORS**
3.0	**Consideration of Alternatives** Describes the alternatives considered including site selection, design iterations and alternative technologies.	Oisín Doherty Sarah Bergin	**ORS**
4.0	**Planning & Policy Context** Summarises waste management, energy, climate change and planning policy, and the legislative context at European, national, regional, and local levels with relevance to the Proposed Development.	Luke Wymer Mark Fitzgibbon	**John Spain Associates** 39 Fitzwilliam Place | Dublin 2 | D02 ND61
5.0	**Biodiversity** Addresses the requirement to assess potentially significant effects on biodiversity, having particular attention to species and habitats protected under the EU Habitats Directive and the Birds Directive.	Larry Manning Neve McCann	**ORS**
6.0	**Population & Human Health** Addresses the requirement to assess potentially significant effects on population and human health.	Mark Fitzgibbon Sarah Bergin	**John Spain Associates** **ORS**
7.0	**Land, Soils and Geology** Addresses the requirement to assess the type of land, soil, and geology in the area of the Proposed Development and identifies any potentially significant effects.	Jack Wilton Cathal Tighe Alex Nascimento	**ORS**
8.0	**Hydrology & Hydrogeology** Addresses the requirement to assess potentially significant effects to surface and ground water quality.	Biance Severgnini Anna Quaid	**ORS**

9.0	**Air, Odour & Climate** Addresses the requirement to assess potentially significant effects to air quality in the surrounding environment.	Andrew Evans Christopher Carr	**ORS** **Irwin Carr Consulting** 7 Osborne Promenade | Warrenpoint | Newry BT34 3NQ
10.0	**Noise & Vibration** Addresses the requirement to assess potentially significant effects from noise and vibration emissions.	Gary Duffy David Courtney	**Enfonic** Century Business Park | Unit 2A | Dublin | D11 T0HV
11.0	**Landscape & Visual** Addresses the requirement to assess potentially significant effects on landscape and visual characteristics.	Anthony Ryan Geraldine Hayes	**Hayes Ryan Landscape Architects** Killmead | Athy | Co. Kildare
12.0	**Traffic & Transport** Addresses the requirement to assess potentially significant effects on traffic and transport infrastructure.	Angeliki Kalatha	**ORS**
13.0	**Archaeology & Cultural Heritage** Addresses the requirement to assess potentially significant effects on archaeological and cultural heritage.	Declan Moore	**Moore Group** 3 Gort na Rí | Athenry | Co. Galway
14.0	**Material Assets** Addresses the requirement to assess potentially significant effects on material assets i.e., existing utilities and infrastructure.	Dominick Doherty	**ORS**
15.0	**Interactions** Provides an assessment of the interaction between all the environmental aspects referred to in this EIAR.	Killian Smith	**ORS**
16.0	**Summary of Mitigation** Describes mitigation and monitoring measures in order to avoid, prevent, reduce, or if possible, offset any identified significant adverse effects on the environment.	Anna McQuaid	**ORS**

Each technical assessment chapter, i.e., **Chapters 5.0** to **14.0** adopts the following structure:

- Introduction
- Consultation
- Assessment Methodology & Significance Criteria
- Description of the Receiving Environment
- Likely Significant Effects
- Mitigation Measures
- Cumulative Effects
- Residual Effects
- Monitoring
- Summary of Significant Effects
- Statement of Significance

A schedule of drawings included in **Volume IV: Drawings** is presented below.

Table 1.3: Schedule of Drawings

Name	Scale	Drawing number
SITE LOCATION MAP	1:2500	231240-ORS-ZZ-00-DR-AR-100
RECORD PLACE MAP	1:10560	231240-ORS-ZZ-00-DR-AR-101
EXISTING SITE SURVEY	1:500	231240-ORS-ZZ-00-DR-AR-102
PROPOSED SITE LAYOUT	1:500	231240-ORS-ZZ-00-DR-AR-200
PROPOSED STRUCTURES 01, 03, 04, 05 & 55	1:100	231240-ORS-ZZ-ZZ-DR-AR-210
PROPOSED STRUCTURES 06 & 07	1:100 & 1:200	231240-ORS-ZZ-ZZ-DR-AR-211
PROPOSED STRUCTURES 08, 09, 10 & 11	1:200	231240-ORS-ZZ-ZZ-DR-AR-212
PROPOSED STRUCTURES 12, 13, 14, 15, 16 & 17	1:200	231240-ORS-ZZ-ZZ-DR-AR-213
PROPOSED STRUCTURES 18, 19, 20, 21, 22 & 23	1:100 & 1:200	231240-ORS-ZZ-ZZ-DR-AR-214
PROPOSED STRUCTURES 24, 25 & 26	1:100	231240-ORS-ZZ-ZZ-DR-AR-215
PROPOSED STRUCTURE 27 & CONTINGUOUS ELEVATION	1:100 & 1:200	231240-ORS-ZZ-ZZ-DR-AR-216
PROPOSED CONTINGUOUS ELEVATIONS	1:200	231240-ORS-ZZ-ZZ-DR-AR-217
DRAINAGE LAYOUT	1:500	231240-ORS-ZZ-00-DR-CE-400
SILAGE RECLAIM LAYOUT:	1:500	231240-ORS-ZZ-00-DR-CE-401
WATERMAIN & PUMPED WATER LAYOUT	1:500	231240-ORS-ZZ-00-DR-CE-402
CUT & FILL LAYOUT	1:500 & 1:250	231240-ORS-ZZ-00-DR-CE-490
TYPICAL MANHOLE DETAILS	1:50	231240-ORS-ZZ-00-DR-CE-420
RAINWATER TANK DETAIL		231240-ORS-ZZ-00-DR-CE-421
TOPOGRAPHICAL SURVEY SHEET 1	1:500	231240-ORS-ZZ-00-DR-TII-002
TOPOGRAPHICAL SURVEY SHEET 2	1:500	231240-ORS-ZZ-00-DR-TII-003
SIGHTLINES LAYOUT	1:250	231240-ORS-ZZ-00-DR-TII-004
HGV SWEPT PATH ANALYSIS SHEET 1	1:250	231240-ORS-ZZ-00-DR-TII-005
HGV SWEPT PATH ANALYSIS SHEET 2	1:500	231240-ORS-ZZ-00-DR-TII-006
TRAFFIC SIGNS AND ROAD MARKINGS LAYOUT	1:500	231240-ORS-ZZ-00-DR-TII-1200
LANDSCAPE PLAN		24/CYCLE0/ORS/Rt/M/001

1.9 Statement of Competency

Article 5(3)(a) of the EIA Directive, as amended, requires that “the developer/applicant shall ensure that the environmental impact assessment report is prepared by competent experts”.

This EIAR has been prepared and managed by ORS on behalf of the applicant. The range of expertise required within the EIAR project team has been identified during the scoping exercise, considering the significance, complexity, and range of effects to be assessed.

The EIAR project team outlined below possesses an appropriate combination of experience, expertise, and knowledge to ensure that the information provided by the applicant for the

purpose of its examination by the competent authority is complete and of a high standard.

1.9.1 ORS

Oisin Doherty - Senior Environmental Consultant

Oisín Doherty holds a BSc. (Hons.) in Geography with Environmental Science from Ulster University, 2009, and a MSc. in Environmental Management from Queens University, 2011. Oisin has 14 years' experience in Anaerobic Digestion, Environmental Impact Assessment, Environmental Monitoring and Assessment, Environmental Licence Compliance and Waste Management.

Prior to joining ORS, Oisin spent 5 years as Environmental Manager and Plant Manager of two large-scale Biogas facilities operating under EPA and DAFM license conditions, gaining in-depth knowledge of Anaerobic Digestion, Biomethane and Biogenic CO_2 production, Organic Waste Management, Environmental Licence Compliance and ISO14001 Environmental Management Systems.

Oisin is a Full Member of the Institute of Environmental Sciences (MIEnvSc) and a Charted Environmentalist (CEnv).

Luke Martin – Associate Director - Environmental Team Lead

Luke Martin holds a B.A. (Hons) in Natural Science from Trinity College Dublin, 2012, and a MSc. in Sustainable Energy and Green Technology from University College Dublin, 2015.

Luke has 12 years' experience across all aspects of environmental assessment including contaminated land, flood risk assessment, noise and air monitoring, and licence compliance / applications for a wide range of projects. Luke specialises in the field of Environmental Due Diligence, Industrial Emissions Licence Compliance, Environmental Planning and EIAR co-ordination.

Luke is a Full Member of the Ireland Brownfield Network (IBN), The Institution of Environmental Science (IES) and achieved Chartered Environmentalist (CEnv) status in 2022.

Cathal Tighe (ORS) – Senior Environmental Consultant

Cathal Tighe holds a B.Agr.Sc (Hons) in Agricultural-Environmental Science from University College Dublin in 2017 and has a background in Horticulture from Dublin City University and Teagasc.

Cathal has 3 years' experience working within the agri-environmental research and development sector within Ireland. Cathal has developed novel aerobic composting processes for the stabilisation of end-of-life substrates, and recycling processes to recover, rehydrate and reuse spent horticultural peat in the protected cropping industry.

Neil Kelly - Senior Environmental Consultant

Neil Kelly holds a B.A. (Hons) in Environmental Science and Health from Dublin City University, 2015.

Neil has 10 years' experience in the assessment of air quality a for a wide range of projects. Neil is an MCERTS Air and Emission certified Team Leader. Neil specialises in the fields of air dispersion modelling, stack emissions, air quality monitoring and Industrial Emissions Licence

requirements.

Dominick Doherty - Senior Environmental Consultant

Dominick Doherty holds a BSc. (Hons.) in Geography with Environmental Science from Ulster University, 2008, and an MSc. Sustainable Energy and Green Technology from University College Dublin, 2011. Dominick has 12 years' experience in environmental science and renewable technologies.

Alex Nascimento - Senior Environmental Consultant

Alex Nascimento holds a BEng. (Hons.) in Environmental Engineering from Federal University of Mato Grosso do Sul (Brazil), 2011. Alex has 13 years' experience as an environmental consultant.

Sarah Bergin- Senior Environmental Consultant

Sarah holds a BSc in Chemistry (2009) and PhD in engineering photonics (2015). Sarah has over 7 years' experience working in consultancy, providing chemical and hazard management to both industry and emergency services, designing and implementing large scale experimental projects around health and safety consequences in industry. Sarah has direct experience of working on an operational biogas plant, supporting across all functions of compliance including, explosive atmosphere zoning, pressure systems, digestate management and environmental testing.

Anna Quaid - Environmental Consultant

Anna Quaid holds a B.Sc. (Hons) in Environmental Science from Munster Technological University, 2021, and a MSc. in Applied Environmental Science from University College Dublin, 2022.

Anna has 4 years' experience in the assessment of hydrogeology for a wide range of projects. Anna has completed training in site suitability assessments for domestic on-site wastewater treatment (QQI). Anna specialises in the fields of hydrogeological analysis, pollutant fate modelling and contaminated land.

Bianca Severgnini - Environmental Consultant

Bianca holds a B.Eng. (Hons) in Environmental Engineer with the University of Caxias do Sul, Brazil, 2020.

Bianca has 3 years' experience in hydrology and hydrogeology, sustainable resource management, and environmental impact assessments. Her skill set includes Geographic Information Systems (GIS), data modelling, and technical reporting.

Larry Manning – Senior Ecologist

Larry Manning holds a B.Sc. (Hons) in Applied Freshwater and Marine Biology, GMIT (Now Atlantic Technical University), 2011. Larry is a member of the Irish Whale and Dolphin Group, Birdwatch Ireland, Irish Wildlife Trust, Bat Conservation Ireland and the Marine Institute.

Larry has 13 years' experience in ecological assessment in terrestrial, freshwater and marine habitat. Larry's specialisations also include Ornithology monitoring and surveys at sea using the ESAS methodology, and on land using various methods. Larry has extensive experience in

the delivery of Ecological Impact Assessment (EcIA), Appropriate Assessment screening and Natura Impact Assessment.

Jack Wilton - Environmental Consultant

Jack Wilton holds a BSc. in Microbiology from University College Dublin, 2016 and a MSc. in Environmental Sustainability from University College Dublin, 2023.

Jack has a strong background in environmental science, specialising in analysis and assessment related to the environmental and construction sectors. Jack possesses extensive experience in technical writing and data analysis with a focus on environmental impact and sustainability.

Angeliki Kalatha – Senior Transport Engineer

Angeliki holds an MSc in Civil Engineering from Aristotle University of Thessaloniki (A.U.Th.), 2014, and an MSc in Engineering Project Management from A.U.Th., 2016. She is a member of Engineers Ireland and the Technical Chamber of Greece.

Angeliki is a Senior Transportation Engineer with ORS, bringing eight years of professional experience in transportation and infrastructure development. She has contributed to various transportation projects, including traffic analysis, Traffic and Transport Assessments, and initiatives promoting active travel and sustainable mobility. She is skilled in using TRL Junctions 10 and TRANSYT software for modelling and analysing roundabouts, priority junctions and signalised junctions.

Rory Moynihan - Infrastructure Engineer

Rory holds an MEng in Civil and Structural Engineering from the University of Leeds, graduating in 2015, and is a Chartered Engineer with Engineers Ireland. Rory has built upon his Civil Engineering fundamentals with experience across a broad range of projects ranging from high density housing developments to industrial plant infrastructure design. Rory has experience in surface water infrastructure, specialising in SuDS feature design, foul and potable water infrastructure design and pavement design across a broad range of applications.

1.9.2 Enfonic

Gary Duffy - Principal Consultant

Gary Duffy, BEng, MIOA is the managing director of Enfonic with over 25 years' experience as an acoustic engineer and consultant. He has extensive knowledge in the field of noise measurement, prediction, and impact assessment. He co-wrote the EPA's original guidance note on noise and represented the IOA on the technical advisory committee of the Department of the Environment's revision of Part E (Sound Insulation) of the Building Regulations. He is a founder member of the Irish branch of the Institute of Acoustics and a sitting member of the current committee.

David Courtney - Consultant & Technical Manager

David Courtney, BEng, MIOA (Consultant & Technical Manager) studied Mechatronic Engineering in DCU and qualified with IOA Diploma in Acoustics and Noise Control (2019) & Certificate in Environmental Noise Measurements (2017). He undertakes all types of noise and vibration surveys in relation to wind turbines planning and compliance, IPPC & IE compliance, BS4142, BS5228 and BS8233 assessments, traffic noise, construction, building acoustics and

occupational assessments.

1.9.3 Hayes Ryan Landscape Architects

Assessment for this LVIA is being conducted by Geraldine Hayes and Anthony Ryan of Hayes Ryan Landscape Architects. Hayes Ryan are experienced landscape architects and landscape consultants with a wide array of experience in landscape design, management and landscape and visual impact assessment on public and private projects in both urban and rural environments. The partners competency ranges from standalone nationwide landscape architect, led projects to collaboration as part of multidisciplinary teams over a period of 25 years.

Geraldine Hayes - Partner - Landscape Architect

Geraldine Hayes holds a B.Agr.Sc. (Honours) in Landscape and Horticulture, and a MSc. in Landscape Architecture. Geraldine has 25 years' experience in Landscape Architecture, Horticulture, Irish cultural landscapes, LVIA studies, Community Development, Historic Landscapes, Landscape Design, Landscape Ecology and Planning.

Anthony Ryan Partner - Landscape Architect

Anthony Ryan also holds a B.Agr.Sc. (Honours) in Landscape and Horticulture, and a MSc. in Landscape Architecture. Anthony has 25 years' experience in Landscape Architecture, Horticulture, Detailed Site Design, Large Scale Residential Developments, Theme Park Design, Healthcare and Hospitality Projects.

1.9.4 Moore Group

Declan Moore - Managing Director

Declan Moore studied Archaeology and English at University College Galway, graduating in 1991. He obtained a Certificate in Management Studies in 1994 and became a Licence eligible archaeologist in 1999. Since graduating he has gained over 30 years' experience as a field archaeologist and consultant. Declan is a Member of the Institute of Archaeologists of Ireland and the European Association of Archaeologists. As Managing Director of Moore Group Declan has managed large-scale excavations as well as the cultural heritage elements of numerous urban and rural housing and industrial developments. He has project managed the cultural heritage sections of EIAR's for over 300km of powerlines throughout Ireland, including the 400kV North South Interconnector, the Grid West scheme, the North Kerry Transmission Line Project the Eirgrid North Connacht project, the Cloon – Lanesboro scheme and the Great Island to Kilkenny upgrade scheme.

Most recently he has overseen the cultural heritage assessments of data centres as well as housing developments in Galway, Dublin and Mayo and water schemes and gas pipeline schemes nationwide. He has also recently completed project management of the N52 Grange to Clontail Scheme Route Assessment report and is currently overseeing archaeological work on the N5 Westport to Turlough road as well as consultation for the proposed Kings Island Flood Relief Scheme in Limerick City.

1.9.5 Irwin Carr Consulting

Shane Carr - Director

Shane has over 25 years' experience working in both the Public and Private sectors, with particular expertise in the areas of environmental noise, modelling as well as staff and project management. Shane has been working as a consultant since 2007, joining Marshall Day in 2010 and subsequently becoming a Director in Irwin Carr in 2016. In this time he has carried out noise modelling projects throughout Ireland and the UK and is currently the SoundPLAN distributor for Irwin Carr in Ireland.

Shane has a broad range of experience in all aspects of noise including environmental noise assessment and control. He has presented expert evidence on a number of occasions for a range of planning issues and environmental noise assessments.

Christopher Carr – Consultant

Christopher graduated from the University of Ulster at Jordanstown with a BSc (Hons) degree in Environmental Health and has recently completed a post graduate Diploma in Acoustics and Noise Control at Trinity College Dublin.

Christy has carried out an extensive number of noise impact assessments for renewable energy developments. This process has involved the setting up of monitoring equipment for background noise surveys, liaising with local authorities, acoustic modelling using the SoundPLAN software package, as well as assessment in line with both ETSU-R-97 and the Institute of Acoustics Good Practice Guidance.

1.10 Appropriate Assessment

Limerick City and County Council (as the Competent Authority) are required to assess in view of best scientific knowledge, if the Proposed Development, individually or in combination with another plan or project is likely to have a significant effect on the European (or Natura 2000) site. To facilitate this requirement, an AA Screening Report (Document Ref: **231240-ORS-XX-XX-RP-EN-13d-005**) has been submitted to the Council for assessment.

1.11 Consultation and Engagement

In accordance with best practice guidelines this EIAR included stakeholder consultation throughout the project design, EIA screening and EIAR scoping stages. A summary of consultation and engagement with relevant local stakeholders, organisations and statutory bodies on the Proposed Development is presented in **Table 1.4** below.

Table 1.4: Consultation and Engagement

Date	Consultation Group	Topic	Consultation Team
January 2024 and ongoing	Local Agricultural Operators	Consultation and discussion on Feedstock supply and biobased fertiliser use.	Cycle0 Team
January 2024 and ongoing	Local Industries	Consultation and discussion around Feedstock supply.	Cycle0 Team
12/12/2024	Local Stakeholders	Public Consultation event at the Charleville Park Hotel, Limerick Road, Charleville.	Cycle0 Team, ORS, John Spain Associates
February 2025	Local Stakeholders	Distribution of project information and design drawings.	Cycle0 Team
12/03/2024	Limerick City and County Council	Pre-planning meeting REF: 550780	Cycle0 Team, ORS,

			John Spain Associates
July 2024	Gas Networks Ireland (GNI)	Consultation on Gas Grid Connection and injection via virtual pipeline	Cycle0 Team

1.12 Limitations encountered during preparation of EIAR.

There were no limitations encountered in compiling the information within the EIAR.

1.13 Viewing of EIAR

The EIAR will be available to view online via the Department of Planning, Housing and Local Government's EIA Portal, which will provide a link to the planning authority's website on which the application details are contained.

The EIAR and all associated planning documentation will also be available for viewing at the offices of Limerick City and County Council. The EIAR may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy during normal office hours at the following address:

- Limerick City and County Council, Planning Department, Dooradoyle Road, Dooradoyle, Limerick, V94 WV78.
- Limerick City and County Council Planning Department Opening Hours: Monday to Friday 9.00am - 4.00pm