MOUNTAIN ROAD LRD

VOLUME I | EIAR

Non Technical Summary

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TABLE OF CONTENTS

Table of Tables

Table of Figures

CHAPTER 1 | **Introduction**

Article 5(1)(e) of the EIA Directive requires the project proponent to include a Non-Technical Summary (NTS) of the Environmental Impact Assessment Report (EIAR) and it is transposed into Irish law under article 94(c) of the Planning and Development Regulations 2001, as amended. The term 'non-technical' indicates that this summary should not include technical terms, detailed data and scientific discussion, that detail is presented in Volume II, the EIAR.

This Non-Technical Summary provides a concise, but comprehensive description of the Project, its existing environment, the effects of the project on the environment, the proposed mitigation measures, and the proposed monitoring arrangements, where relevant. The NTS highlights any significant uncertainties about the project. It explains the development consent process for the Project and the role of the EIA in that process.

It is important to highlight that the assessments that form part of the EIAR were undertaken as an iterative process rather than a one-off, post-design environmental appraisal. Findings from the individual assessments have been fed into the design process, resulting in a project which achieves a 'best fit' within the environment.

The development description is set out in Section 2.1. To summarise, the applicant seeks permission for the following Large Scale Residential Development (LRD) comprising the demolition of existing structures on site and the construction of 362 no. residential units, 1 no. creche with a community room and café and all associated ancillary development works at Mountain Road, Kilmoney (Townland), Carrigaline, Co. Cork.

Figure 1 Indicative Outline of Application Site

1.1 Screening for Environmental Impact Assessment

Development which falls within one of the categories specified in Schedule 5 of the Planning and Development Regulations 2001, as amended, which equals or exceeds, a limit, quantity, or threshold prescribed for that class of development must be accompanied by an EIAR.

The proposed Large-Scale Residential Development (LRD) comprises the construction of 362 no. residential units on a gross site area of 12.97ha. An EIAR is therefore required as the LRD comprises urban development on a site area that exceeds the 10ha threshold in a built up area for a mandatory EIAR.

1.2 Competency

It is a requirement that the EIAR must be prepared by competent experts. For the preparation of this EIAR, the Applicant engaged McCutcheon Halley Chartered Planning Consultants to direct and coordinate the preparation of the EIAR and a team of qualified specialists were engaged to prepare individual chapters. The consultant firms and lead authors are listed in **Table 1**. Details of competency, qualifications, and experience of the lead author of each discipline is outlined in the individual chapters.

Table 1 Chapters of EIAR & Contributors

Chapter	Aspect	Consultant	Lead Consultant
1	Introduction	McCutcheon Halley Planning Consultants	Ciaran Dineen
2	Project Description	McCutcheon Halley Planning Consultants	Ciaran Dineen
3	Alternatives	McCutcheon Halley Planning Consultants	Ciaran Dineen
4	Population & Human Health	McCutcheon Halley Planning Consultants	Ciaran Dineen
5	Landscape & Visual	JBA Consulting	Maria Ines Timoteo
6	Material Assets: Traffic & Transport	MHL & Associates Ltd	Brian Murphy
7	Material Assets: Built Services	OSL Butler Consulting Engineers	David Butler
8	Material Assets: Waste	OSL Butler Consulting Engineers	David Butler
9	Land & Soils	Enviroguide Consulting	Gareth Carroll
10	Water & Hydrology	Enviroguide Consulting	Gareth Carroll
11	Biodiversity	Enviroguide Consulting	Tom Ryan
12	Noise & Vibration	AWN Consulting	Jennifer Harmon
13	Air Quality & Climate	Enviroguide Consulting	Laura Griffin
14	Cultural Heritage – Archaeological & Built Heritage	Lane Purcell Archaeology	Avril Purcell
15	Risk of Major Accidents and Disasters	McCutcheon Halley Planning Consultants	Ciaran Dineen
16	Interactions of the Foregoing	McCutcheon Halley Planning Consultants	Ciaran Dineen
17	Summary of Mitigation Measures	McCutcheon Halley Planning Consultants	Ciaran Dineen

1.3 Methodology

In preparing the EIAR the following regulations and guidelines were considered:

- The requirements of applicable EU Directives and implementing Irish Regulations regarding Environmental Impact Assessment, as cited in section 1.5above;
- Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Reports (European Commission, 2017)

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, May 2022).
- Guidelines on Information to be Contained in Environmental Impact Statements (EIS) (Environmental Protection Agency, 2002)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018).

In addition, contributors have had regard to other relevant discipline-specific guidelines, these are noted in individual chapters of the EIAR.

Each chapter of this EIAR assesses the direct, indirect, cumulative, and residual impact of the proposed development for both the construction and operational stage of the proposed development.

The identified quality, significance, and duration of effects for each aspect is primarily based on the terminology set out in the EPAs Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022) as summarised in the following table:

Table 2 Impact Rating Terminology

Quality of Effects	
Positive	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	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).
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 a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics.
Duration & Frequency of Effects	
Momentary Effects	Seconds to minutes
Brief Effects	Less than 1 day

Temporary Effects	Less than 1 year
Short-term Effects	1-7 years
Medium-term Effects	7-15 years
Long-term Effects	15-60 years
Permanent Effects	Over 60 years
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).
Extent & 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?)
Probability of Effects	
Likely	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Type of Effects	
Indirect Effects	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
Cumulative 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 effect is of greater significance than the sum of its constituents, (e.g. combination of SOx and NOx to produce smog).

CHAPTER 2 | **Project Description**

2.1 Proposed Development

The proposed development consists of the following:

Bridgewater Homes Ltd. intend to apply for permission for the following Large Scale Residential Development (LRD) comprising the demolition of existing structures on site and the construction of 362 no. residential units to include 318 no. dwelling houses (comprising a mix of 2, 3 and 4 bed semi-detached and townhouse/terraced units) and 44 no. 2 bed apartment/duplex units, 1 no. creche with a community room and café and all associated ancillary development works including vehicular and pedestrian access, a 3m shared surface pedestrian and cycle link on the existing laneway to the east, upgrades to the L-6945-9 and L -6495-0 Mountain Road to the north and east of the site to include pedestrian crossings, traffic calming/raised tables and a 3m shared cycle/footpath facility connecting on to the R611/Kilmoney Road, drainage (including a pumping station), landscaping, amenity and open space/play areas, footpaths and cycle lanes, boundary treatments, bicycle and car parking, bin and bike storage, plant, public lighting and all other ancillary development at Mountain Road, Kilmoney (Townland), Carrigaline, Co. Cork.

The application may be inspected online at the following website set up by the applicant:**mountainroadlrd.ie**

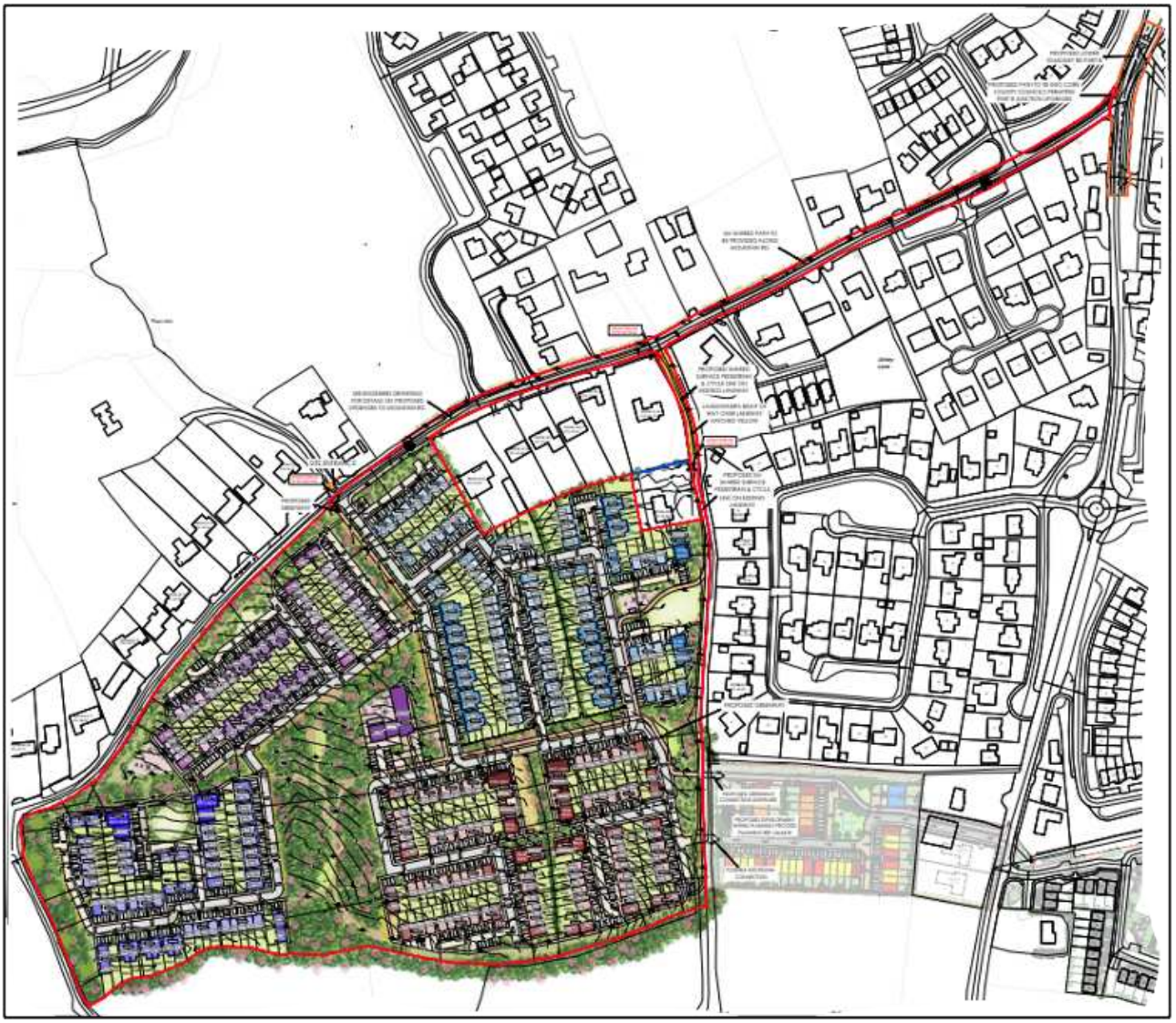

Figure 2 Proposed Site Layout

The site, which is 12.97 hectares in area, with a net developable area of 10.24 hectares, is located along Mountain Road, in the townland of Kilmoney, Carrigaline, Co. Cork.

The site is situated the south-west of Carrigaline, is within the settlement boundary of the town, and is located c. 2km from the Main Street.

The area surrounding the lands comprise a mix of uses but are mostly residential and agricultural in character. There are a number of individual one-off dwelling houses located along Mountain Road, on both sides of the carriageway. To the south and west of the site are greenfield, agricultural lands, while to the east of the site is an existing farmyard. To the east of the southern portion of the proposed development is the existing Wheatfields residential estate, which consists of mostly two-storey large, detached dwelling units

Figure 3 Location of Development Site

An overview of the key development statistics is set out in the following Table:

Table 3 Development Overview

Development Statistics	
Gross Site Area	12.97 ha
Net Site Area	10.24 ha
No. Units	362
Public Open Space	16.3%
Non-Residential Uses	1059.9sqm
Density (Net Area)	35.4 dph
Unit Mix Summary	161 no. 2-bed units 155 no. 3-bed units 46 no. 4-bed units
Car Parking	584 no. spaces

Bicycle Parking	102 no. spaces
Dual Aspect Units	100%
Plot Ratio (Gross Site Area)	0.296
Plot Ratio (Net Site Area)	0.375
Site Coverage (Gross Site Area)	17.7%
Site Coverage (Net Site Area)	22.2%

2.2 Non Residential Use

As part of the proposed development, it is proposed that uses, in additional to that of residential will be provided. As per the proposed development description provided in Section 2.3.2, the proposal includes the provision of 1 no. childcare facility, 1 no. community room and 1 no. café. These facilities will be provided as part of a neighbourhood centre and the composition of these uses is as follows;

- Childcare Facility – 872.4 sqm (Gross Area)
- Community Room – 83.9sqm (Gross Area)
- Café Unit – 103.6sqm (Gross Internal Area)

Figure 4 CGI Image of Proposed Creche

2.3 Materiality

The materiality of the buildings will provide opportunity to create an unmistakable identity for a distinctive character in different areas within the new neighbourhood. The location of materials on the respective units is subject to their durability and visual aesthetic qualities. The development is structured to enable the creation of neighbourhoods featuring distinct architectural languages. Each of these character areas are grouped around a central space creating a recognisable sense of place by using a mix of landmark housing typologies and blend of materials unique to that location.

2.4 Access, Parking & Connections

It is proposed that the site will be accessed from Mountain Road along the northern boundary of the site. The existing Mountain Road is to be upgraded from the site entrance with works proposed along the east of the road. An agreement has been reached with the relevant stakeholders along this section of the road, with works facilitating upgrades, resulting in the carriageway width being increased and a footpath proposed on the northern side, where paths will link to the development and the existing footpath network to the east.

This infrastructure will promote permeability through the proposed development and within the wider area, encouraging walking and cycling in the locality and minimising the need to use private vehicles, particularly for shorter journeys.

Figure 5 Pedestrian and Cycle Routes Proposed

The proposed development provides in-curtilage parking spaces, on-street parking spaces, on-street motorcycle parking, as well as bicycle parking spaces. A total of 584 no. car parking spaces are to be provided. 563 no. spaces will be allocated spaces. 9 no. visitor spaces are to be provided while 12 no. spaces are provided for the childcare facility, café and community room combined. A full breakdown of car parking and bicycle parking space details are provided in the below Table.

Table 4 Car and Bicycle parking figures for the site

	Car Parking Spaces	Cycle Parking Spaces
Total Parking Spaces	584	102
Total Communal Electrical Vehicle Parking Spaces	10	NA
Visitor Parking	9	12
Childcare Facility	8	12
Community Room/Café	4	12
Total Parking	584 no.	102 no.

2.5 Landscape, Public Open Space & Amenity Space

Public open space reflects 16.4% of the overall site area, with active spaces provided throughout the site. These present amenity opportunities for prospective residents of all ages.

A key focus of the layout is shaped around a central woodland area in the heart of the site. It is proposed that this natural woodland area can be protected and enhanced so that it will form part of an active open space which can provide a significant amenity value for future residents. It is envisaged that this area can be home to an active environment, which promotes health and well-being, and will incorporate unique features such as a woodland play area, exercise stations and seating areas.

Figure 6 Woodland Park Illustrative Plan

2.6 Drainage Strategy

A full description of services associated with the proposed development is contained in Chapter 7 of this EIAR and it should be read in conjunction with this section.

2.6.1 Wastewater

It is proposed that this development will be serviced internally by 150mm and 225mm diameter foul sewers and will include the provision of services connections, inspection chambers etc. throughout the site. Due to the topography of the site, a portion of the site will require pumping.

As part of the Uisce Éireann confirmation of feasibility received under CDS24001434, an upgrade is required to the existing foul sewer network to accommodate the proposed site. The aforementioned upgrade works includes a 300mm diameter foul sewer to be installed from the proposed development and connecting to the existing foul sewer in the R611 (Kilmoney Lower Road).

2.6.2 Surface Water

It is proposed to service the proposed development by means of a connection to an existing 300mm diameter surface water pipe located to the north of the site. This surface water pipe crosses Mountain Road, and eventually discharges into an existing stream running along Forest Road.

The proposed development has been sub-divided into 10 smaller sub-catchments. These sub-catchments attenuate and control the discharge generated within to QBAR. Surface water run-off from the proposed development will be discharged, after attenuation and control, to QBAR.

The site's surface water management infrastructure has been designed in accordance with the Greater Dublin Strategic Drainage Study 2005 (GDSDS).

2.6.3 Sustainable Urban Drainage Systems (SuDS)

It is proposed to use a Sustainable Urban Drainage System (SuDS) approach to stormwater management throughout the site where possible. The overall strategy aims to provide an effective system to mitigate the adverse effects of urban stormwater runoff on the environment by reducing runoff rates, volumes and frequency, reducing pollutant concentrations in stormwater, contributing to amenity, aesthetics and biodiversity enhancement and allow for the maximum collection of rainwater for re-use where possible. In addition, SuDS features aim to replicate the natural characteristics of rainfall runoff for any site by providing control of run-off at source and this has been achieved by the current proposals.

A number of SuDS features are proposed as part of this development and include;

- Permeable Pavers
- Rainwater Harvesting
- Infiltration Basins
- Tree Pits
- Swales
- Rain Gardens

A full list of SuDS features are available in the Surface Water Management Plan/ Drainage Impact Assessment prepared by OSL Consulting Engineers under separate cover.

2.6.4 Water Supply

It is proposed that this development will be serviced by 150mm and 100mm diameter watermains and will include the provision of new fire hydrants and relevant infrastructure throughout the site.

As part of the UE confirmation of feasibility received under CDS24001434, an upgrade is required to the existing water network to accommodate the proposed site. The aforementioned upgrade works includes a 150mm diameter water main to be installed from the proposed development and connecting to the existing water main in the R611 (Kilmoney Lower Road).

2.7 Services

2.7.1 Electrical Supply and Telecommunications

In order to facilitate the new development the proposal is to install new electrical services to serve the houses and apartments. This involves the following:

- Rerouting the overhead lines underground.
- New Unit Substations.
- New underground ducting and electrical infrastructure to serve the development.
- New underground ducting and electrical infrastructure to serve the development lighting.

In order to facilitate the new development, the proposal is to install new underground ducting and telecommunications infrastructure to serve the houses and apartments.

2.7.2 Gas Supply

It is not proposed that gas is provided to the houses and apartments in the development.

2.7.3 Waste Management

An Operational Waste Management Plan (OWMP) prepared by OSL Consulting Engineers accompanies this application and should be referred to in conjunction with this section.

2.7.4 Climate Action and Energy

A Climate Action and Energy Statement has been prepared by OSL Consulting Engineers and is provided under separate cover with the application material.

2.7.5 Site Lighting

A public lighting strategy has been developed by Molloy Consulting and is provided under separate cover as part of the application material.

2.8 Demolition and Construction Phase

This application is accompanied by an Outline Construction Environmental Management Plan (OCEMP) and a set of demolition plan drawings as part of the application material. The Report and drawings should be read in conjunction with this section for a comprehensive description of the construction and demolition phase.

It is proposed, upon receiving a successful application, that there will be possible number of phases of construction. The dwelling units will be developed on a sequential basis starting on the western part of the site and generally moving sequentially. It's proposed to commence work on site in January 2026 starting with the site set up followed by the setting out and provision of services. Full phasing details are available in the OCEMP.

The construction of the residential units will, to a certain degree respond to the demand/sale of the units involved, it is estimated to be constructed/completed over a 60 month period. It will involve up to 100 No. construction staff (depending on the number of units being constructed at any one time).

2.9 Site Compound

Details of the site compound are provided under separate cover in the OCEMP, submitted with the application material. The compound shall be entirely within the site boundaries. Site accommodation to be provided will include suitable washing / dry room facilities for construction staff, canteen, sanitary facilities, first aid room, office accommodation etc.

Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure. The compound shall be constructed using a clean permeable stone finish and will be enclosed with security fencing. A permeable hardstand area will be provided for staff parking and these areas will be separate from designated machinery/plant parking. Appropriate on-site parking and compounding will be provided to prevent overflow onto the local network. Parking in nearby residential estates shall be strictly prohibited

2.10 Construction Hours

For the duration of the proposed works the maximum working hours shall be 07:00 to 18:00 Monday to Friday (excluding bank holidays) and 08:00 to 16:00 Saturdays, subject to the restrictions imposed by the planning authority . No working will be allowed on Sundays and Public Holidays.

2.11 Construction Traffic

AN Outline Construction Traffic Management Plan (OCTMP) prepared by MHL Consulting Engineers accompanies this application under separate cover and should be read in conjunction with this section.

Access is to be maintained at all times to leaseholds, private residents, and general local and public roads traffic. Arrival and egress of large HGVs to the site will require these vehicles to enter the site along the adjoining Mountain Road, avoiding the nearby residential estates to the north. The existing farm site entrance will be used for all construction access /deliveries to the site but will be upgraded/enhanced to facilitate all future construction and operational access requirements. This may require its signalisation at an early stage, subject to approval by the local authority.

Traffic management, including a stop/go system, during peak HGV movements is to be implemented. Off-loading of materials such as concrete, precast concrete, structural steel, etc. is proposed alongside site construction traffic movements, mobile cranes, concrete pumping etc. During deliveries, the main internal access road will be 2-way and require the proposed development access be managed, particularly in the vicinity of the existing inhabited private residencies, pedestrian crossings, footpaths and within tight radius bends nearby on the public road.

2.12 Demolition Phase

The proposed development includes the removal of a small number of agricultural farm sheds which are located along the eastern boundary of the site. The Applicant will oversee the Demolition process and will provide a suitably competent and experienced representative as Construction & Demolition (C&D) Waste Manager for the project.

Demolition waste shall be generated during development but will be limited. Details of demolition waste to be generated from the development are outlined in the OCEMP.

2.13 Earthworks

2.13.1 Ground Conditions

A Site Investigation Report has been submitted as part of Appendix 9.1. The soils and geology encountered during the site investigation undertaken by PGL in 2018 are summarised as follows;

- Topsoil was encountered from ground level to depths ranging from 0.25mbGL to 0.40mbGL.
- The topsoil was underlain by mixed glacial deposits comprising slightly sandy, slightly gravelly SILT with low cobble content to depths of up to 3.6mbGL.
- Weathered mudstone was encountered in the southeast of the site at depths ranging from 2.7mbGL to 3.3mbGL.
- Groundwater was encountered at 2.7mbGL (described as a trickle flow rate) at the boundary between the mixed glacial deposits and the weathered Mudstone, at a single trial pit location. Groundwater is assessed in Chapter 10 of this EIAR.

2.13.2 Invasive Species

There are no recorded invasive species on the site. Please refer to Chapter 11 of this EIAR for further details.

2.13.3 Waste

A Resource and Waste Management Plan (RWMP) has been prepared for construction phase of the proposed development and is submitted under separate cover with the planning application and should be read in conjunction with this section.

The waste management objective will be to prevent waste arising in the first place, and to re-use, recycle or recover waste materials where possible. The Contractor will have the responsibility to record resource and waste management at the site in line with the Resource and Waste Management Plan (RWMP).

2.13.4 Bulk Excavation

According to the OCEMP, a specialist ground works contractor will be appointed to carry out the excavation and rock breaking works. The appointed specialist contractor will carry out a full risk assessment prior to the commencement of work.

The ground works operation will be carried out in order to ensure that material removed from the ground is taken away at regular intervals in order to reduce the amount of material that can be stored on site.

Topsoil stripping associated with the proposed development will be monitored by a suitably qualified archaeologist, which will ensure the identification of any small archaeological features that may survive within the site. If any features of archaeological potential are discovered during the course of the works further archaeological mitigation will be required, such as preservation in-situ or by record.

Stripping of topsoil will be carried out in a controlled and carefully managed way and coordinated with the proposed staging for the development. At any given time, the extent of topsoil strip (and consequent exposure of subsoil) will be limited to the immediate vicinity of active work areas. Topsoil stockpiles will also be located so as not to necessitate double handling.

2.14 Health and Safety

2.14.1 Construction Phase

A detailed Construction and Environmental Management Plan (CEMP), in line with the preliminary CEMP submitted as part of this planning application, will be prepared and implemented by the contractor at the construction phase.

2.14.2 Operational Phase

An Outline and Resource Waste Management Plan (ORWMP) has been prepared and submitted as part of the application and should be read in conjunction with this section.

2.15 Commissioning

The testing and commissioning of services (drainage, watermain, gas, electricity) will be completed in accordance with relevant codes of practice as set out in Chapter 7 of the EIAR.

2.16 Decommissioning

The design life of the scheme is greater than 60 years. Thus, for the EIA process, the development is considered permanent, and a decommissioning phase is not considered in this report.

CHAPTER 3 | **Alternatives**

3.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) was prepared to consider alternatives as required by Annex IV (2) of the Environmental Impact Assessment (EIA) Directive 201/92/EU on the assessment of the effects of certain public and private projects on the environment as amended by EIA Directive 2014/52/EU (the "**EIA Directive**") and in Schedule 6 of the Planning and Development Regulations 2001, as amended, (PDRs) which states;

> *"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".*

The PDRs identify that reasonable alternatives may include project design proposals, location, size and scale, which are relevant to the proposed development and its specific characteristics. The PDRs require that an indication of the main reasons for selecting the preferred option, including a comparison of the environmental effects be presented in the EIAR.

The Environmental Protection Agency Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, 2022 states:

> *The objective is for the developer to present a representative range of the practicable alternatives considered. The alternatives should be described with 'an indication of the main reasons for selecting the chosen option'. It is generally sufficient to provide a broad description of each main alternative and the key issues associated with each, showing how environmental considerations were taken into account in deciding on the selected option. A detailed assessment (or 'mini-EIA') of each alternative is not required.*

The Guidelines also state that the range of alternatives considered may include the 'do-nothing' alternative.

Notwithstanding the above, pursuant to Section 3.4.1 of the 2022 EPA Guidelines, the consideration of alternatives also needs to be cognisant of the fact that:

> *"in **some instances some of the alternatives described below will not be applicable** – e.g. there may be no relevant 'alternative location'…" (emp. added)*

The Guidelines are also instructive in stating:

> *"Analysis of high-level or sectoral strategic alternatives cannot reasonably be expected within a project level EIAR… It should be borne in mind that the amended Directive refers to 'reasonable alternatives… which are relevant to the proposed project and its specific characteristics'".*

This chapter of the EIAR provides an outline of the main alternatives examined for the proposed development and sets out the main reasons for choosing the development as proposed.

The assessment of alternatives is considered under the following headings:

i. 'Do-nothing' Alternative
ii. Alternative Locations
iii. Alternative Uses
iv. Alternative Project Design
v. Alternative Processes

3.2 Expertise and Qualifications

This chapter was prepared by Ciaran Dineen of McCutcheon Halley Chartered Planning Consultants. Ciaran holds a Bachelor of Science (BSc) degree in Government and Politics and a Master's in Planning and Sustainable Development (MPlan), both received from University College Cork. He has over 2 years' experience working with multi-disciplinary teams and has provided input into a variety of projects. He is a member of the Irish Planning Institute.

Directly relevant experience to this proposed development that Ciaran has been involved in is the formation of EIAR's, EIA and AA screening reports for a range of development projects. Relevant project experience includes large housing developments, single 'one – off' developments, submissions to local area plans and county development plans. Ciaran project managed and coordinated the preparation of this EIAR with input from a team of qualified specialists.

3.3 Consideration of Alternatives

3.3.1 Do Nothing

3.3.1.1 Actual Do Nothing

The 'Do-nothing' alternative is a general description of the evolution of the key environmental factors of the site and environs if the proposed project did not proceed. Each Chapter of this EIAR includes a description of the 'Do Nothing' alternative and should be referenced in conjunction with this Chapter.

The development site has been zoned for new residential development by the Cork County Development Plan, with a specific zoning objective (CL-R-10). It is a greenfield parcel of land situated in an area where there has been residential development to the north and to the east. The site has access to infrastructure and services, while Carrigaline town centre is looking a short walking distance to the north of the site. The site will connect into existing footpath networks through the provision of a proposed shared surface footpath along Mountain Road, as proposed as part of this development. The proposal also makes provision for future access to lands to the east of the site, which is to enable future pedestrian and cyclist connectivity to the R611, supporting objective CLU-08 of the Development Plan.

The applicant has secured the consent of a number of individual third party landowners in order to facilitate the proposed development.

The proposed development site would remain in its current condition, and it would not fulfil its residential zoning objective nor assist in the delivery of housing units at a period of national housing shortage. Accordingly, there would be an adverse effect on population, as this approach would fail to address the shortage of homes in Cork County. Maximising the efficiency of zoned land particularly when nationally, there is a housing crisis and as a result, the delivery of housing on zoned land in a timely manner is of critical importance.

When compared with the proposed development, the key difference between the Do-Nothing and the proposed development is the delivery of new homes, and its consequential negative effect for population when compared with the alternative, the delivery of 362 new homes.

Under the Do-Nothing alternative, there would be no new residential neighbourhood within the proposed development site. However, this is likely to be short term having regard to the fact that the site is zoned for residential development. The proposed development will change the character of the landscape and harmonise with the surrounding development. Any resulting effect of this can be managed by well-considered, high quality design, that respects the setting. Moreover, provisions for future pedestrian and cyclist connectivity to the east of the site as outlined in objective CLU-08 of the Development Plan would not be made and this would be to the detriment of pedestrian and cyclist infrastructure for the wider area.

To conclude, the Do-nothing alternative is an inappropriate and unsustainable approach that would result in the inefficient use of a strategically located and of zoned residential lands located in proximity to Carrigaline town centre. With the mitigation measures proposed in this EIAR and having regard to the findings that no significant effects on the environment are expected with such measures in place, the comparative environmental effects are not considered sufficient to rule out the proposed development.

The primary likely significant environmental impacts of the proposed development are fully addressed in the relevant specialist Chapters of this EIAR. These impacts relate to Population & Human Health, Land & Soil, Water & Hydrology, Landscape & Visual, Noise & Vibration, as well as Air Quality & Climate associated with the proposed development.

The proposed development has the potential for cumulative, secondary, and indirect impacts, these can be difficult to quantify due to complex inter-relationships. All interactions and cumulative impacts have been addressed in Chapter 16 Significant Interactions with cumulative impacts and interactions fully addressed in the relevant specialist Chapters of this EIAR.

3.3.2 Alternative Locations

The suitability of the proposed development site for residential development is confirmed by the Cork County Development Plan 2022-2028 and the site specific zoning objective for the site (CL-R-10). The objective for this specific land-zoning is as follows;

> *"Medium B density residential development to include a mix of house types accompanied with appropriate landscaping. Access to the site will be from the R611 and the Mountain Road. Specific arrangements will be made for the provision and construction of the link road (CL-U-07) the southern relief road, amenity walk (CLU-08)"*

The Development Plan was the subject of a Strategic Environmental Assessment (SEA).

Article 5 of the SEA Directive requires the environmental report to consider *"reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme"* and the significant effects of the alternatives selected. 3 no. strategic alternatives were considered:

1. Alternatives Scenario 1: Balanced allocation of SPA growth between Greater Cork Ring, North and West Cork.
2. Alternatives Scenario 2: Allocation of Growth to SPA's proportionately
3. Alternatives Scenario 3: Water and Waste Services Approach
4. Alternative Scenario 4: Limit growth within the Blackwater Catchment to Mallow (Key Town)
5. Alternative Scenario 5: Ecosystems Services Approach.
6. Alternative Scenario 6: Alternatives for Rural housing designations.

It was concluded that Alternative 2, was the preferred scenario and would contribute to sustainable development, and as such, would result in positive impacts when tested against the Environmental Protection Objectives.

According to the Development Plan, Alternative 2 was selected as the preferred scenario as it represented the following;

> *"a balanced recognition of established patterns of development in the county having regard to the requirements of the NPF and RSES. The approach provides for rural protection while allowing an appropriate level of growth within lower tier settlements. This approach works with existing and planned delivery of services infrastructure and presents the best option towards sustainable transport."*

Moreover, the Development Plan notes the following in relation to the decision to adopt Alternative 2 as the scenario of preference;

"Alternative 2 supports local communities and population, supporting provision of local services and infrastructure, which assists in countering isolation without impact on surrounding environment. While having some uncertain environmental

effects these can be mitigated and Alternative 2 is a balanced sustainable approach to planned development for the county as a whole. As such Alternative 2 has been selected as the basis of the preparation of the Development Plan."

Considering the site's zoning objective and the fact that the Development Plan was assessed by SEA, it is considered that in this context, there is no reasonable alternative location.

3.3.3 Alternative Uses

3.3.3.1 Cork County Development Plan 2022-2028

The primary determinant of suitable uses is established in the site's zoning, as per the Cork County Development Plan 2022-2028. The proposed development site is zoned CL-R-10 for Medium B Residential Development. In addition to the site specific objective, the Development Plan contains more general objectives for sites zoned *'Residential'.* The Development Plan states the following policy approach for these zoned area;

"residential areas are intended primarily for housing development but may also include a range of other uses, particularly those that have the potential to foster the development of new residential communities. These are uses that benefit from a close relationship to the immediate community and have high standards of amenity, such as crèches, schools, nursing homes or homes for older people, open space, recreation and amenity uses".

In principle, an application for any one or a combination of the uses listed above could be progressed on the site subject to compliance with other policies and objectives in the Development Plan.

Having regard to the site's zoning designation under the Development Plan, the reasonable alternative scenario for the development of the proposed site is:

i. A residential development; or
ii. A residential led mixed use scheme incorporating some permitted in principle uses.

Therefore, the proposed residential development, which includes the provision of a childcare facility, community room and café, is considered an appropriate use for the subject site.

3.3.4 Alternative Design (including size & scale)

The layout of the proposed development went through a detailed design process with input from Cork County Council and the entire applicant's design team and the EIAR team.

3.3.4.1 Alternative Design No. 1 – Initial Sketch Design

Alternative 1 was developed as part of early development proposals prior to the submission of design proposals to Cork County Council. At this stage, the layout proposed to retain many of the existing hedgerows on site however, it also proposed to remove a number of hedgerows and further consideration was needed in order to retain more. It was decided that the layout would be arranged around the retention of the central woodland scrub area at the heart of the site. Dwellings were orientated to passively survey public open spaces throughout the site and allowed for adequate distances between dwellings to limit overlooking. Pedestrian links were proposed through the site to promote effective

circulation and promote permeability within the scheme and a hierarchy of these routes and access along the eastern laneway needed to be included / further developed.

The key details of the proposal at this stage were as follows:

Table 5 Key Site Statistics – Alternative Design 1

Site Statistics	Alternative A
Site Area	10.87 (gross) 9ha (net)
Total No. Units	314
Creche	80 childcare places
Density	35 units/ha
Open Space	12% of site area

Figure 7 Alternative Design No. 1 (Source: Deady Gahan Architects)

3.3.4.2 Alternative Design No. 2 – S.247

Alternative Design No. 2 was presented to Cork County Council and discussed as part of the Section 247 pre-planning application meeting held on 10th May 2024. This meeting was to discuss the Large Scale Residential Development Proposal. At this stage the proposal consisted of a total of 318 no. units at a density of 36.5 units/ha, along with the provision of 1 no. childcare facility. An existing laneway along the eastern boundary was included as part of an active travel proposal for the scheme and allowance for a future connection of the greenway to the east was provided.

A large number of hedgerows are shown to be retained and while a strategy for open space was provided, further consideration needed to be formed to develop more usable open spaces. Useable open space within the scheme was 12% at this stage.

Dwellings were orientated to passively survey public open spaces throughout the site and allow for adequate distances between dwellings to limit overlooking, however further development of unit types / character area was needed.

Access to the site was shown via Mountain Road and at this stage looped streets were proposed throughout the scheme, providing primary and local access streets with shared surfaces. Further development of parking arrangements and avoidance of street dominance was needed.

A higher density courtyard was formed to the east of the development site, which accommodated ground floor accessible units. However, further consideration of quality of open space in this area was needed.

Table 6 Key Site Statistics – Alternative Design 2

Site Statistics	Alternative 2
Site Area	11.47 (gross) 8.7ha (net)
Total No. Units	318
Creche	80 childcare places
Density	36.5 units/ha
Open Space	12% of net site area

Figure 8 Alternative Design No. 2 (Source: Deady Gahan Architects)

- The Council provided feedback on this layout including the following key points:
- Requirement to provide access to the site from the R611 and Mountain Road.
- Clarification required regarding greenway connection to the east
- Specific arrangements to be made for the provision and construction of the link road (CL-U-07) and amenity walk (CL-U-08) as per the zoning objective for the site.
- Requirement for a shared surface to be provided along Mountain Road to facilitate both pedestrians and cyclists.
- The creation of a neighbourhood centre with a creche and small-scale convenience retail was encouraged

3.3.4.3 Alternative Design No. 3 – Second S.247

Alternative Design No. 3 was presented to Cork County Council and discussed as part of a second Section 247 pre-planning application meeting held on 31st July 2024.

At this stage the proposal consisted of a total of 318 no. units at a density of 35.3 units/ha along with a childcare facility, community room and café/retail unit, reflecting the request made by the Council as part of the first Section 247 meeting. Useable open space was increased to 16% of the site area further to the inclusion of the central open space area into the calculation of useable open space. A reduction of streets and car dominance was also reflected in the layout, although it was adjudged that further consideration to develop this more was required.

It was explained at the second Section 247 meeting by the applicant that access to the R611 from the site was not possible and the case was made that the objective of the zoning for the site does not state that direct access to the R611 was required.

It was emphasized that the proposed development (of the CL-R-10 site) also makes provision for vehicular/pedestrian and cycle connectivity between the CL-R-10 and CL-R-07 sites and when both sites have been developed, there will be vehicular/pedestrian and cycle connectivity between Mountain Road and the R611, however through traffic from the CL-R-10 site will not be encouraged through the CL-R-07 site.

The proposed development of the CL-R-10 site also included significant improvements to Mountain Road at this stage, which will deliver significant sections of the CL-U-07 (road) and CL-U-08 (greenway) objectives. Delivering these improvements in the form of pedestrian/cyclist shared surface needed to be considered further in respect of whether this was to be provided along the northern or southern side of the Mountain Road.

Table 7 Key Site Statistics – Alternative Design 3

Site Statistics	Alternative 3
Site Area	11.4 (gross) 9ha (net)
Total No. Units	318
Creche	80 childcare places
Community Room	100sqm (approx.)
Café/Retail Unit	66sqm (approx.)
Density	35.3 units/ha
Open Space	16% of net site area

Figure 9 Alternative Design No. 3 (Source: Deady Gahan Architects)

3.3.4.4 Alternative Design No. 4 – S.32B

Alternative Design No. 4 was presented to Cork County Council and discussed as part of a Section 32B meeting held with Cork County Council, on 14th November 2024.

At this stage the proposal consisted of 362 no. units. The additional units proposed compared to previous layouts was as a result of the receipt of consent from the relevant landowner. The density proposed was 35.4 units/ha and the layout continued to propose the construction of a childcare facility, community room and café/retail unit. Useable open space was 16.2%.

The community building was reorientated to allow for a strong urban edge along the greenway to the east, while the Plaza to the south of the community building increased in size to allow for greater neighbourhood activity.

The inclusion of units to the north-east of the site helps to complete urban form and provide passive surveillance along eastern laneway / proposed greenway. The layout at this stage saw a reduction in the number of streets and car dominance throughout the scheme and pedestrian connectivity was increased.

Moreover, detailed design was provided for the central woodland area

Following on from additional consultation with the Council's Regional & Local Roads Design Office, at this stage of the design process, the applicant had secured the consent of all of the landowners on the northern side of Mountain Road which allowed for the proposal for a continuous 3 metre shared cycle/pedestrian connection from the proposed development to the Council's Part 8 development works on the Kilmoney Road, as part of this development. Providing this shared surface along the northern side of the road as opposed to the southern side was considered more appropriate. All of these works were included within the red line at this stage.

Table 8 Key Site Statistics – Alternative Design 4

Site Statistics	Alternative 4
Site Area	12.97 (gross) 10.24ha (net)
Total No. Units	362
Creche	80 childcare places
Community Room	103.6sqm
Café/Retail Unit	83.9sqm
Density	35.4 units/ha
Open Space	16.2% of net site area

Figure 10 Alternative Design No. 4 (Source: Deady Gahan Architects)

3.3.4.5 Alternative Design No. 5 – Preferred Alternative – Final Design Proposed

Alternative Design No. 5 is the final design proposed as submitted to Cork County Council as part of the Large-Scale Residential Development application. The final design proposed consists of 362 no. units.

The final design directly responds to the Council's feedback issued as part of their 32D Opinion and is overall an accumulation of high quality design stemming from design team input and feedback from Cork County Council throughout the planning process.

The proposal retains the 362 no. units and density of 35.4 units/ha presented at S.32B stage, with usable open space at 16.3%.

Significant work was carried out to introduce an innovative elevational treatment to Character Area 2 which creates a greater variation in Character Areas. Separation distances were also increased to ensure high quality private amenity is achieved throughout the scheme.

The removal of parking and introduction of various parking arrangements to certain areas was developed and now forms part of the proposal. Balconies have also been designed into the footprint of the duplex units to avoid 'clip-on' structures.

The inclusion of more kickabout and grassed areas is evident in the final layout with 2 no. narrow semi-detached units replacing 4 no. townhouse units to the south of the western courtyard open space. This alteration enlarges this amenity area and allows for a more usable open space for future residents.

The final site plan also outlined another development to the east of the site, which is currently awaiting a decision from Cork County Council, at time of writing. This development has been considered as part of cumulative effects throughout this EIAR.

Table 9 Key Site Statistics – Final Design – Submitted Scheme

Site Statistics	Final Design –Submitted to Council for Planning
Site Area	12.97 (gross) 10.24ha (net)
Total No. Units	362
Creche	102 childcare places
Café	103.6sqm
Community Room	83.9sqm
Density	35.4 units/ha
Open Space	16.3% of net site area
Car Parking Spaces	584 no.
Bicycle Parking Spaces	102 no.

Figure 11 Final Design of Submitted Scheme (Source: Deady Gahan Architects)

3.3.5 Alternative Processes

Due to the nature and scale of the proposed development (i.e. a residential development greater than 100 residential units), the only option is to submit a Large-Scale Residential Development planning application to Planning Authority. Therefore, there is no alternative process to consider.

3.4 Difficulties Encountered

There were no difficulties encountered in the preparation of this assessment for the proposed development.

3.5 Conclusion

On the basis of the foregoing, it is considered that all reasonable alternatives to the project are considered, and no alternatives have been overlooked which would significantly reduce or further minimise environmental effects. Having considered all alternatives, the final design chosen by the applicant as presented is deemed to be the most suitable project for the site.

CHAPTER 4 | **Assessment of Environmental Impacts**

4.1 Population & Human Heath

The assessment of Population and Human Health is contained within Chapter 4 of Volume II.

4.1.1 Existing Environment

The site, in the south-west of Carrigaline, is within the settlement boundary of the town, and is located within 2km of the Main Street. Given its proximity to Carrigaline's Main Street, the site benefits from the town's many facilities and amenities which makes Carrigaline such an attractive place to live in, for all types of backgrounds and ages. The site itself has features and characteristics which will help create a positive living environment by retaining the natural assets and ecological features contained within its parkland setting. There are a number of natural hedgerow boundaries on each side of the site, with an overgrown area located in the centre of the site which provides an opportunity to create a natural and central amenity area.

4.1.2 Do Nothing Scenario

If the development were not to proceed, there be no immediate impact on the existing population, economic activity, or community services and facilities in the town. However, if the development does not occur there will be a shortfall in housing supply in the area which may negatively impact the continued sustainable growth of the town.

The site is zoned for residential development and the provision of housing on the subject site will support the core strategy and objectives of the Cork County Development Plan. If the development does not occur the zoning and objectives of the local planning policy will not be realised in the short term.

In terms of Population and Human Health, a 'do nothing' scenario (i.e., not developing the proposed development site) would represent a lost opportunity to develop these lands for residential use on a zoned site. As such, the proposed development site would remain underutilised, and it would not contribute to increasing the provision of housing in this area.

The impacts on land use are therefore envisaged to be negative to neutral for the 'do-nothing' scenario.

4.1.3 Impact Assessment

4.1.3.1 Construction Phase

The construction phase is expected to last approximately 60 months, as per the Outline Construction Management Plan (OCEMP) submitted with the application, under separate cover, by OSL Consulting Engineers.

Population

The potential impacts arising during the construction phase relate to short term impacts to quality of life, including visual impact/amenity, noise, air quality, and transport. Where relevant, these impacts have been considered in the relevant chapters of the EIAR and will be minimised or mitigated where appropriate. It is unlikely that these impacts will be of a scale to either encourage people to move from the area or discourage people from moving to the area.

Employment & Economics

The construction phase is anticipated to result in a temporary boost to the local economy as workers employed at the site can be expected to make use of local retail facilities and other services. If the application is successful, construction works will continue until the development is completed. Up to 100 workers will be employed on site during the construction phase, and there will be positive economic externalities to industries that are complimentary to the construction sector.

Health

As with any construction site, there will be potential risk to health and safety in terms of injury or death of construction personnel on-site due to the usage of large, mobile machinery as well as heavy equipment and materials.

Residential Amenity

The anticipated likely significant effects in the absence of mitigation on residential amenities relate to disruption due to increased construction traffic movements on the local road network, noise, dust and visual impact arising from plants (e.g. cranes) necessary to deliver the development.

4.1.3.2 Operational Phase

Population

Based on the national household size, the proposed development is expected to generate a population of 904 no. persons. The total estimate development yield for the proposed development containing 362 units of which 161 are 2-bedroom units, 155 are 3-bedroom units, and 46 are 4-bedroom units is 904 no. persons, based on figures contained within Census 2022 for Carrigaline.

Employment & Economy

The Social Infrastructure Audit, submitted with the application, demonstrates that there is a good variety of infrastructure within the catchment area. The proposed development site incorporates dedicated play areas within the public open space areas, as detailed in the Landscape Plan provided under separate cover. The proposed development also includes a childcare facility, community room and a café unit.

Health

The proposed development will not result in any significant negative impacts to the health and wellbeing of the existing population. In particular, the design of the scheme ensures that future residents of the local environment will benefit from the development, in the form of open spaces and amenity areas.

Residential Amenity

During the operational phase, the high-quality living environment of the proposed scheme will result in positive impacts on amenity for future residents. Achieving a high-quality living environment through an integrated and balanced design approach will have a locally significant, positive and permanent effect on residential amenity.

4.1.3.3 Cumulative Impact

As outlined in Chapter 4 of this EIAR, there is potential for the construction phase of the proposed development to overlap with the construction of recently permitted developments in Carrigaline (as listed in Chapter 1 of this EIAR) which would increase the potential impacts on human health and population. During the operational phase, the cumulative impact

of these applications is expected to be slight, long-term impact and positive by providing additional homes, childcare facilities, community spaces, and public open spaces for the local population.

4.1.4 Mitigation

4.1.4.1 Incorporated Design

The integration of energy efficient measures into the design will provide for healthier living standards for future occupants, less dependence on fossil fuels and associated improved air quality. The availability of on the doorstep public open space, amenity spaces, and a highly accessible layout across the scheme will encourage sustainable modes of outdoor access for a wide age group.

4.1.4.2 Construction Phase

An Outline Construction and Environmental Management Plan (CEMP), Outline Resource Waste Management Plan (RWMP) and Operational Waste Management Plan (OWMP) for the proposed development are included in the planning application documentation. The CEMP, RWMP & OWMP will be further updated by the contractor, agreed with Cork County Council prior to commencement, and implemented by the selected contractor after any consent is received.

All construction personnel will be required to understand and implement the requirements of the CEMP and RWMP and shall be required to comply with all legal requirements and best practice guidance for construction sites.

The CEMP provides for a construction phase management structure to ensure that environmental protection and mitigation measures are put in place. The CEMP requires that these measures will be checked, maintained to ensure adequate environmental protection. The CEMP also requires that records will be kept and reviewed as required to by the project team and that the records will be available on site for review by the planning authority.

4.1.4.3 Operational Phase

The proposed development is of a high quality design that incorporates generously sized units with integrated energy efficiency measures and an abundance of open space. The impact assessment section did not identify likely significant negative environmental impacts on population and human health arising from the operational phase of the proposed development. Accordingly, mitigation measures are not proposed.

4.1.5 Residual Impact Assessment

The proposed mitigation measures will avoid, prevent, reduce impacts on the human environment during the construction and operational phases of the proposed development, where no significant adverse residual effect have been identified.

4.1.6 Monitoring

Measures to avoid negative impacts on Population and Human Health are largely integrated into the design and layout of the proposed development. Compliance with the design and layout will be a condition of any permitted development.

No specific monitoring is proposed in relation to this section. Monitoring of standard construction mitigation measures as outlined in this EIAR will be undertaken by the appointed contractor.

CHAPTER 5 | Landscape and Visual Impact Assessment

Methodology

The assessment is based on the recommendations in the Guidelines for Landscape and Visual Impact Assessment (GLVIA) as published by the Landscape Institute (UK) and the Institute of Environmental Management and Assessment (3rd Edition, 2013) . The assessment also considers the landscape character assessment within the Cork County Development Plan 2022-2028, as well as the Cork County Draft Landscape Strategy 2007 and the Ballincollig Carrigaline Municipal District Local Area Plan 2017-2022.

The LVIA in the EIAR was carried out in January 2025 and took into consideration aerial photography, emerging design drawings, relevant publications and reports, together with visits to the site and environs of the proposed development. Verified photomontages in accordance with the GLVIA guidance were also considered to facilitate the assessment of visual impacts. A walkover site visit was undertaken of the proposed development site and visual receptors on the 08/08/2024. The locations for the photomontages have been agreed following liaison with the client and the local planning authority. The desk studies involved assessment of satellite imagery, Google Street View, historic and ordnance survey mapping, background search of the relevant policies from the local council and analysis of the Zone of Theoretical Visibility (ZTV).

Potential impacts on the landscape and visual amenity resulting from the proposed development were assessed through a criteria considering landscape character sensitivity, magnitude of likely impacts, significance of landscape effects.

Receiving Environment

The proposed development consists of the demolition of existing structures on site and the construction of 362 no. residential units, 1 no. creche with a community room and café and all associated ancillary development works at Mountain Road, Kilmoney (Townland), Carrigaline, Co. Cork.

The proposed development site is situated within the townland of Kilmoney, Carrigaline, Co. Cork. To the south and west the majority of land use is a mix of greenfield and agricultural lands, with a ribbon of residential estates and individual one-off dwellings along Mountain Road. Carrigaline urban fabric is located to the east, with estates such as Wheatfields and Abbey Lane immediately adjacent to the existing site. The receiving landscape is relatively flat and currently comprises agricultural fields with grasslands, enclosed and separated by mature tall hedgerows and trees. These dense hedgerows sit on top of drainage ditches separating fields. The centre of the site includes a patch of dense deciduous woodland.

Potential Effects

Demolition Phase

The proposed development will change the fabric within the boundaries of the proposed development. It is not going to change the landscape character through the removal of existing facilities and dwellings within the threshold of the site. The removal of certain sections of hedgerows for access is limited and focused mainly on the northern boundary.

Surrounding receptors of the site are residents of dwellings and are highly sensitive. The magnitude of these visual changes will include slight changes in treeline and hedgerows, with the majority of existing hedging and treelines to be preserved. The highest negative visual impacts are expected to be moderate and would be restricted to the residential receptors to the north, located in closer proximity to the proposed development boundary works. No significant negative impacts are expected.

1 Landscape Institute and Institute of Environmental Management & Assessment, 2013. Guidelines for Landscape and Visual Impact Assessment 3rd Edition. Routledge

Construction Phase

The construction phase will include the temporary addition of welfare units within the site, as well as the addition of materials that will be stockpiled within the site. Machinery will be included. Waste disposal areas will be designated within the site. Changes upon the landscape will include debris, soil removal and loss of some vegetation.

The elements of visual changes upon the views will include the removal of soil and some vegetation, as well as the introduction of welfare units, material stockpiles, equipment and machinery. These visual changes are generally expected to have a slight to imperceptible visual impact as the surrounding hedgerows will be largely preserved. The visual effects to the northern boundary will be moderate due to the wider extent of vegetation removal in this location. No significant impacts are expected, and moderate impacts are temporary.

Operational Phase

The proposed development will change the fabric of the landscape within its boundaries by converting greenfield/ agricultural fields into a residential area, slightly altering the rural and semi-rural character. The introduction of 362 no. residential units will increase the built density and increase the urban elements along Mountain Road. This is at a density that appears proportional to the existing, for a site that is zoned for residential. Therefore, the impact to the landscape is expected to be slight.

During the operational phase, the surrounding receptors are expected to have their visual amenity affected. The existing largely retained vegetation and undulating topography provides sufficient screening. Vegetation removed during construction will be replaced with new planting and establish during operational phase. The highest negative impact of the operational phase is expected to be temporary, moderate to permanent, slight. No significant impacts are expected.

Cumulative Effects

Overall, no significant negative cumulative effects are expected to occur from the proposed works in conjunction with other proposed developments.

CHAPTER 6 | Material Assets: Traffic & Transport

The assessment of Traffic and Transport is contained within Chapter 6 of Volume II.

Chapter 6 – Traffic and Transport of this EIAR assesses the potential impact of the proposed development in terms of traffic and transport. Chapter 6 was written by Mr. David Murphy of MHL & Associates Ltd. Consulting Engineers. David holds an honours bachelor's degree Civil, Structural and Environmental Engineering, with a Masters in Coastal Management and Geographical Information Systems and has been a Member of the Institution of Engineers of Ireland 2006. David has 13 years' experience working in the fields of transport planning, traffic engineering and traffic management.

The traffic and transport section of the Environmental Impact Assessment Report (EIAR) focuses on how the proposed development will impact local traffic, public transport, and road infrastructure. This assessment is crucial because changes in how people move around the area could affect daily life, safety, and the environment. The report evaluates the current traffic situation, looks at what will happen if the development goes ahead, and proposes ways to minimize any negative impacts.

6.1 Overview of the Traffic Assessment

The goal of this traffic assessment is to ensure that the proposed development will not lead to significant increases in traffic congestion, road accidents, or other transport-related problems. It also aims to support sustainable modes of transport, such as walking, cycling, and the use of public transport, in line with national and local policies like Project Ireland 2040 and the Design Manual for Urban Roads and Streets (DMURS, 2019).

6.2 Current Traffic and Transport Conditions

The site of the proposed development is located on the edge of a suburban area. Walking and cycling infrastructure are available but could be improved, especially given the national push toward more sustainable transport solutions. Right now, the area experiences moderate traffic during peak times—morning and evening rush hours—but traffic flow is generally smooth outside these periods. Public transport services are in place, but some bus routes are nearing full capacity, especially during busy periods. The proposed development would be accessed via a new priority junction with Mountain Road, which will be the single point of access for vehicles, cyclists and pedestrians. Existing pedestrian infrastructure includes intermit footpaths on Mountain Road and full footpath facilities on the R611, The limited cycle infrastructure in the vicinity of the subject site includes cycle lanes, shared-use paths such Eastern Relief Road, Forrest Hill /Fushia Avenue and Castle Heights linkages. The closest bus stops to the site are located on the Kilmoney Road Upper, approximately 1100m (10-minute walk) from the proposed site access point. Key roads within the study area include the R611, Kilmoney Upper Road and N28.

6.3 The Impact of the Proposed Development

6.3.1 Construction Phase

When the new development is being built, there will be an increase in traffic from construction vehicles, such as trucks delivering materials and workers commuting to the site. This could lead to some temporary disruptions, like road closures or detours, but these will be managed carefully through traffic management plans. The main impacts during construction are expected to be short-term. Once the development is complete and in use, it will generate additional traffic from residents, workers, and visitors. More cars will use the local roads, and there may be a higher demand for parking. Public transport services will also see an increase in usage, with more people needing to catch buses or

trains, especially during peak times. This additional demand could cause congestion, particularly at key junctions or intersections. Demolition & Construction Phase It is anticipated that the overall construction programme will commence in late 2025/2026 (pending grant of planning) and take approximately 60 months to complete. HGVs would be restricted to the R611. HGVs would not be permitted on Mountain Road to the west of the site. The biggest impact during the Construction phase is predicted on Mountain Road, between the site access and the R611, but impacts will be suitably mitigated through the management of site traffic, safety measures (such as signage), and other measures such as wheel washing and street sweeping.

6.3.2 Operational Phase

The increase in traffic on the local network as a result of the development is below 10% on all roads in the study area, with the exception of the section of Mountain Road between the site access junction and the R611.A detailed traffic assessment has been undertaken on this link, which has Driver Delay, Pedestrian Delay and Amenity (the 'pleasantness' of the pedestrian experience), and Accidents and Safety. The overall effect been assessed as 'Not Significant' in accordance with the EIA Regulations.

6.4 Managing and Reducing Traffic Impacts

Traffic impacts during the construction stage will be mitigated through the implementation of a Construction Traffic Management Plan (CTMP), which will be agreed with the local authority (CCC).

A Mobility Management Plan has also been prepared by MHL and is included in the Traffic and Transport Assessment, as a 'best practice' measure, to accompany the planning application. The aim of the Mobility Management Plan is to minimise the proportion of single occupancy vehicle trips and address the forecast transport impacts of the end-users of the subject site.

As part of the proposed development, the existing carriageway of Mountain Road will be upgraded and realigned to comply with the Design Manual for Urban Roads and Streets (DMURS) standards. The new road design will feature a widened 5.5-meter carriageway to accommodate improved traffic flow and safety. In addition, a 3-meter shared footpath and cycle lane will be constructed along the full extent of the upgraded road, from the junction with the R611 to the development's entrance. This shared space will promote active travel by providing safe, dedicated infrastructure for both pedestrians and cyclists. Traffic calming measures will be incorporated to enhance road safety, including raised junction tables and speed ramps strategically placed along the upgraded section to reduce vehicle speeds and improve safety for all road users. These improvements will ensure a more accessible, safe, and sustainable transport environment for the area.

As part of the NTA's Active Travel Grants Programme and the Carrigaline Transportation and Public Realm Plan (TPREP), Cork County Council (CCC) is planning enhancements to pedestrian and cycle routes in the Carrigaline area. These improvements, combined with the active travel proposals (as identified above) for Mountain Road, aim to mitigate the impact of the development while supporting the broader objectives of the TPREP.

6.5 Benefits of the Proposed Development

The development is aligned with national and regional policies that aim to reduce dependency on private cars and promote more sustainable travel modes. By improving pedestrian and cycling infrastructure and ensuring that public transport services can meet future demand, the development will encourage people to use more environmentally friendly modes of transport. This is in line with the goals of the National Cycle Manual (NTA, 2023) and the National Planning Framework, which promotes reducing car dependency and increasing the use of public and active transport.

6.6 Addressing Future Traffic and Transport Needs

The traffic assessment also considers future growth in the area. As the population increases and more developments are built, the demand for road space, public transport, and parking will rise. This EIAR evaluates how the proposed development fits into the broader picture of regional development, taking into account upcoming projects that could affect traffic, such as road upgrades or the expansion of public transport services. To prepare for this future, the design of the development includes space for future transport improvements, ensuring that any changes to the local transport network will not be hindered by the new development. The cumulative assessment considers how development might proceed in future years. It assumes a total of up to 362 residential units on site, a new priority access junction on Mountain Road, which will be constructed, and will become the main point of entry. The development will also include a new community room and associated café.

6.7 Monitoring

Traffic conditions will be monitored post-construction to ensure that mitigation measures are effective, with adjustments made as needed in collaboration with local authorities. A Mobility Manager will be appointed from within the management company to ensure the implementation and monitoring of the Mobility Management Plan. They will act as a point of contact for residents for all mobility and access related issues.

The proposed development will have some impact on traffic and transport in the area, especially during construction and when the development becomes operational. However, with proper planning and mitigation measures in place, these impacts can be managed effectively. The inclusion of pedestrian, cycling, and local road improvements will not only reduce the negative effects on traffic but will also promote more sustainable and environmentally friendly travel options. In the long run, the development aligns with national and local goals for a more sustainable, connected, and safe transport system. With the CTMP and Mobility Management Plan in place, the residual impact of the Proposed Development will be minor. With the proposed Mountain Road improvements in place, the residual impact of the cumulative effects of the development will be ‘not significant’.

CHAPTER 7 | Material Assets: Built Services

The assessment of Built Services is contained within Chapter 7 of Volume II.

7.1 Baseline Environment

7.1.1 Surface Water Drainage

Context and Character:

The site of the proposed development is greenfield in nature in respect of surface water drainage. The existing lands currently drains by means of a series of sod and stone ditches linking with the surrounding informal ditch regime. There is an existing 300mm diameter surface water pipe to the north of the site, crossing Mountain Road, and eventually discharges into an existing stream running along Forest Road.

Sensitivity:

Surface water drainage systems generally can be sensitive to changes in their design, installation, and maintenance.

Overall, surface water drainage systems are Moderately Sensitive to changes. The River Waterbody Owenboy (Cork)_40, and Transitional Waterbody, Owenboy Estuary, approximately 2km to the northeast of the subject lands is a receiving environment for surface water runoff from the site and is potentially Significantly Sensitive to changes in the nature of surface water runoff from the site.

A flood risk assessment of the site has been performed by OSL Butler Consulting Engineers and included as part of this application under sperate cover. The assessment concludes that the risk of flooding at the site is not significant and that the development of the site will not result in a significant increase in the risk of flooding at the site or elsewhere as a result of the development.

7.1.2 Waste Water Drainage

Context and Character:

There is an existing 225mm diameter foul line within Mountain Road, approximately 300m to the east of the proposed development entrance. This existing foul line services the lands adjacent to Mountain Road.

This existing foul line connects to a 375mm diameter foul sewer located approximately 625m to the east of the site in Kilmoney Road (R611). These sewers drain north eastwards towards the pump station (Crosshaven Road WWPS Ringaskiddy) located at Carrigaline Main Road (adjacent to Carrigaline Library). The rising main from the aforementioned pump station discharges to an existing 525mm dia foul line to the south.

Sensitivity:

Foul drainage systems can be sensitive to changes in their design, installation, and maintenance.

7.1.3 Water Supply

Context and Character:

There is an existing 100mm diameter Asbestos watermain located in Mountain Road. This main is serviced/supplied via the existing network located in Kilmoney Road (R611).

Sensitivity:

Water systems can be sensitive to changes in their design, installation, and maintenance.

7.1.4 Electrical Supply

Context and Character:

The existing site has overhead electrical lines, Medium Voltage (10kV/20kV), across the site.

Sensitivity:

The proposed installation will be cable based within an underground ductwork system and will have low sensitivity.

7.1.5 Gas Supply

There are no existing gas supply lines located within the proposed development boundary.

7.1.6 Telecommunications

Context and Character:

There is no existing telecommunication services located within the proposed development boundary.

Sensitivity:

The proposed installation will be cable based within an underground ductwork system and will have low sensitivity.

7.2 Impact Assessment

7.2.1 Do Nothing Scenario

In the do-nothing scenario (i.e. assuming the proposed development were not progressed), the built services and infrastructure at the site of the proposed development and in the immediate vicinity would likely remain as they are at present (greenfield, previously agricultural). No likely significant effects would arise in relation to material assets in this scenario.

7.2.2 Demolition & Construction Phase

The potential significant effects associated with the Material Assets - Built Services during the demolition phase of this development is insignificant.

The potential significant effects associated with the Material Assets - Built Services during the construction phase of this development has been summarised below.

Surface Water Drainage

New surface water drainage systems will be constructed on site to service the development, connecting to existing surface water drainage infrastructure in the receiving environment.

In the absence of mitigation measures the **Direct** impact of the construction phase on surface water drainage is **Negative** in quality, **Significant** in terms of significance, **Likely** in probability and **Medium-term** in duration.

In the absence of mitigation measures the **Indirect, Secondary and Cumulative** impact of the construction phase on surface water drainage services is **Negative** in quality, **Significant** in terms of significance, **Likely** in probability and **Medium-term** in duration.

Wastewater Drainage

New wastewater drainage systems will be constructed on site to service the new development, connecting to existing wastewater infrastructure in the receiving environment.

In the absence of mitigation measures the **Direct** impact of the construction phase of wastewater drainage services is **Negative** in quality, **Significant** in terms of significance, **Likely** in probability and **Medium-term** in duration.

In the absence of mitigation measures the **Indirect, Secondary and Cumulative** impact of the construction phase on wastewater drainage services is **Negative** in quality, **Moderate** in terms of significance, **Unlikely** in probability and **Medium-term** in duration.

Water Supply

New water supply systems will be constructed on site to service the new development, connecting to existing water supply infrastructure at the boundary of the site.

In the absence of mitigation measures the **Direct** impact of the construction phase on water supply services is **Negative** in quality, **Moderate** in terms of significance, **Likely** in probability and **Medium-term** in duration.

Potential **Indirect, Secondary and Cumulative** effects of the construction phase on water supply services are likely to have no significant effects.

Electricity

For Electrical Supply, the permanent electricity connections will not be live during the construction phase until near completion. Construction related activities will require temporary connection to the local electrical supply network. The potential impact from the construction phase of the proposed development on the local electrical supply network is likely to have no significant effects.

Telecommunications

No likely significant effects.

7.2.3 Operational Phase

During the operational phase, the site will contain operational surface water drainage, wastewater water drainage, water supply, electrical supply and telecommunications systems to serve the proposed development.

Surface Water Drainage

In the absence of mitigation measures the **Direct** impact of the operational phase on surface water drainage services is **Negative** in quality, **Moderate** in terms of significance, **Likely** in probability and **Permanent** in duration.

Wastewater Drainage

In the absence of mitigation measures the **Direct** impact of the operational phase on wastewater services is **Negative** in quality, **Significant** in terms of significance, **Likely** in probability and **Permanent** in duration.

In the absence of mitigation measures the **Indirect, Secondary and Cumulative** impact of the operational phase of wastewater drainage services is **Negative** in quality with a **Slight** significance, **Likely** probability and **Permanent** in duration.

Water Supply

In the absence of mitigation measures the **Direct** impact of the operational phase on water supply services is **Negative** in quality, **Moderate** in significance, **Likely** probability, **Permanent** in duration.

In the absence of mitigation measures the **Indirect** impact of the operational phase on water supply services is **Negative** in quality, **Slight** in terms of significance, **Likely** in probability and **Permanent** in duration.

Electricity

The predicted impact of the operational phase on electrical supply services is Neutral in quality, Imperceptible in significance, Permanent in duration and **Indirect** in type

Telecommunications

The predicted impact of the operational phase on telecommunications services is Neutral in quality, Imperceptible in significance, Permanent in duration and **Indirect** in type.

7.2.4 Cumulative Impact

The impact as a result of potential future developments has been assessed. These potential future developments will be of a similar nature to the proposed development. As a result, the cumulative impact is expected to be neutral and not significant.

7.3 Mitigation

7.3.1 Incorporated Design

All new-build service infrastructure is to be designed in accordance with the relevant service provider and asset owner's code of practice, which require due cognisance of the receiving environment. Design depths of proposed infrastructure are to be optimised so that excessive excavations are avoided where possible, and by association a reduction in resultant waste and machinery operation time.

It is proposed that products and materials are supplied locally, where practicable and available, in order to reduce carbon footprint of travel and production.

7.3.2 Demolition & Construction Phases

A detailed Construction and Environmental Management Plan (CEMP), in line with the preliminary CEMP submitted as part of this planning application, will be prepared and implemented by the contractor at the construction phase. The mitigation measures described below are relevant to bothe the Demolition and Construction Phase and are recommended to be implemented during these phases.

General Mitigation Measures

The following mitigation measures are recommended for the construction phase of the development:

- Works shall be performed in accordance with Statutory requirements, including Health, Safety and Welfare at Work (Construction) Regulations 2013 (S.I. no. 291 of 2013).
- The works shall be supervised by suitable competent personnel responsible for delivery of the built services as per the permitted development.
- Works in existing roads shall be performed in accordance with Guidelines for Managing Openings in Public Road, Dept of Transport Tourism and Sport, Second Edition (Rev 1), April 2017.
- Works in existing public roads and pedestrian paths shall be performed in accordance with Cork County Council requirements for the management and control of roadworks in Cork County.
- The Construction and Environmental Management Plan (CEMP) prepared to accompany the planning application shall be updated with any and all additional requirements included in a Grant of Permission from the Planning Authority and shall be adopted and executed with updating as necessary to reflect changes in the construction phase.
- The Resource and Waste Management Plan (RWMP) prepared to accompany the planning application shall be updated with all additional requirements included in a Grant of Permission from the Planning Authority and shall be adopted and executed with updating as necessary to reflect changes in the construction phase.
- The locations of all existing on-site services (underground and overhead) shall be confirmed prior to the commencement of works and suitable protection measures put in place to minimise the risk of damage to existing services.
- The precise routing of electricity and telecommunications infrastructure on the site are to be agreed with the relevant service providers prior to the commencement of on-site works.
- Consultation with the relevant services providers shall be undertaken in advance of works. This will ensure all works are carried out to the relevant standards and ensure safe working practices are implemented.
- All reasonable precautions shall be taken to avoid unplanned disruptions to any services / utilities during the proposed works.
- There will be an interface established between the contractor(s) and the relevant utilities service providers /

authorities during the construction phase of the proposed development. This interface will be managed in order to ensure a smooth construction schedule with no / minimal disruption to the local community

With the implementation of these mitigation measures, above and below, the severity of the impact of the proposed development on the built services will be minimised, with tie-ins to existing services and installation of new services completed in a satisfactory manner for the relevant service providers.

Surface Water Drainage

In addition to the General Mitigation Measures listed above, the following measures shall be implemented in relation to surface water drainage services:

- A quality management plan shall be created and implemented to ensure that the works are executed to deliver the permitted surface water drainage system free of significant defects.

Wastewater Drainage

In addition to the General Mitigation Measures listed above, the following measures shall be implemented in relation to wastewater drainage services:

- Uisce Éireann shall be consulted prior to commencement of works.
- Existing wastewater drainage infrastructure shall be protected in accordance with Uisce Éireann requirements.
- Wastewater drainage services to be adopted by Uisce Éireann shall be constructed in accordance as per the permitted development and in accordance with the following:
    - Code of Practice for Wastewater Infrastructure, Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, Uisce Éireann, July 2020 (Revision 2);
    - Wastewater Infrastructure Standard Details, Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, Uisce Éireann, July 2020 (Revision 2)
    - Quality Assurance (QA) Field Inspection Requirements Manual, Connections and Developer Services (A Guide for Self-Lay Developers), Uisce Éireann, August 2020 (Revision 3)
- In respect of wastewater drainage services not to be adopted by Uisce Éireann, including temporary wastewater drainage, a quality management plan shall be created and implemented to ensure that the works are executed to provide a suitable wastewater drainage system free of significant defects and in accordance with the recommendations of Building Regulations Technical Guidance Document H – Drainage and Waste Water disposal (published 2010, re-printed 2016)

Water Supply

In addition to the General Mitigation Measures listed above, the following measures shall be implemented in relation to water supply services:

- Uisce Éireann shall be consulted prior to commencement of works
- Existing water supply infrastructure shall be protected in accordance with Uisce Éireann requirements.
- Water supply services to be adopted by Uisce Éireann shall be constructed in accordance as per the permitted development and in accordance with the following:
    - Code of Practice for Water Infrastructure, Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, Uisce Éireann, July 2020 (Revision 2);
    - Water Infrastructure Standard Details, Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, Uisce Éireann, July 2020 (Revision 4)
    - Quality Assurance (QA) Field Inspection Requirements Manual, Connections and Developer Services (A Guide for Self-Lay Developers), Uisce Éireann, August 2020 (Revision 3)

- In respect of water supply services not to be adopted by Uisce Éireann, including temporary water supply, a quality management plan shall be created and implemented to ensure that the works are executed to provide a suitable water supply system free of significant defects and in accordance with the recommendations of Building Regulations Technical Guidance Document G – Hygiene (published 2008, Reprinted July 2011)

Electricity Network

The following measures shall be implemented in relation to Electrical Supply services:

- ESB Networks will be consulted prior to commencement of the works
- A quality management plan shall be created and implemented to ensure that the works are executed to deliver the permitted Electrical Supply System free of significant defects.

Telecommunications Network

The following measures shall be implemented in relation to Telecommunication Supply services:

- Openeir will be consulted prior to commencement of the works
- A quality management plan shall be created and implemented to ensure that the works are executed to deliver the permitted Telecommunications Supply System free of significant defects.

7.3.3 Operational Phase

The design and construction of the required services infrastructure in accordance with the relevant guidelines and codes of practice is likely to mitigate any potential impacts during the operational phase of the development, with the exception of any routine maintenance of the site services.

Any additional mitigation measures required for the proposed built services, if required, during the operational phase will be as advised by the relevant service provider.

Surface Water Drainage

The surface water drainage includes various components to control and ensure the quantity and quality of surface water runoff in accordance with design requirements. Inspection and maintenance of components of the system shall be performed on a regular and scheduled basis to ensure the effective functioning of the system and the mitigation of risk to the receiving environment, for both adoptable and non-adoptable parts of the system.

Wastewater Drainage

The wastewater drainage network, when completed, will be vested to Uisce Éireann who will have responsibility for the ongoing maintenance and operation of the services generally.

Information on good household practices in relation to domestic water usage shall be supplied to the purchaser at handover.

The sale or lease of commercial premises that generates grease and oil and food residue as part of its commercial output will include a requirement to install grease traps in accordance with EN 1825- 1:2004 Grease separators Principles of design, performance and testing, marking and quality control and to enter an agreement with a suitably licenced operator to maintain and clean the grease traps on an appropriate maintenance schedule.

Water Supply

The water supply network when completed will be vested to Uisce Éireann who will have responsibility for the ongoing maintenance and operation of the service.

Information on good household practices in relation to domestic water usage shall be supplied to the purchaser at handover.

Electricity Network

ESB Networks will take charge of their system on completion and will be responsible for the ongoing maintenance and operation of the service.

Telecommunications Network

Openeir will take charge of their system on completion and will be responsible for the ongoing maintenance and operation of the service

7.4 Residual Impact Assessment

This section assesses potential significant environmental impacts which remain after mitigation measures are implemented.

Assuming the full and proper implementation of the mitigation measures set out herein; and given that the design, construction and operation of utilities infrastructure are strictly controlled by the respective utility provider and authorities (i.e. Uisce Water, ESB, GNI and so on); the residual impact of the proposed development is as described below.

7.4.1 Demolition Phase

The residual impacts on the Material Assets - Built Services during the demolition phase of this development is insignificant.

7.4.2 Construction Phase

Residual impacts on the built services during the construction phase is considered to be temporary and occasional in nature and not significant, where service is unavoidably disrupted to facilitate the construction phase.

Surface Water Drainage

With the implementation of mitigation measures the **Direct** impact of the construction phase on surface water drainage services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

With the implementation of mitigation measures the **Indirect, Secondary and Cumulative** impact of the construction phase on surface water drainage services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

Wastewater Drainage

With the implementation of mitigation measures the **Direct** impact of the construction phase of wastewater drainage services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

With the implementation of mitigation measures the **Indirect, Secondary and Cumulative** impact of the construction phase on wastewater drainage services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

Water Supply

With the implementation of mitigation measures the **Direct** impact of the construction phase on water supply services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

Electricity Network

With the implementation of mitigation measures the **Direct** impact of the construction phase on electrical supply services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

Telecommunications Network

With the implementation of mitigation measures the **Direct** impact of the construction phase on telecommunications services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Medium-term** in duration.

7.4.3 Operational Phase

Residual impacts on the built services during the operational phase given the new infrastructure and upgrades to the existing networks is considered to be permanent with a constant occurrence, positive and beneficial to all the end users.

Surface Water Drainage

With the implementation of mitigation measures the **Direct** impact of the operational phase on surface water drainage services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Permanent** in duration.

Wastewater Drainage

With the implementation of mitigation measures the **Direct** impact of the operational phase on wastewater services is **Neutral** in quality, **Insignificant** in significance, **Likely** probability, **Permanent** in duration.

With the implementation of mitigation measures the **Indirect, Secondary and Cumulative** impact of the operational phase of wastewater drainage services is **Neutral** in quality, **Insignificant** significance, **Likely** probability, **Permanent** in duration.

Water Supply

With the implementation of mitigation measures the **Direct** impact of the operational phase on water supply services is **Neutral** in quality, **Insignificant** in significance, **Likely** probability, **Permanent** in duration.

With the implementation of mitigation measures the **Indirect, Secondary and Cumulative** impact of the operational phase on water supply services is **Neutral** in quality, **Insignificant** in significance, **Likely** probability, **Permanent** in duration

Electricity Network

With the implementation of mitigation measures the **Direct** impact of the operational phase on electrical supply services is **Neutral** in quality, **Insignificant** in significance, **Likely** probability, **Permanent** in duration.

Telecommunications Network

With the implementation of mitigation measures the **Direct** impact of the operational phase on telecommunications services is **Neutral** in quality, **Insignificant** in significance, **Likely** probability, **Permanent** in duration.

7.4.4 Cumulative Residual Effects

Considering the proposed future developments listed under the previous sections above, the cumulative residual effects are considered to be neutral and not significant.

7.5 Monitoring

All potable water will be cleaned and tested to the satisfaction of Uisce Éireann prior to the connection to the public potable water. In addition, all connections to the public potable water and foul water sewer will be carried out under the supervision of Uisce Éireann.

All new infrastructure, which is to serve the proposed development, is to be routinely inspected with any maintenance carried out, as required. Any monitoring of the built services required during the operational phase of the proposed project will be as advised by the relevant services providers.

CHAPTER 8 | Material Assets: Waste

The assessment of Waste is contained within Chapter 8 of Volume II.

8.1 Baseline Environment

8.1.1 Soils

The soils beneath the site have been mapped by the GSI (GSI, 2024) as mineral poorly drained (mainly acidic) Surface Water Gleys / Ground Water Gleys derived from mainly non-calcareous parent materials (IFS Soil Code: AminPD).

The quaternary sediments beneath the site are mapped by the GSI (GSI, 2024) as till derived from Namurian sandstones and shales (TNSSs).

There are no quaternary features mapped by the GSI within the site (GSI, 2024).

The closest quaternary features to the site are mapped by the GSI (GSI, 2024) as undifferentiated meltwater channels which is located approximately 0.32km southwest (orientated in a southwest to northeast direction), 0.33km northwest (orientated in a southwest to northeast direction) and 0.39km southeast (orientated in a southeast to northwest direction).

8.1.2 Bedrock Geology

The bedrock beneath the site is mapped by the GSI (GSI, 2024) as follows:

- The bedrock beneath the northern portion of the site is mapped as the White Strand Formation (New Code: CNWHIT) described as sandstone and interbedded pyritic mudstone.
- The bedrock beneath the central portion of the site is mapped as the Lispatrick Formation (New Code: CDLPTK) described as pyritic cherty mudstone with dolomite.
- The bedrock beneath the southern portion of the site is mapped as the Cuskinny Member (New Code: CDKINS2) described as flaser-bedded sandstone and mudstone.

While there are no bedrock outcrops mapped by the GSI (GSI, 2024) within the site boundary, there are a number of bedrock outcrops mapped within a 2km radius of the site, the closest of which are located approximately 0.36km northwest of the site.

8.1.3 Invasive Species

There are no Third Schedule Invasive Species, which would require additional attention and/or mitigation present on the subject site.

8.2 Impact Assessment

8.2.1 Do Nothing Scenario

In the 'Do Nothing' scenario, the proposed development does not proceed and there would be no excavation, construction or operational waste generated at the site. There would, therefore, be no additional demand or loading on waste management infrastructure locally or nationally and thus there would be a neutral effect on the environment in terms of waste.

8.2.2 Demolition and Construction Phase

This is a greenfield site with 3 no. existing farm buildings and associated yards (none of which is habitable and can essentially be described as farm sheds) to be demolished on the northern part of the site.

The Construction Phase will give rise to the requirement to remove and bring quantities of various materials to and from the site. Construction and excavation related wastes will be created during the Construction Phase, and this has the potential to impact on the local waste management network.

An Outline Construction and Environmental Management Plan (OCEMP) (OSLButler Consulting Engineers, 2024) and a Resource and Waste Management Plan (RWMP) (OSLButler Consulting Engineers, 2024) have been prepared for construction phase of the proposed development and will be submitted with the planning application.

There will be bulk excavation cut and fill required throughout the site in order to facilitate the finished levels of the developed site. Cut and fill depths will generally be limited to less than 2m with the exception of certain specific parts of the site where substantially deeper excavation depths will be required.

Existing topsoil and subsoil onsite are uncontaminated and naturally occurring and thus, is in accordance with the regulatory regime for by-products as enshrined in Article 5 of the Waste Framework Directive and as transposed into Irish legislation by Article 27 of the European Communities (Waste Directive) Regulations 2011 and are considered suitable for re-use in the proposed development.

Excavated topsoil and subsoils required for re-use on site will be temporarily stored on site for re-use, otherwise it will be exported. Rock excavated on site will be crushed and re-used on site for filling where suited. Topsoil will be stored in an appropriate manner on site for the duration of the construction works.

Excavated materials in excess of those required for the site development works will be treated as a by-product (production residue) and exported off-site to be re-used at another suitable site in the first instance in accordance with the Waste Framework Directive (2008/98/EC, as amended by Directive (EU) 2018/851) and as transposed in Ireland by the European Union (Waste Directive) Regulations 2011-2020.

Waste will also be generated from construction workers e.g., organic/food waste, dry mixed recyclables (wastepaper, newspaper, plastic bottles, packaging, aluminium cans, tins and cartons), mixed non-recyclables and potentially sewage sludge from temporary welfare facilities provided onsite during the Construction Phase. Waste printer/toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated infrequently from site offices.

The potential impact from the Construction Phase on waste recovery and disposal is likely to be medium-term, negative, direct and slight in nature.

8.2.3 Operational Phase

The Operational Phase of the proposed development will result in an increase in the production of municipal waste in the region and will increase demand on waste collectors and treatment facilities, however, as the surrounding area is urban in nature, waste collection is commonplace.

Municipal waste is made up of household waste and commercial waste that is compositionally comparable to household waste. It includes residual, recyclables, organic, bulky, and waste electrical and electronic equipment. An Operational Waste Management Plan (OWMP) has been prepared by OSLButler Engineering Consultants (2024) and is included as a standalone report with this planning application.

The potential impact from the Operational Phase on municipal waste disposal is likely to be **long-term**, **negative, direct** and **slight** in nature

8.2.4 Cumulative Impact

The capacity of waste collection companies and waste management facilities in Cork County have been designed with forward planning and expansion in mind to cater for a growing population. It is necessary that all the developments provide the infrastructure and services to assist residents to segregate domestic waste at source, in order to reduce the generation and disposal of non-recyclable mixed waste.

Existing waste collections currently take place in the local area and during the Operational Phase, the proposed development will be added to an existing collection route.

The likely effect will be **neutral** and **not significant** on waste management facilities in the area in the **long term.**

8.3 Mitigation

8.3.1 Incorporated Design

The following measures have been incorporated into the design:

- Buildings have been designed with material efficiency in mind. This involves reducing the amount of materials used in the building fabric and minimising the waste during construction; and
- Opportunities to achieve on-site and off-site reuse and recycling of waste have been identified.

8.3.2 Demolition & Construction Phases

The waste management objective will be to prevent waste arising in the first place, and to re-use, recycle or recover waste materials where possible. The following mitigation measures are recommended for the Construction Phase of the proposed development regarding waste management:

- Dedicated, secure waste segregation areas have been selected for the duration of the enabling works. The dedicated waste storage areas within the waste segregation points will house all bins and skips for the storage of segregated construction waste generated. All containers will be marked with clear signage which will identify which waste types are to be placed into each container.
- Waste materials will be separated at source and will follow the Resource and Waste Management Plan (RWMP) and Outline Construction and Environmental Management Plan (OCEMP);
- Prior to the commencement of the Construction Phase detailed calculations of the quantities of topsoil, subsoil and green waste will be prepared, and soils will be tested to confirm they are clean, inert or non-hazardous;
- A policy of 'as needed' ordering and strict purchasing procedures will be implemented to prevent waste arisings as far as possible;
- The Contractor will vet the source of aggregate, fill material and topsoil imported to the site in order to ensure that it is of a reputable origin and that it is "clean" (i.e., it will not contaminate the environment).
- The Contractor and/or Council will implement procurement procedures to ensure that aggregate, fill material and topsoil are acquired from reputable sources with suitable environmental management systems as well as regulatory and legal compliance;
- The waste materials generated during the Construction Phase will be stored in suitably size receptables and transferred offsite for appropriate processing, recycling and recovery;
- Waste materials generated from the Construction Phase that are unsuitable for reuse or recovery will be separately collected;

- Disposal of construction generated wastes will be considered a last resort and only after recycling or recovery options have been ruled out;
- A suitably competent and fully permitted waste management company will be employed to manage waste arising for the Construction Phase. The appointed waste contractor must have the relevant authorisations for the collection and transport of waste materials, issued by the National Waste Collection Permit Office (NWCPO);
- All waste materials will be transported to an appropriately authorised facility, which must have the relevant authorisations for the acceptance and treatment of the specific waste streams, i.e., a Certificate of Registration (COR) or a Waste Facility Permit (WFP) as granted by a Local Authority, or a Waste/Industrial Emission Licence as granted by the Environmental Protection Agency;
- It is not envisaged that there will be any hazardous waste generated throughout the construction works however, in the event that hazardous soil, or historically deposited waste is encountered during the site bulk excavation phase, the contractor will notify Cork City Council and provide a Hazardous / Contaminated Soil Management Plan, to include estimated tonnages, description of location, any relevant mitigation, destination for disposal/treatment, in addition to information on the authorised waste collector(s). Only authorised facilities will be used and as a result of this, the potential impacts at any authorised receiving facility sites will have been adequately assessed and mitigated as part of the statutory consent procedures;
- Waste generated by construction workers will be stored in wheelie bins on site and it will be collected by an appropriately authorised waste collector.
- All wastes generated on site will be sent for recycling, recovery, or disposal to a suitably licensed or permitted waste facility; and
- All waste quantities and types will be recorded and quantified, and records will be retained onsite for the duration of the Construction Phase.

The Contractor will have the responsibility to record resource and waste management at the site in line with the Resource and Waste Management Plan (RWMP).

As noted above, there are no Third Schedule Invasive Species, which would require additional attention and/or mitigation present on the subject site.

8.3.3 Operational Phase

The Operational Waste Management Plan (OWMP) details the waste segregation and storage capacity requirements, as well as the plan which will be adopted to manage the residential and commercial waste arising from the proposed development, one operational.

Implementation of the OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus contributing to the targets set out in the National Waste Management Plan for a Circular Economy (NWMPCE) 2024 -2030.

The waste storage and collection strategy outlined in the OWMP will provide adequate storage capacity for the estimated quantity of segregated waste. Designated areas for waste storage will provide sufficient room for the required receptacles in accordance with the details outlined in the OWMP.

The layout of the proposed development facilitates access for refuse vehicle collection of waste throughout the site.

The OWMP will also include mitigation measures to ensure a high level of recycling, reuse and recovery at the proposed development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in The National Waste Management Plan for a Circular Economy 2024-2030.

8.4 Residual Impact Assessment

8.4.1 Demolition & Construction Phases

The residual effects on waste management are considered slight, neutral, direct and medium-term, this is due to:

- The prevention and mitigation measures proposed within this and other chapters of the EIAR;
- Compliance with national legislation and the allocation of adequate time and resources dedicated to efficient waste management practices; and
- Continued use of permitted/licensed waste hauliers and facilities. Waste removed from the facility will be managed appropriately and will avoid environmental impacts or pollution. In addition, the correct management and storage of waste will avoid litter or pollution issues at the site.

8.4.2 Operational Phase

Waste materials will be generated on an ongoing basis during the Operational Phase; these will for the most part consist of municipal waste and recyclable materials. Careful management of these, including segregation at source, will help to ensure a high level of waste recycling, reuse, and recovery at the development.

Given the provision of appropriate facilities, and their correct use by residents, environmental impacts (e.g. litter, contamination of soil or water, etc.) arising from operational waste storage and removal are expected to be minimal. The use of suitably licensed waste contractors will ensure compliance with relevant legal requirements and appropriate off-site management of waste. With the implementation of the proposed operational waste management measures, the proposed development is not expected to have a significant environmental impact with respect to operational waste. The likely effect of the Operational Phase on waste management will be neutral, direct and slight in the long-term.

8.4.3 Cumulative Residual Effects

The capacity of waste collection companies and waste management facilities in Cork County have been designed with forward planning and expansion in mind to cater for a growing population. It is necessary that all the developments provide the infrastructure and services to assist residents to segregate domestic waste at source, in order to reduce the generation and disposal of non-recyclable mixed waste.

Existing waste collections currently take place in the local area and during the Operational Phase, the proposed development will be added to an existing collection route. The likely effect will be **neutral** and **not significant** on waste management facilities in the area in the **long term**.

8.5 Monitoring

8.5.1 Demolition & Construction Phases

The site control measures to manage and minimise waste include:

- Signage on the site office/welfare bins to separate them as environmental/domestic waste bins; and
- Briefing for all sub-contractors via induction handouts.

The Resource Manager (RM) will be responsible for conducting ongoing resource audits at the site during the Construction Phase.

8.5.2 Operational Phase

The building management company and future residents will be required to maintain the bins and storage areas in good condition as required by the Cork County Council Waste Bye-Laws. The waste strategy presented in the OWMP will provide sufficient storage capacity for the estimated quantity of segregated waste. The designated areas for waste storage will provide sufficient room for the required receptacles in accordance with the details of this strategy.

CHAPTER 9 | **Land & Soils**

The assessment of Land & Soils is contained within Chapter 9 of Volume II.

9.1 Existing Environment

The site of the Proposed Development is located at Mountain Road, Kilmoney, Co. Cork, within the southwest settlement boundary of Carrigaline. The area is characterised by a mix of residential and agricultural land uses. The site itself comprises 12.97 hectares of undeveloped agricultural lands, divided into small fields by existing hedgerows, with a small area of woodland located within the center of the site. The soils beneath the site are mapped as mineral poorly drained Surface Water Gleys / Ground Water Gleys derived from mainly non-calcareous parent materials. The quaternary sediments are till derived from Namurian sandstones and shales, and the bedrock consists of sandstone, pyritic mudstone, and flaser-bedded sandstone and mudstone.

9.2 Impact Assessment

The assessment of potential impacts on the land, soils, and geological environment was carried out by Enviroguide Consulting. The assessment included a detailed desk study, site walkover, site investigation, and review of relevant drawings and documents. The potential impacts were identified, and appropriate mitigation measures were proposed to reduce any adverse effects.

9.2.1 Do Nothing Scenario

If the Proposed Development did not proceed, the site would remain as undeveloped greenfield land, and there would be no change or impact on the land, soils, and geological environment.

9.2.2 Demolition and Construction Phase

During the demolition and construction phase of the Proposed Development there will be an unavoidable loss of in-situ soils and subsoils, with an estimated excavation of approximately 13,800m³ of soil and subsoil. The impact on the underlying soils is considered to be ‘negative’, ‘slight’, and ‘permanent’.

During the demolition and construction phase of the Proposed Development there will be an unavoidable loss of in-situ soils and subsoils, with an estimated excavation of approximately 13,800m³ of soil and subsoil. There will also be a requirement for the importation of approximately 16,450m³ of inert soil and subsoil and 8,500m³ of aggregate fill materials. The potential impacts of the Proposed Development include the loss of undeveloped land, excavation of soil and subsoil, and potential contamination from construction materials. Mitigation measures will be implemented to manage and control these impacts.

9.2.3 Operational Phase

The operational phase will consist of typical activities in a residential development, with no bulk excavation of soils or bedrock. The land use will change from undeveloped greenfield land to residential land with associated vehicular and pedestrian access, car parking, and landscaping. There will be no significant impacts on the land, soils, and geological environment during the operational phase of the Proposed Development.

9.2.4 Cumulative Impact

The cumulative impacts of the Proposed Development, in combination with other developments in the area, were

assessed. There are no identified significant potential cumulative impacts on land, soils, and geology during the construction phase and operation phase of the Proposed Development.

9.3 Mitigation

9.3.1 Incorporated Design

The design of the Proposed Development incorporates measures to minimise potential impacts on the land, soils, and geological environment. These measures include the reuse of suitable excavated soil and subsoil for landscaping and engineering use, and the careful management of imported fill materials.

9.3.2 Demolition & Construction Phases

Mitigation measures will be adopted during the demolition and construction phases to address potential impacts. These measures include the control and management of earthworks, soils, subsoils, and stockpiles, as well as the handling of cementitious materials, fuels, and hazardous materials. The implementation of these measures will ensure that there are no significant residual impacts on the land, soils, and geological environment.

9.3.3 Operational Phase

There is no requirement for mitigation measures for the Operational Phase taking account of the design measures for the Proposed Development.

9.4 Residual Impact Assessment

Overall, there are no significant residual impacts on land, soils and geology anticipated regarding the demolition and construction phase and operational phase of the Proposed Development.

9.5 Monitoring

9.5.1 Demolition & Construction Phases

During the demolition and construction phase, routine monitoring and inspections will be conducted during refuelling and concrete works to ensure compliance with avoidance, remedial, and mitigation measures. Inspections and monitoring will also be carried out during excavations and other groundworks to ensure that water quality protection measures are fully implemented and effective. A dust deposition monitoring program, as documented in the OCEMP (OSL, 2025b), will be implemented during the construction phase to verify compliance with relevant standards and limits. Additionally, materials management and waste audits, as documented in the ORWMP (OSL, 2025c), will be conducted regularly to monitor soil management, record keeping, traceability of materials, and ensuring records of material acceptance at the end destination.

9.5.2 Operational Phase

During the operational phase, there are no specific monitoring requirements related to land, soil, and geology for the Proposed Development.

CHAPTER 10 | Hydrology and Hydrogeology

The assessment of Water & Hydrology is contained within Chapter 10 of Volume II.

10.1 Existing Environment

The site is mapped by the EPA as being within the Lee, Cork Harbour, and Youghal Bay WFD Catchment (Catchment I.D.: 19) and the Owenboy[Cork]_SC_010 WFD Sub-catchment (Sub-Catchment I.D.: 19_15). The northwest portion of the site is mapped as being within the Owenboy[Cork]_040 WFD River Sub-basin (EU Code: IE_SW_19O011400), while the southeast portion of the site is mapped as being within the Kilnaglery_010 WFD River Sub-basin (EU Code: IE_SW_19K620850). The closest EPA mapped surface waterbodies to the site are the Healy's Bridge Stream, the West Carrigaline River, and the Kilnaglery 19 Stream, located approximately 0.24km west, 0.29km north, and 0.37km east of the site, respectively.

The EPA maps the groundwater body (GWB) beneath the site as the Ballinhassig East GWB (EU Code: IE_SW_G_004). The main discharges are to the rivers and streams crossing the sandstones, mudstones, shales, and impure limestone formations, as well as small springs and seeps. Flow directions are anticipated to align with the local surface water catchments, suggesting that groundwater in the northeast portion of the site likely flows to the west and north towards the Healy's Bridge Stream and West Carrigaline River, while groundwater in the southeast portion of the site likely flows to the east/southeast towards the Kilnaglery 19 Stream.

10.2 Impact Assessment

The assessment of potential impacts on the hydrological and hydrogeological environment was carried out by Enviroguide Consulting. The assessment included a detailed desk study, site walkover, site investigation, and review of relevant drawings and documents. The potential impacts were identified, and appropriate mitigation measures were proposed to reduce any adverse effects

10.2.1 Do Nothing

If the Proposed Development does not proceed, the existing hydrological and hydrogeological conditions at the site will remain unchanged. There will be no additional impacts on the surface water and groundwater environments.

10.2.2 Demolition and Construction Phase

During the demolition and construction phase, there will be no direct discharge to groundwater. Excavations are anticipated to be above groundwater, with no requirement for dewatering. Potential sources of contamination include storage and use of fuels, oils, and chemicals, use of concrete, and runoff with sediment. These contaminants could infiltrate to groundwater. The potential water receptors include the underlying bedrock aquifer and the Healy's Bridge Stream, the West Carrigaline River, and the Kilnaglery 19 Stream. In the absence of mitigation, there could be a negative, moderate to significant, and long-term impact on the local aquifer and receiving surface water bodies

10.2.3 Operational Phase

During the operational phase of the Proposed Development, there is limited potential for any adverse impact on the receiving water (hydrological and hydrogeological) environment at the site taking account of the design for the Proposed Development.

The surface water drainage network will manage surface water runoff from impermeable surfaces in the Proposed Development. The network will include attenuation and SuDS measures such as petrol interceptors, swales, bioretention raingardens, SuDS tree pits, permeable pavers, and a cellular attenuation system. Foul water from the Proposed Development will discharge to the existing foul sewer and be treated at the Ringaskiddy Wastewater Treatment Plant before discharging to Cork Harbour.

10.2.4 Cumulative Impact

The cumulative impacts of the Proposed Development, in combination with other offsite developments, have been considered. The surface water drainage system has been designed to manage surface water runoff and prevent any cumulative impacts on the receiving surface water environment. Foul water from the Proposed Development will be treated at the Ringaskiddy Wastewater Treatment Plant, which has adequate capacity to handle the additional load.

10.3 Mitigation

10.3.1 Incorporated Design

The surface water drainage strategy for the Proposed Development has been designed in accordance with the principles and objectives of Sustainable Drainage Systems (SuDS) and the Greater Dublin Strategic Drainage Study (GDSDS) to treat and attenuate surface water prior to discharging offsite.

10.3.2 Demolition & Construction Phases

During the demolition and construction phase, all works will be undertaken in accordance with the Outline Construction Environmental Management Plan (OCEMP). Measures will be implemented to control and manage surface water runoff, handle and store fuels and chemicals appropriately, and prevent any potential emissions to ground and surface water.

10.3.3 Operational Phase

During the operational phase, ongoing regular monitoring and maintenance of the drainage and SuDS measures will be undertaken to ensure their effectiveness in managing surface water runoff and preventing any potential impacts on water quality.

10.4 Residual Impact Assessment

The residual impacts of the Proposed Development on the receiving water environment are considered to be minimal, taking into account the design avoidance and mitigation measures implemented during the demolition, construction, and operational phases.

10.5 Monitoring

Monitoring measures will be implemented during the demolition and construction phases to ensure compliance with the OCEMP and to prevent any potential impacts on water quality. Ongoing regular monitoring and maintenance of the drainage and SuDS measures will be undertaken during the operational phase to ensure their continued effectiveness.

CHAPTER 11 | **Biodiversity**

The assessment of Biodiversity is contained within Chapter 11 of Volume II.

11.1 Existing Environment

The site for the Proposed Development is located within existing farmland bordering Mountain Road to the north, and farmland to the south and west. It includes a variety of habitats such as wet willow-alder-ash woodland, wet grassland, hedgerows, scrub, treelines, and drainage ditches. These habitats support a range of flora and fauna, including breeding birds, bats, badgers, and amphibians.

11.2 Impact Assessment

The assessment identified several Key Ecological Receptors (KERs) within the site, including the wet willow-alder-ash woodland, wet grassland, hedgerows, drainage ditches, breeding bird assemblages, badgers, hedgehogs, pygmy shrews, bats and invertebrates. The potential impacts on these KERs were evaluated for both the construction and operational phases of the development.

11.2.1 Do Nothing

If the Proposed Development does not proceed, the site would remain in its current state as agricultural land with valuable habitats on the periphery and interspersing woodland. The continued management of the site would likely maintain the existing biodiversity, providing suitable habitat for generally accepted common and widespread species.

11.2.2 Demolition & Construction Phase

During the construction phase, the majority of wet grassland will be lost, and there will be some removal of hedgerows. However, the wet willow-alder-ash woodland will remain largely intact, with minimal tree removal. Impacts on fauna during the construction phase are largely related to the potential risk of injury or death as a result of construction activities.

11.2.3 Operational Phase

The operational phase will involve increased human disturbance across the retained and enhanced habitats within the Proposed Development by way of increased noise, human presence, and potential for littering. Potential impacts on fauna during the Operational Phase are also related to the increased human presence on site which will increase baseline disturbance of wildlife in the locality. Cumulative Impact

The cumulative impact assessment considered other developments and plans in the vicinity. No significant cumulative impacts were identified, however some accrual loss of habitats can be observed in combination with nearby developments and the Proposed Development.

11.3 Mitigation

11.3.1 Incorporated Design

The design of the Proposed Development includes several features to avoid or mitigate negative impacts on biodiversity. These include the retention of existing woodland and hedgerow, the creation of public walkways which will guide and

centralise human disturbance, and the use of wildlife-friendly lighting across the Proposed Development. The landscape plan incorporates native planting schedules to complement and enhance local biodiversity, and the embedded surface water management features (SUDS features) will add variability to the baseline habitats at the Site.

11.3.2 Demolition & Construction Phases

Specific measures during the construction phase include pre-construction surveys for badgers and amphibians, the timing of vegetation clearance to avoid the breeding season for birds, and the implementation of best practice construction site management to minimize pollution and disturbance. Measures to protect retained habitats are also included as best practice standards.

11.3.3 Operational Phase

During the operational phase, mitigation measures to avoid or reduce potential negative impacts will include the maintenance of surface water treatment facilities, the management of soft landscaping to promote pollinators, and the installation of artificial nest sites for swifts and kestrels, as well as bat boxes and amphibian hibernacula.

11.4 Residual Impact Assessment

After the implementation of mitigation measures, the residual impacts on biodiversity are expected to be minimal. The landscape design and planting strategy will result in new opportunities for notable species to occupy the site. This includes the installation of artificial nest sites for birds and pollinators, as well as bat boxes to increase local roosting opportunities for bats, will provide additional functional habitat for local wildlife.

11.5 Monitoring

Monitoring during the construction and operational phases will ensure that the mitigation measures are implemented effectively. This will include pre-construction surveys, regular maintenance of surface water treatment facilities, and the monitoring of artificial nest sites and bat boxes. Additionally, a Biodiversity Management Plan (BMP) will be developed for the Proposed Development which will include details of all biodiversity related mitigation and enhancement measures as well as an outline of maintenance and management of soft landscaping and biodiversity features (e.g., bird and bat boxes).

CHAPTER 12 | **Noise & Vibration**

The assessment of Noise & Vibration is contained within Chapter 12 of Volume II.

12.1 Existing Environment

The existing baseline environment was quantified by undertaking environmental noise surveys, the results of which are presented within Chapter 12. The baseline noise surveys determined that the noise environment was largely dominated by local road traffic, distant construction noise and intermittent aircraft noise. Other sources of noise noted were in relation to machinery being used in agricultural lands close to the proposed development.

12.2 Impact Assessment

12.2.1 Do Nothing Scenario

In the absence of the proposed project, the existing noise and vibration levels within the study area are expected to remain largely unchanged. The current baseline conditions characterised by the noise surveys presented within Section 12.6.1 of chapter 12 will continue to prevail.

12.2.2 Demolition and Construction Phase

Construction noise impacts will vary at various receivers throughout the construction phase of the proposed development. The main construction activities in relation to noise are:

- Site Set Up, Clearance and Demolition
- Provisions of Services to the Site
- General Construction

Without mitigation the worst-case effect of the above construction phases will be temporary to short term, negative and significant to very significant at the NSLs closest to the proposed demolition and construction works.

12.2.3 Operational Phase

The noise impacts relating to the operational phase of the proposed development will relate to:

- Mechanical Plant and Services
- Additional Traffic on Public Roads
- Outward Noise from Plaza and Creche

The noise impacts relating to mechanical plant and services are likely to be neutral, imperceptible and long-term if guidelines and recommendations within the EIAR chapter are followed. The noise impacts relating to Additional Road Traffic and Outward noise from the proposed Plaza and Creche will be long term, negative and not significant.

12.2.4 Cumulative Impact

12.2.4.1 Construction Phase

Cumulative noise impacts in relation to construction noise are unlikely to occur due to the scale of the proposed development with construction noise associated with the development likely to dominate the surrounding noise environment. The noise contribution of other sites would need to be equal to those associated with the proposed development in order to result in any cumulative effect.

12.2.4.2 Operational Phase

The noise limits set within the EIAR are designed to avoid any significant increase in the prevailing background noise environment. There is not expected to be a cumulative effect in relation to either operational mechanical plant noise or road traffic noise during the operational phase of the proposed development.

12.3 Mitigation

12.3.1 Demolition & Construction Phases

Mitigation measures to be implemented during the construction phase are discussed within the full EIAR, these measures include but are not limited to:

- Selection of quiet plant;
- Control of noise sources;
- Screening;
- Hours of work;
- Liaison with the public; and
- Monitoring.

After mitigation, it is anticipated that the residual worst-case effect of the construction phase noise will remain temporary to short-term, negative, and significant to very significant. However, it is important to note that this worst-case residual effect will occur at certain NSLs highlighted within the noise and vibration chapter, which are closest to the construction and demolition work areas related to the various phases of construction. For most of the construction periods, construction works will be further from NSLs, resulting in a lower impact. It is also important to note that construction activities are inherently transient, meaning noise intrusive works will likely only affect the nearest NSLs for brief periods.

12.3.2 Operational Phase

Mitigation measures to be implemented during the operational phase are discussed within the full EIAR these measures mainly relate to the selection of quiet plant as well the suppression of break out noise from items of mechanical plant, where required for residential buildings. The residual operational noise impact in relation to the mechanical plant and services noise will be neutral, Imperceptible and long term.

The residual impact of the traffic on the surrounding roads and Outward noise from the proposed Plaza and Creche will be negative, not significant and long term.

12.4 Monitoring

12.4.1 Construction Phase

During the demolition/construction phase the contractor will carry out noise monitoring at representative NSLs to evaluate and inform the requirement and / or implementation of noise management measures. Noise monitoring will be conducted in accordance with ISO 1996–1 (ISO 2016) and ISO 1996–2 (ISO 2017).

12.4.2 Operational Phase

There are no proposed monitoring requirements associated with the operational phase of the proposed Development.

CHAPTER 13 | Air Quality & Climate

The assessment of Air Quality & Climate is contained within Chapter 13 of Volume II.

13.1.1 Existing Environment

According to the 2012 Regulations (S.I. No. 326 of 2012) the proposed site falls into 'Zone B' of Ireland which is described by the EPA as 'Cork Conurbation'. It is expected that existing ambient air quality in the vicinity of the site is characteristic of a suburban location with the primary source of air emissions such as particulate matter, NO2, and hydrocarbons likely to be of traffic, combustion and agriculture, and domestic fuel burning.

The closest representative suburban background monitoring to the site which continuously monitors for concentrations of nitrogen oxides (NO2) and particulate matter (PM2.5 and PM10) is located on the South Link Road on the south side of Cork City (ca. 9.10km northwest of the site). Air quality monitoring carried out at this location is likely to be broadly representative of conditions that may be experienced at the site. Concentrations of NO2 are also well below the threshold limits contained within the regulations at South Link Road monitoring station, with an annual mean of 17.9 ug/m3 and 15.0 ug/m3 and measured in 2022 and 2023, respectively (EPA, 2023; EPA, 2024).

EPA 2023 background concentrations for South Link Road have been used in combination with correction factors to estimate current annual average NO2 concentrations in the region of the proposed development. These factors have been adapted from both TII (2011) and DEFRA roadside NO2 projection factors. Based on these correction factors, the estimated baseline year (2024) background NO2 concentration in the region of the proposed development is 14.1 µg/m3.

EPA 2022 1background concentrations for South Link Road have been used in combination with correction factors to estimate current annual average PM10 concentrations in the region of the proposed development. These factors have been adapted from both TII (2011) and DEFRA roadside NO2 projection factors. Based on these correction factors, the estimated current background PM10 concentration in the region of the proposed development is 15.6 µg/m3.

13.1.2 Impact Assessment

13.1.2.1 Do Nothing Scenario

If the proposed development were not to proceed, ambient air quality at the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from potential new developments in the surrounding area, changes in road traffic etc). Under the Do-Nothing Scenario construction works associated with the proposed development will not take place. Impacts from increased traffic volumes and associated emissions from the proposed development will also not occur. Therefore, the do-nothing scenario is considered neutral in terms of air quality.

13.1.2.2 Demolition & Construction Phase

A construction phase dust assessment has been carried out in accordance with the Institute of Air Quality Management (IAQM) Guidance on the assessment of dust from demolition and construction (2024). The risk of dust impacts has been assessed separately for demolition, earthworks, construction and trackout and the dust emission magnitude has been classified for each of the three activities (this is known as 'Step 2A' of the dust assessment), using the definitions outlined for each activity within the Institute of Air Quality Management (IAQM) guidance. The dust emission magnitude is based on the scale of the anticipated works and is classified as small, medium and large. The sensitivity of the area was determined for dust soiling and human health impacts, respectively, as per the guidance (this is known as 'Step 2B' of

1 There is no data for South Link Road in 2023 due to operational issues.

the dust assessment). In accordance with the Institute of Air Quality Management (IAQM) guidance, the dust emission magnitude (Step 2A) and sensitivity of the area (Step 2B) have been combined and the risk of impacts from demolition, construction, earthworks and trackout have determined (before mitigation is applied) (this is known as 'Step 2C' of the dust assessment). This risk has then been used to inform the selection of appropriate mitigation measures.

Table 10 details the risk of dust impacts for demolition, earthworks, construction and trackout activities without mitigation measures.

Table 10 Summary of Unmitigated Risks

Potential Impact	Sensitivity	Magnitude			
		Demolition	Earthworks	Construction	Trackout
		Small	Large	Large	Large
Dust Soiling Impacts	High	Medium Risk	High Risk	High Risk	High Risk
Human Health Impacts	Low	Negligible	Low Risk	Low Risk	Low Risk
Ecological Impacts	Not applicable – no ecological receptors within the study area.				

The dust risk categories detailed in Table 10 been used to define the appropriate, site-specific, mitigation measures to be adopted.

Construction traffic is not expected to result in a significant change (> 10%) in AADT flows near to sensitive receptors. Therefore, a detailed air quality assessment is not required.

13.1.2.3 Operational Phase

It is predicted that fossil fuel combustion gas emissions including carbon dioxide, sulphur dioxide, nitrogen oxides, carbon monoxide and hydrocarbon particulate emissions will be minor and ongoing for the operational phase of the development and will not have a significant adverse impact on the existing ambient air quality in the vicinity of the site. The air dispersion modelling concluded that the operational phase is likely to result in a long-term increase in Nitrogen Dioxide (NO2) concentrations in the locality, however, this increase in traffic has been determined to have an overall insignificant impact in terms of local air quality. Furthermore, the increase in traffic has been determined as marginal with regard to climatic impacts. Therefore, no residual significant impacts are anticipated from the proposed development in the context of air quality and climate.

13.1.3 Mitigation

13.1.3.1 Incorporated Design Mitigation

The dwellings will be required to minimise overall energy use and to incorporate an adequate proportion of renewable energy in accordance with Building Regulations Part L 2022, Conservation of Energy and Fuel. The following points related to embodied carbon will be considered for the proposed development:

- Reduce the weight of equipment. Specify products that can be demounted and reused. Specify products with long lifespans;
- Mitigate refrigerant impact through low refrigerant Global Warming Potential (GWP) and leakage rates;
- Plant should be easily accessible for inspection, maintenance and replacement;
- Design with adaptation in mind;

- Less is more, design out mechanical, electrical and pumping (MEP) where feasible;
- Source local materials where possible; and
- Source materials with an Environmental Product Declaration (EPD) where possible.

13.1.3.2 Demolition & Construction Phase

Communications

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager;
- Display the head or regional office contact information; and
- Develop and implement a Dust Management Plan (DMP), the final dust management plan will form part of the overall construction management plan which will formally be prepared and submitted to Cork County Council post grant of planning permission.

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Make the complaints log available to the local authority when asked;
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book; and
- Hold regular liaison meetings with other high risk construction sites within 250m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

Monitoring

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of site boundary, with cleaning to be provided if necessary;
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Cork County Council when asked; and
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Preparing and Maintaining the site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period;
- Avoid site runoff of water or mud;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below; and
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicle/Machinery and Sustainable Travel

- Ensure all vehicles switch off engines when stationary - no idling vehicles;
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable; and
- A speed restriction of 20 km/hr will be applied as an effective control measure for dust for on-site vehicles using unpaved haul roads.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/ mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- Avoid bonfires and burning of waste materials.

Measures Specific to Demolition

- Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground;
- Avoid explosive blasting, using appropriate manual or mechanical alternatives; and
- Bag and remove any biological debris or damp down such material before demolition

Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- Only remove the cover in small areas during work and not all at once.

Measures Specific to Construction

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

Measures Specific to Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport;
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site log book;

- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned;
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and
- Access gates to be located at least 10 m from receptors where possible.

13.1.3.3 Operational Phase

It has been determined that the Operational Phase air quality impact is negligible and therefore no site-specific mitigation measures are proposed.

13.1.4 Residual Impact Assessment

The proposed mitigation measures will ensure that a potential significant adverse effect will not occur, therefore, the residual effect will not be significant.

The traffic generated by the proposed development has been assessed for its impact on air quality and it has been determined to have an overall not significant impact in terms of local air quality with the implementation of the proposed mitigation measures.

13.1.5 Monitoring

The following Table summarises the Construction Phase mitigation and monitoring measures.

Table 11 Summary of Construction Phase Mitigation and Monitoring

Likely Significant Effect	Quality	Significance
Dust nuisance	Negative	Imperceptible
Traffic Emissions	Negative to neutral	Imperceptible

The following Table summarises the Operational Phase mitigation and monitoring measures.

Table 12 Summary of Operational Phase Mitigation and Monitoring

Likely Significant Effect	Quality	Significance
Traffic Emissions	Negative to neutral	Imperceptible

CHAPTER 14 | Cultural Heritage – Archaeology & Built Heritage

The assessment of Cultural Heritage – Archaeology & Built Heritage is contained within Chapter 14 of Volume II.

14.1 Existing Environment

There are no registered archaeological monuments within the proposed development site. The closest registered site is a fulacht fia (CO098-085), 300m to the southwest and a ringfort (CO098-017001) and souterrain (CO098-017002), 370m to the northeast. In total, there are twenty-four registered archaeological sites within 1km of the proposed development site (the Study Area), providing evidence for human settlement and activity dating to the Bronze Age (*circa* 2200 to 700BC). There are no Protected Structures (PS), or structures listed in the National Inventory of Architectural Heritage (NIAH) within the proposed development site. The closest PS is Kilmoney Abbey (CO098-016; PS634), situated 960m to the northeast.

Much of our archaeological heritage exists as subsurface remains, often unrecorded. The proposed development site comprises a large greenfield site with the potential to contain subsurface archaeological remains.

14.2 Impact Assessment

14.2.1 Do Nothing Scenario

If development does not proceed, the existing landscape will remain unchanged, preserving its current condition and allowing any potential archaeological sites to remain undisturbed beneath the surface.

14.2.2 Demolition Phase

No archaeological, architectural, or cultural heritage effects are predicted by the removal of existing modern agricultural sheds along the eastern boundary of the proposed development site.

14.2.3 Construction Phase

Archaeology – Registered archaeological sites

There are no registered archaeological monuments within the proposed development site. There will be no significant direct or indirect effect on any registered archaeological site during the construction phase.

Archaeology – Potential previously unknown archaeological sites or features

Much of our archaeological heritage survives only as subsurface remains, often unrecorded. The construction phase of the proposed development will involve extensive topsoil stripping and ground reduction, which would directly and negatively impact any previously unknown archaeological remains.

The geophysical survey conducted on the proposed development site identified no definitive archaeological sites. However, several anomalies of uncertain origin, (designated A, B, C and K) were highlighted as potentially archaeological. Due to the unknown and unquantified nature of these anomalies, any impact on them is assessed as direct and negative. Determining the extent and significance of these effects will require further archaeological investigation, an agreed programme of targeted archaeological testing.

The proposed development site is a large greenfield site with the potential to contain subsurface archaeological features. Any ground disturbance carries the risk of uncovering previously unknown archaeological material. The impact on such unrecorded archaeological sites is also assessed as direct and negative with the extent and significance of the effects remaining uncertain pending further archaeological investigation, through archaeological testing.

One area in the southern-central section of the proposed development is densely wooded and was neither visually inspected nor subject to a geophysical survey. This woodland will be incorporated as part of an active open space for future residents, featuring amenities such as a wooded play area, a green amphitheater, a kick-about lawn, and an exercise station. These works may impact any surface/subsurface archaeological remains that could exist within this landscape.

Architectural Heritage

There are no protected structures or structures listed in the NIAH or architectural sites of merit within the proposed development site.

There will be no significant direct or indirect effect on any registered architectural site or any structure of architectural merit during the construction phase.

14.2.4 Operational Phase

No archaeological, architectural, or cultural heritage effects are expected during the operational phase of the proposed development.

14.2.5 Cumulative Impact

The cumulative impacts of the proposed development, together with those of permitted or proposed projects in the vicinity, on the cultural heritage environment were assessed. The proposed development will not affect any registered archaeological or architectural sites. However, the impact on any potential subsurface archaeological remains, which may exist beneath the surface, is unknown and unquantified without further investigation, through archaeological testing.

Construction works for the proposed development, as well as those associated with other projects in the area (refer to Chapter 1 for details), will involve large-scale ground disturbance that could uncover previously unknown archaeological features or finds. The combined effect of all these developments could have a cumulative impact on the archaeological landscape. The greater the extent of ground disturbance, the higher the risk of negatively affecting potential subsurface archaeological remains. If such features are preserved by record, they will be permanently removed from the cultural heritage landscape, contributing to an overall negative cumulative effect on the cultural heritage of the local area.

The cumulative impact cannot be fully assessed without understanding the extent, if any, of subsurface archaeological sites which may be identified during construction within the proposed development site and within the permitted developments in nearby areas.

14.3 Mitigation

14.3.1 Incorporated Design

Licensed archaeological testing of the proposed development site is scheduled for early 2025, pending a licence from the National Monuments Service. Should archaeological features or deposits be revealed during these investigations, both the National Monuments Service and the Planning Authority will be consulted. All newly identified archaeological sites

will be preserved *in situ* or by record and sufficient time and resources will be allowed to resolve all archaeological matters. Preservation *in situ* will require the relocation of the element of the development beyond the area of archaeological sensitivity. Preservation by record will require the excavation of the archaeological material and such material will be fully resolved to professional standards of archaeological practice (Policy Guidelines on Archaeological Excavation – Department of Arts, Heritage, Gaeltacht, and the Islands). This work will be funded by the developer.

14.3.2 Demolition & Construction Phases

No archaeological, architectural, or cultural heritage effects are predicted during the demolition phase of the proposed development; therefore, no mitigation measures are proposed.

Licenced archaeological monitoring will be conducted within the wooded area (Field 14) during proposed landscaping works. For the remainder of the development site and based on the results of archaeological testing and consultation with the County Archaeologist, licenced archaeological monitoring may be required during the construction phase. The requirement and extent of this monitoring will be determined based on the findings of archaeological testing and following discussions with the County Archaeologist.

14.3.3 Operational Phase

No archaeological, architectural, or cultural heritage mitigation is proposed during the operational phase of the proposed development; therefore, no mitigation measures are proposed.

14.4 Residual Impact Assessment

No residual archaeological, architectural, or cultural heritage effects are predicted during the demolition phase.

No residual significant effects on the archaeological, architectural, and cultural heritage environment are expected following the implementation of appropriate mitigation measures.

No residual archaeological, architectural, or cultural heritage effects are predicted during the operational phase of the proposed development.

No residual cumulative effects are predicted following implementation of appropriate mitigation measures.

14.5 Monitoring

Licenced archaeological monitoring will be conducted within the wooded area (Field 14) during proposed landscaping works. For the remainder of the development site and based on the results of archaeological testing and consultation with the County Archaeologist, licenced archaeological monitoring may be required during the construction phase. The requirement and extent of this monitoring will be determined based on the findings of archaeological testing and following discussions with the County Archaeologist.

CHAPTER 15 | **Risk Management**

The assessment of Risk Management is contained within Chapter 15 of Volume II.

15.1 Existing Environment

The site, which is 12.97 hectares in area, with a net developable area of 10.24 hectares, is located along Mountain Road, in the townland of Kilmoney, Carrigaline, Co. Cork.

The subject land is predominantly a greenfield site which has features and characteristics which will help create a positive living environment by retaining the natural assets and ecological features contained within its parkland setting. There are a number of natural hedgerow boundaries on each side of the site, with an overgrown area located in the centre of the site which provides an opportunity to create a natural and central amenity area.

15.1.1 Topography

The site slopes from the southwestern corner of the site towards the north eastern corner. The site has a high point in the southwestern corner of the site 62.5m OD datum to a low point on the north eastern corner of the site of 52.75m OD datum.

15.1.2 Flood Risk

A Site-Specific Flood Risk Assessment has been carried out by OSL Consulting Engineers and is submitted under separate cover. The site including all proposed residential dwellings is located in Flood Zone C as defined by the requirements of "The Planning System and Flood Risk Management, Guidelines for Planning Authorities" and its Technical Appendices.

15.1.3 Seismic Activity

In Ireland, the principal seismic events have occurred along/beyond the east, south-east and south of Ireland with seismic movements generally up to 2.9 Magnitude recorded on land with no large seismic events recorded in the immediate vicinity of the subject site.

15.1.4 COMAH/SEVESO Sites

The Seveso Directive (Directive 82/501/EEC, Directive 96/82/EC, Directive 2012/18/EU) was developed by the EU after a series of catastrophic accidents involving major industrial sites and dangerous substances. Such accidents can give rise to serious injury to people or serious damage to the environment, both on and off the site of the accident.

There are 29 no. Seveso sites (14 no. lower tier and 15 no. upper tier) located Cork County Council administrative area.

There are no Seveso sites in close proximity to the proposed development. The closest to the subject site is the Carbon Chemicals Group Limited which is a 'lower tier establishment' and is over 5.6km from the subject site, located in Ringaskiddy, Co. Cork. The most recent COMAH inspection of the premises was in October 2024. In event of an emergency HSA Regulation 25 information for Carbon Chemical Group Limited states the following:

> *"The public likely to be affected will be warned by one or more on-site sirens. / Information on what to do in the event of a major accident is available at the website listed immediately below (www.carbon.ie)"*

Given the low risk and 'lower tier' nature of Carbon Chemicals Group Limited premises and the distance to the proposed development, it is not considered a concern for the proposed development at construction or operational phase.

15.2 Impact Assessment

15.2.1 Do-Nothing Scenario

The site will remain as underutilized greenfield area.

15.2.2 Construction and Demolition Phase

No scenarios of concern have been identified during the construction phase. As such the predicted impact is considered to be short term, imperceptible and neutral.

15.2.3 Operational Phase

The proposed development is not located in an area prone to flooding or an area prone to seismic events or within close proximity to a COMAH/Seveso site. As such, these accident scenarios are not of concern.

15.3 Residual Impact Assessment

Control measures will be put in place for health and safety and environmental management as per conditions of the planning permission, relevant code of practices and relevant legislation. The residual impacts will be negligible once all control, mitigation and monitoring measures have been implemented. The potential for dust or noise from the site operations to cause any nuisance to nearby receptors is deemed to be negligible and the adherence and full implementation of the appropriate control and mitigation measures will ensure there is no potential for cumulative effects to arise

CHAPTER 16 | Description of Significant Interactions

Likely significant interactions are set out in Chapter 16 of the EIAR. In practice many impacts have slight or subtle interactions with other disciplines. During the preparation of this EIAR each of the specialist consultants engaged with each other with respect to the likely interactions between effects predicted as a result of the proposed development. Mitigation measures to alleviate identified likely significant effects address identified interactions. This approach meets with the requirements of Part X of the Planning and Development Act 2000, as amended, and Part 10, and schedules 5, 6 and 7 of the Planning and Development Regulations 2001, as amended.

CHAPTER 17 | **Summary of Mitigation & Monitoring Measures**

A key objective of the Environmental Impact Assessment process is to identify likely significant environmental impacts at the pre-consent stage and where necessary to propose measures to mitigate or ameliorate such impacts. Monitoring Measures must be incorporated in the Development Consent for a Project if the Project is likely to have significant adverse effects Article 8a of the EIA Directive, requires that monitoring measures proposed (if appropriate) should be included in the EIA Report.

Chapter 17 of Volume II of this EIAR provides a summary of the mitigation and monitoring measures proposed for each discipline throughout the EIAR.

It is proposed that the appointed contractor will develop a site-specific Construction and Environmental Management Plan (CEMP) prior to works commencing on-site. All the mitigation and monitoring measures proposed within the individual specialists' assessments will be incorporated into the plan.