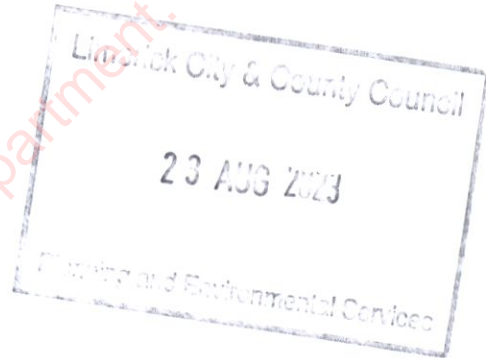


ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Part B – Main Report



HRA | PLANNING
chartered town planning consultants

Limerick City & County Council
23 AUG 2023
Planning and Environmental Services

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CHAPTER ONE INTRODUCTION

1.1 INTRODUCTION

This Environmental Impact Assessment Report (EIAR) has been prepared on behalf of Riverpoint Construction Limited for a proposed residential development for a residential development on land located between the Old Cratloe Road and Pass (Meelick) Road in the western environs of Limerick City. Planning permission is sought to construct 54 no. residential units on a planning application site of 2.56 hectares and a net residential development area of 1.81 hectares. The full extent of the site is detailed in Figure 1.1.

This EIAR has been prepared in response to a further information request issued under Article 103(1)(b)ii of the Planning and Development Regulations 2001 as amended (the Regulations) by Limerick City & County Council under planning reference 22/959. The further information requested that,

“Information as specified in Schedule 7A of the Planning and Development Regulations 2001 for the purposes of EIA Screening determination is required. The information should include the results of the Article 33 request which concerned the potential for cumulative impact considerations having regard to existing and or permitted development”.

A Screening Assessment of the development proposal, including the proposed masterplan was undertaken having regard to the information required under Schedule 7A, taking into account, where relevant, the criteria set out in Schedule 7 of the Regulations. The cumulation of the impact with the impact of other existing development the subject of a consent for proposed development for the purposes of Section 172(1A)(b) of the Act was considered and in particular the cumulative impact arising from the overall masterplan proposal which will provide for a total of 448 no. residential units, childcare facility and neighbourhood centre (4 no. commercial units) on an overall site of 22.53 hectares.

The proposed residential development of 54 no. residential units on a site of 2.56 hectares does not exceed the criteria set out for mandatory Environmental Impact Assessment (EIA).

Section 172 of the Planning & Development Act 2000, as amended, does set out the basis for EIA for developments which do not equal or exceed, the relevant quantity, area or other limit specified in Part 2 of Schedule 5, i.e., “sub-threshold development”. Cumulatively, when the proposed development is considered in conjunction with previous phases of development (only Phase 1 has been granted permission), the extent of the overall phased masterplan proposal exceeds the mandatory EIA threshold of 10 hectares in a built-up area. Accordingly, it was deemed appropriate to consider the potential for significant effects on the environment and to prepare an EIAR in relation to the subject development, to ensure that the proposed development, in its own right and when considered in conjunction with the overall masterplan, would not negatively impact on the environment.

1.2 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment (EIA) is a procedure under the terms of European Directives¹ for the assessment of the effects of development projects on the environment. An Environmental Impact Assessment Report (EIAR) is a statement prepared by the developer, providing information on the significant effects on the environment based on current knowledge and methods of assessment. It is carried out by competent experts, with appropriate expertise to provide informed assessment on their discipline.

The primary objective of the EIAR is to identify the baseline environmental context of the proposed development, predict potential beneficial and/or adverse effects of the development and propose appropriate mitigation measures where necessary. In preparing the EIAR the following regulations and guidelines were considered:

- The requirements of EC Directives and Irish Regulations regarding Environmental Impact Assessment;
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, 2022);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018, Department of Housing Planning & Local Government; and
- In addition, specialist disciplines have had regard to other relevant guidelines, as noted in the specific chapters of the EIAR.

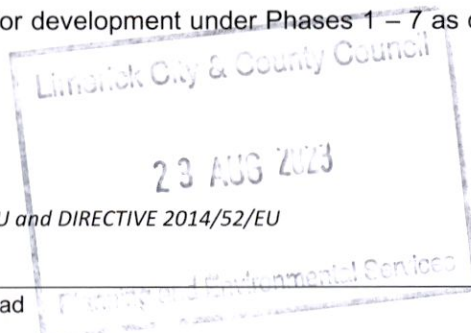
1.3 FUNCTION OF THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

This EIAR is a statement of the effects, if any, which the proposed development, if carried out, would have on the environment. It consists of a systematic analysis and assessment of the potential effects of a proposed project on the receiving environment. The function of the EIAR is to:

- Establish the existing environmental characteristics of the proposed site;
- Provide details of the proposed development and associated secondary developments;
- Predict the likely significant effects of the development on the environment;
- Outline the measures considered necessary to avoid, reduce or mitigate the negative impacts identified both individually and cumulatively to an acceptable degree;
- Identify areas requiring reinstatement and on-going monitoring.

The EIAR has been prepared following the logical analysis of the development proposal in relation to the receiving environment. This process of environmental impact 'assessment' and the preparation of this report has been an evolving iterative process. In order to avoid, reduce or negate potential adverse environmental effects, and to ensure holistic consideration of all environmental issues, the EIAR for this project has been cognisant of baseline environmental conditions established and assessed within the wider masterplan site, including all areas proposed for development under Phases 1 – 7 as detailed on Drawing MP-01.

¹ EU Directive 85/337/EEC as amended by Directives 2011/92/EU and DIRECTIVE 2014/52/EU



For the avoidance of doubt, all necessary technical information required for the purpose of the EIAR is enclosed within this report. Consideration of this EIAR is not reliant upon consideration of any data contained in any other separate assessment.

Prior to lodging this application, the required information has been issued for the Department of Housing, Planning and Local Government's EIA Portal. The purpose of this tool is to inform the public, in a timely manner, of applications that are accompanied by an EIAR. The portal provides a URL link.

1.4 TECHNICAL DIFFICULTIES or LACK OF DATA

The compilation of the information necessary for the EIAR did not present any significant difficulties. However, some assumptions and projections were necessary for certain areas of this assessment, particularly the traffic and noise assessments.

Although preliminary and national data has been published from the Census of Population 2022, at the time of writing there is no Small Area Population (SAP) figures available. Accordingly, this EIAR continues to use SAP figures sourced from the Census of Population 2016. Accordingly, data relating to the economic, demographic and social characteristics of the surrounding area have been primarily sourced from 2016 Census of Population with some DED information utilized from the 2022 Census of Population.

In respect of traffic and transport, the modelling for the proposed development as detailed in Chapter 12.0, uses traffic count surveys undertaken during the ongoing Covid-19 pandemic in 2021. However, there were no formal travel restrictions in place at the time and schools were open, so it is not considered that counts have been distorted.

Survey work has been undertaken to complement data from official sources in order to provide up-to-date base line information on which to undertake the environmental assessments. This EIAR has been prepared on the best available information and in accordance with current best practice and guidelines published by the Environmental Protection Agency.

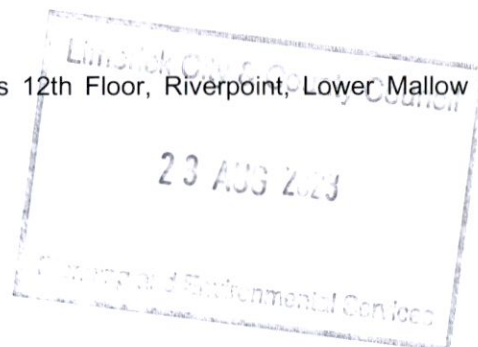
1.5 THE APPLICANT

The Riverpoint Construction Limited registered office is 12th Floor, Riverpoint, Lower Mallow Street Limerick.

1.6 THE DEVELOPMENT

1.6.1 Site Context

The site is located approximately 3.5km from Limerick City centre, in the western environs of the city, adjoining the built-up area and existing residential development. The general area comprising the masterplan site has a rural feel, notwithstanding significant residential and educational developments immediately to the east. The site is within close walking proximity to the Technological University of the



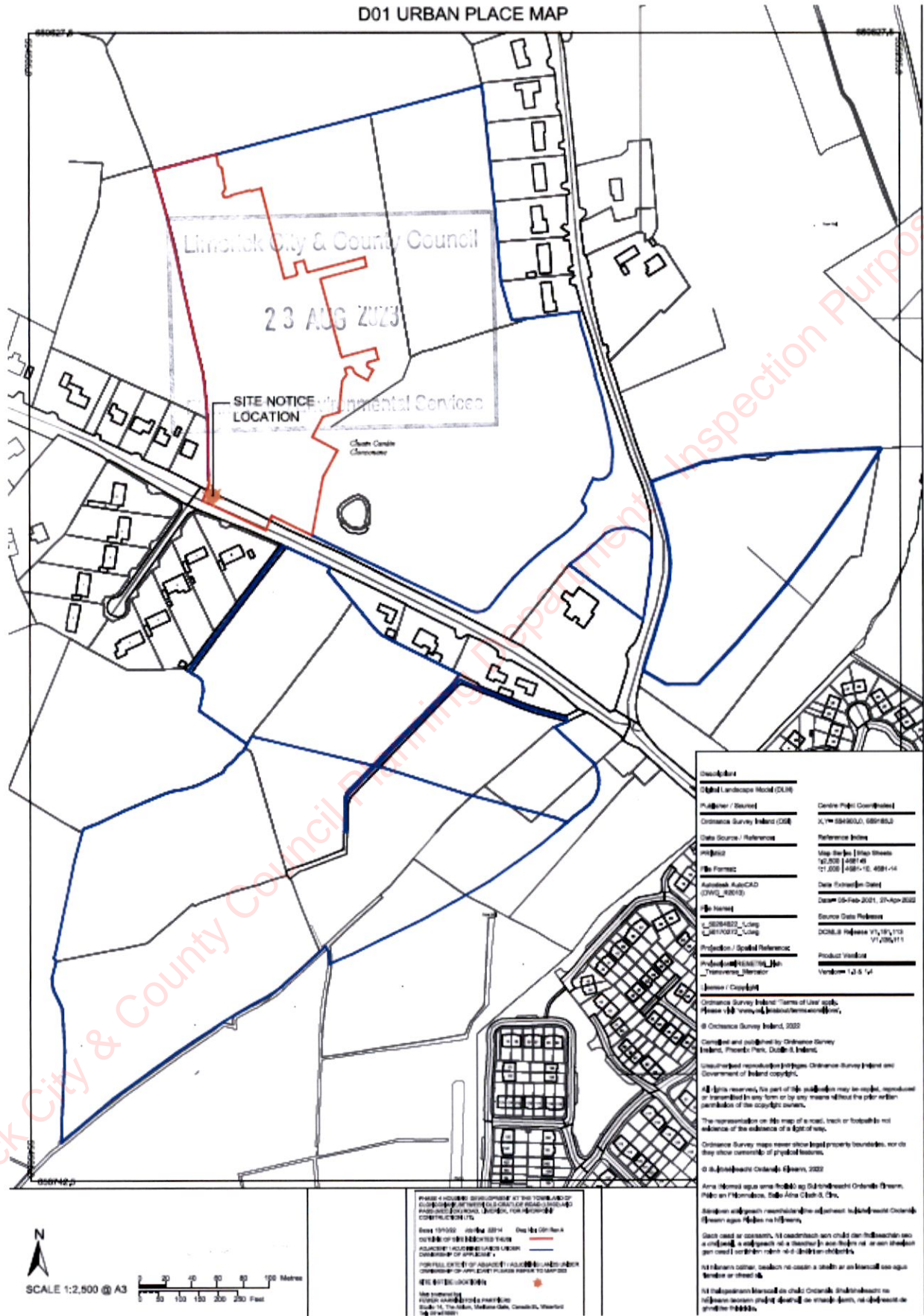


Figure 1.1 Site Extent defined in Red with Land in Blue in Client Ownership

Shannon (TUS) and Thomond Park. A 10 minute walk from the site provides connectivity across the city via bus route No.302 on the Old Cratloe Road.

The subject application comprises Phase 3 as identified in red in Figure 1.1. Specifically, the application site is surrounded to the north, east and west by greenfield land and to the south by the Old Cratloe Road. Whilst the western boundary is defined by a mature hedgerow, the eastern boundary, whilst currently undeveloped, is subject to a residential planning application (Phase 3) on its north eastern boundary and a proposed neighbourhood centre development on its south eastern boundary (currently on further information). The site is irregular in shape, duly designed to accommodate future phases of development.

The masterplan site is bound by the Old Cratloe Road to the south and the Meelick Road to the east, both of which are being upgraded and realigned as part of the Coonagh–Knockalisheen Distributor Road scheme which is currently on site and expected to be complete by 2025/25. Currently, the site comprises a parcel of agricultural land. The area proposed for development is set within a former golf course which was still in use in the 1990s but reverted back to agricultural use by 2000. There are remnants of the landscape characteristics of the golf course evident within the site, with a pond located on the western boundary which appears to dry up in Summer months.

1.6.2 The Proposed Development

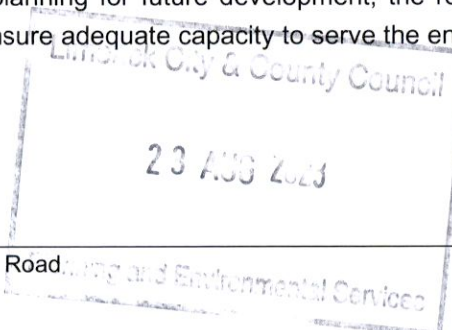
The development as described in the public notices is set out hereunder

Planning permission for the construction of 54 residential units comprising of the following: 30 No. 3 storey, 5 bed, semi-detached units; 2 No. 2 storey, 4 bed, semi-detached units; 14 No.2 storey 3 bed semi detached units; 4 No. single storey 2 bed, end of terrace units and 4 No. single storey 2 bed, mid terrace units. Installation of all necessary and associated site works to include vehicular and pedestrian connections onto Old Cratloe Road (L3102), roadways, footpaths, green spaces, landscaping and boundary treatments, together with all associated drainage connection works and all ancillary site works.

It is important to note that this application seeks permission for an overall site as defined in red of 2.56 hectares but with a net residential developable area of 1.81 hectares. The net residential developable area represents that land which shall be developed and excludes the proposed Distributor Road, which ultimately is intended to provide access to adjoining land.

1.6.3 The Masterplan

Whilst the proposed development comprises an application site of 2.56 hectares, the applicant owns and is proposing development on an overall site of 22.53 hectares. A holistic approach to development has been adopted and an overall masterplan has been prepared for 22.53 hectares of land with capacity to deliver circa 448 no. residential units, a childcare facility and neighbourhood centre (4 no. commercial units) and a significant Biodiversity area as detailed in Figure 1.2. However, this total number is likely to change and can only be finally determined once planning permission has been secured for each phase of development. In terms of infrastructure and planning for future development, the roads and water services have been planned from the outset to ensure adequate capacity to serve the entire masterplan area.



Delivery 1, Phase 1 and Delivery 5, Phase 3 of the overall development was granted planning permission by the planning authority for 99 no. residential units but is currently on appeal to An Bord Pleanála. Table 1.1 clarifies the intent of the overall development site in terms of a phased approach to development and the delivery of units within each phase of development as detailed in Figure 1.2. This is provided as an indication of future development on site but could be subject to change as each proposal advances.

Delivery	Development	Gross Site Area defined by red line boundary	Status	Plan Ref. No.
Delivery 1	Phase 1 - 99 residential units	3.4 ha.	Planning permission granted on appeal to An Bord Pleanála	P21/1800
Delivery 2	Childcare Facility.	0.43 ha.	Granted Permission	P22/790
Delivery 3	Phase 2 - 86 residential units	2.19 ha.	Granted Permission	P22/817
Delivery 4	12 residential units & neighbourhood facility	1.49 ha.	Clarification of Further Information Request	P22/917
Delivery 5	Phase 3 - 98 residential units	9.45 ha.	Planning permission granted on appeal to An Bord Pleanála	P22/959
Delivery 6	Phase 4 - 54 residential units	2.55 ha.	Further Information Request	P22/1114
Delivery 7	Phase 5 - 99 residential units	3.02 ha.	Future development	

Table 1.1 Phased Approach within Overall Masterplan

1.7 PLANNING APPLICATION AND ENVIRONMENTAL ASSESSMENT – CLARIFICATION

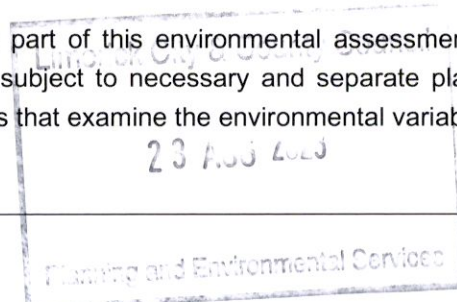
For the avoidance of doubt, all works proposed as part of the planning application for which planning permission is being sought, and described in the statutory notices, have been subject to environmental assessment which is presented in this EIAR. The 'physical characteristics' of these development works are presented and described in further detail in the following chapters. These characteristics of development present a phased approach to development on the lands and the proposed phasing approach is described and assessed as part of this EIAR.

However, in order to ensure an effective and conclusive environmental assessment consistent with best practice, the assessment of potential effects on the environment examines; the effects arising from the physical characteristics of the proposed residential development of 54 no. units (for which planning permission is sought) and also; the collective cumulative effects of the overall proposed masterplan development (448 no. units, creche & neighbourhood centre) if and whenever it is implemented.

The examination of the 'all phase' development scenario for the site is consistent with best practice in order to examine a 'worst-case' scenario of the project effects.

Examination of this 'worst-case' scenario is based on the likely effects of the proposed development as Phase 4 (Delivery 6) of the overall development and the anticipated activities that will occur from subsequent construction and operational stages of remaining phases based on the information known and available at this time in respect to those subsequent phases. The number of units within these subsequent phases are likely to change as planning permissions are sought and granted. However, the overall environment impacts if any and effects should not substantially change.

Despite the consideration of all development phases as part of this environmental assessment, the residential development as set out in the masterplan is subject to necessary and separate planning consent. This approach is applied in the relevant chapters that examine the environmental variables.



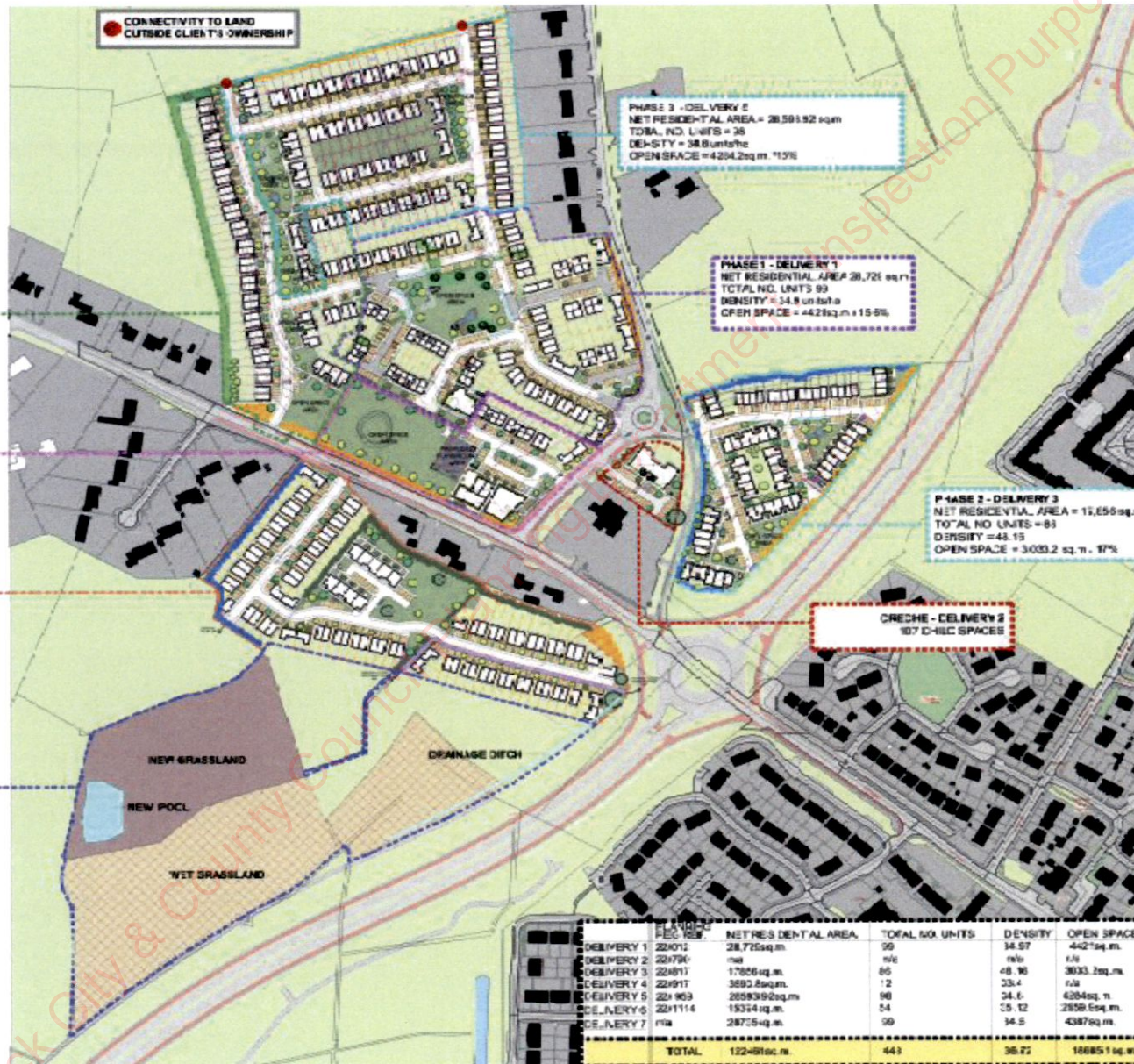


Figure 1.2
Masterplan Layout

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1.8 REQUIREMENT FOR ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Environmental Impact Assessment (EIA) requirements derive from EU Directives. Council Directive 2014/52/EU amended Directive 2011/92/EU and is transposed into Irish Law by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.

Proposed development which falls within one of the categories of development 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 subject development does not fall within development classes set out in Part 1 of Schedule 5.

Whilst the proposed development of 54 no. units does not of itself fall within a development class set out in Part 2 of Schedule 5, the overall masterplan of 448 no. units on 22.53 hectares of land does and the applicable category is 10(b)(iv).

(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere. (In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)

The proposed development comprises 2.56 hectares (as defined by red line boundary inclusive of the biodiversity area) and is therefore sub-threshold mandatory EIA.

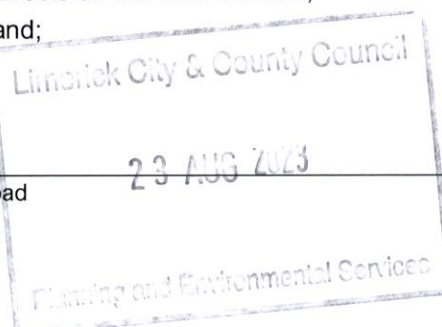
The application site is located within the edge of the built up area of the western environs of Limerick City. A threshold of 10 hectares applies to a built-up area. The overall masterplan site comprises 22.53 hectares. The proposed development, when considered in conjunction with the previous phases of development, will cumulatively exceed the 10 hectares threshold. Having regard to development which has already occurred within the masterplan area and future residential development, which is likely to be delivered, a non-mandatory EIAR has been prepared in the interests of the proper planning and sustainable development of the area.

1.9 STRUCUTRE OF THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

1.9.1 Layout of the EIAR

The EIAR comprises five parts which include:

- (A) Non – Technical Summary;
- (B) Introduction and Overview;
- (C) Project Characteristics likely to have significant Effects on the Environment;
- (D) Examination of the Effects on the Environment, and;
- (E) Interaction of the Foregoing



The 'Non-Technical Summary' presents a synopsis of the specialist technical reports, and commentary on the significant direct and indirect effects on the environment. It omits technical terms and abbreviations but does not understate any issues of significance that may arise from the project. The 'Introduction and Overview' provides details on how the EIAR is structured, presents the project characteristics, the need for the development and the planning context, and details a number of alternatives that were considered in preparing the proposal. The section 'Project Characteristics likely to have Significant Effects on the Environment' details the project phase by phase from construction through to the operational phase. The effects of the project on identified environment variables are then undertaken whilst the final section of the EIAR examines the interaction between the examined variables.

1.9.2 Assessment Criteria

The EIAR includes a simplistic and systematic methodological assessment of the proposed development under the following sub-headings:

- Introduction
- Assessment Methodology
- Receiving Environment
- Likelihood of Impacts
- Description and Significance of Impacts
- Remedial and Mitigation Measures
- Residual Impacts
- Monitoring
- References



1.9.3 Significance of Environmental Effect

The effects on the receiving environment are measured as the likely natural or physical changes in the environment resulting directly or indirectly from the development processes. Consideration of these effects was undertaken by assessing the proposed development against the defined environmental variables set out in the Planning and Development Regulations 2001, as amended and the recently EPA published Guidelines on the Information to be Contained in Environmental Impact Assessment Reports

Impacts or effects are described in Guidance documents in terms of quality, significance, magnitude, probability, duration, and type. Table 1.2 below presents the description of the significance of effects and Table 1.3 presents the description of the duration of effects as shown in the Guidelines.

"Significance" is a concept that can have different meaning for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	
Imperceptible	An effect capable of measurement but without noticeable consequences
Not significant	An effect which causes noticeable changes in the character of the environment but without noticeable 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 trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.

Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics

Table 1.2 Describing the Significance of Effects

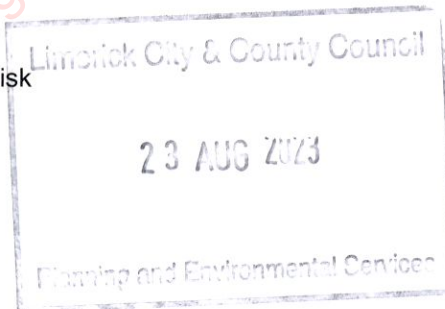
'Duration' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	
Momentary Effects	Effects lasting from seconds to minutes.
Brief Effects	Effects lasting less than a day.
Temporary Effects	Effects lasting less than a year.
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years.
Permanent Effects	Effects lasting over sixty years.

Table 1.3 Describing the Duration of Effects

1.9.4 Environmental Variables

The potential significance of the environmental variables was first identified in the scoping exercise that preceded the preparation of the EIAR. Further details of the scoping approach is detailed in Chapter 4.0. The environmental variables assessed for this project extend to include:

- Population & Human Health
- Biodiversity
- Land & Soils
- Water – Hydrology, Hydrogeology & Flood Risk
- Air Quality
- Noise & Vibration
- Climate
- Material Assets - Traffic & Transport
- Material Assets – Utilities & Waste
- Cultural Heritage - Archaeology
- The Landscape – LVIA



In assessing each of the above variables, examination was undertaken in terms of their context, character, significance and sensitivity in respect to the proposed development and location. The level of detail and information presented and assessed for each of the above variables differs depending on the context, character, significance and sensitivity of each variable within this receiving environment and, the potential effects that the proposed development may have on each variable.

1.10 COMPETENCIES OF TEAM

The preparation of this EIAR has been project managed by HRA | PLANNING Chartered Town Planning consultants. The project management team hold recognised professional qualifications in Town Planning, Environmental Impact Assessment Management, and in Ecological Assessment. The assessment has been prepared with other specialist professional inputs as specified in Table 1.4.

Chapter of EIAR	Author(s)	Company	Subject Area	Qualification
Part A	Mary Hughes	HRA Planning	Non-Technical Summary	BA (Hons) MSc PGDip EIA Mgmt. MIPI Town Planning Consultant
Part B				
Chapter 1	Mary Hughes	HRA Planning	Introduction	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 2	Mary Hughes	HRA Planning	Project Description	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 3	Mary Hughes	HRA Planning	Residential Need & Spatial Planning Policy	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 4	Mary Hughes	HRA Planning	Project Scoping & Consultation	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 5	Mary Hughes	HRA Planning	Examination of Alternatives	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 6	Mary Hughes	HRA Planning	Population & Human Health	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 7	Jane Russell – O'Connor	Russell Environmental	Biodiversity	PhD, P.G.C.E, BSc.
Chapter 8	Brian Lahiff	Garland Engineering	Land & Soils, Geology & Hydrogeology	BE, PGradDip.CEng MIEI
Chapter 9	Brian Lahiff	Garland Engineering	Hydrology – Surface Water & Flooding	BE, PGradDip.CEng MIEI
Chapter 10	Ciara Nolan	AWN Consulting	Air Quality & Climate	BSc. MSc. AMIEnvSc, AMIAQM
Chapter 11	Leo Williams	AWN Consulting	Noise & Vibration	BAI MAI PgDip MIOA
Chapter 12	Brian Coakley	Coakley Consulting Engineers	Material Assets - Traffic & Transport	BE MEngSC HDipGIS MIEI
Chapter 13	Brian Lahiff Mary Hughes	Garland Engineering CSD Engineers HRA Planning	Material Assets – Built Services	BE, PGradDip.CEng MIEI BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 14	Brian Lahiff Mary Hughes	Garland Engineering HRA Planning	Material Assets – Waste Management	BE, PGradDip.CEng MIEI BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 15	Martin McGonigle & Tony Cummins	John Cronin & Associates	Cultural Heritage - Archaeology	BA Msc BA MA
Chapter 16	Kevin Fitzpatrick	Kevin Fitzpatrick Landscape Architecture	The Landscape	BA (Hons) Land Arch, MLA, MILI
Chapter 17	Mary Hughes	HRA Planning	Interaction with the Foregoing	BA (Hons) MSc PGDip EIA Mgmt. MIPI
Chapter 18	Mary Hughes	HRA Planning	Summary of Mitigation Measures	BA (Hons) MSc PGDip EIA Mgmt. MIPI

Table 1.4 Table of Content and Authors

Mary Hughes is a Director of HRA Planning Chartered Town Planning Consultants and Corporate Member of the Irish Planning Institute. She qualified as a Town Planner in 1996 with a Masters of Science Degree from Queens University Belfast and has 23 years' experience in the field of town planning and environmental assessment. She received a Diploma in Environmental Impact Assessment Management from UCD in 1999. She spent her formative years working in local authorities throughout Ireland as a Town Planner before moving to private practice in 2002. Mary has project managed and co-authored many Environmental Impact Statements (EIS) and more recently Environmental Impact Assessment Reports (EIAR) on behalf of private clients and public bodies across a diverse range of project typed and development sectors in Ireland.

Dr. Jane Russell – O'Connor is the managing Director of Russell Environmental and Sustainability Services Limited and has a PhD in Ecology from the University of Wolverhampton. She has worked as a practicing ecologist for 10 years on a variety of different projects for developers, local authorities, the Heritage Council, civil engineers, architects and industrial multinationals within Ireland, as well as working in the Nature Conservation industry as a Ranger and Country Park Manager for over 10 years, in the UK. She featured on Nationwide in May 2020 about biodiversity and for her work in developing and implementing the pollinator plan in Tramore with Tidy Towns. Dr Russell-O'Connor also teaches ecology and environmental science, part-time, at the South East Technological University in the Department of Architecture and has successfully supervised a number of PhD students to completion.

Tony Cummins BA MA is a Senior Archaeologist with John Cronin & Associates since 2009. He holds B.A. and M.A. degrees in archaeology (University College Cork (UCC) 1992 & 1994) and was confirmed as a licence-eligible archaeologist by the National Monuments Service in 1998. Since that time he has directed numerous archaeological excavations throughout Ireland and also has extensive experience in the compilation of cultural heritage impact assessments for a variety of development types, including residential schemes.

Brian Coakley is Managing Director of Coakley Consulting Engineers. He holds a BE in Civil and Environmental Engineering (2001), a MEngSc Master of Engineering Science Degree (2003) and a Higher Diploma in Geographical Information Systems(GIS) in 2010 from University College Cork (UCC). Brian has over 20 years experience in the fields of traffic engineering, transport planning, road safety and design. He has experience throughout Ireland and overseas in all stages of planning including feasibility, master planning, preliminary and detailed design for projects of varying type, scale and complexity. He has provided traffic and transport input for several Environmental Impact Statements (EIS) and more recently Environmental Impact Assessment Reports (EIAR).

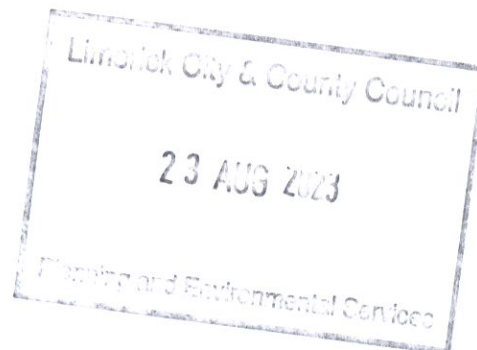
Martin McGonigle graduated with a B.A. in Heritage Studies from G.M.I.T in 2001, followed by an MSc in Maritime Archaeology at the University of Ulster, Coleraine in 2002. He is a Senior Archaeologist with John Cronin & Associates (JC&A) and has been a full-time professional archaeologist since 2002, a Licensed Archaeologist in RoI since 2008 & NI since 2009 and is a full member of Institute of Archaeologists of Ireland (MIAI). Since joining JC&A in 2008 Martin has worked as Senior Archaeologist on numerous archaeological schemes and heritage projects, including cultural heritage assessments for environmental impact assessments, archaeological works on large infrastructure projects. He has also published nationally and internationally on a wide range of cultural heritage and archaeological subjects. Martin graduated with an MSc in Applied Landscape Archaeology from the University of Oxford, passing with distinction.

Brian Lahiff is a Chartered Engineer with Garland Engineering and holds a Bachelor of Civil Engineering from National University of Ireland. Brian has also completed a Postgraduate Diploma in Health and Safety in Construction from Trinity College Dublin in 2008 with distinction. He has also gained a Postgraduate Diploma in Project Management from Trinity College Dublin in 2010, again with distinction. As a Chartered Engineer, Brian has Fifteen (15) years' experience in planning, design, project management, co-ordination and supervision of the construction of a range of projects. He has acted on various types and sizes of projects and specialises in the delivery of phased projects in challenging environments especially in healthcare campuses.

Ciara Nolan is a Senior Environmental Consultant in the air quality section of AWN Consulting Ltd. She holds an MSc. (First Class) in Environmental Science from University College Dublin and has also completed a BSc. in Energy Systems Engineering. She is an Associate Member of both the Institute of Air Quality Management (AMIAQM) and the Institution of Environmental Science (AMIEEnvSc). She has over 5 years of experience working in environmental consultancy focussing on air quality. She has prepared air quality and climate impact assessments for numerous EIARs for a range of projects including commercial, residential, industrial, pharmaceutical and data centre developments.

Leo Williams is a Senior Acoustic Consultant at AWN Consulting who has 6 years' experience as an environmental consultant specialising in Acoustics and Environmental Impact Assessment. He has authored numerous EIAR chapters in relation to various sectors, including residential, mixed-use, renewable energy developments and industrial developments.

Kevin Fitzpatrick is a Landscape Architect with Kennedy Fitzpatrick Landscape Architecture. Kevin has 23 years of experience in both landscape design, from planning through to construction, and landscape and visual impact assessment. In specific regard to LVIA he has worked across a range of projects including residential developments, industrial developments, data centres and infrastructure projects.



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23 AUG 2023
Planning and Environmental Services

CHAPTER TWO PROJECT DESCRIPTION

2.1 INTRODUCTION

This chapter sets out a description of the proposed development and information on the project site; the design; extent; and other relevant features of the project. In accordance with Article 5(1)(a) of the 2011 Directive as amended by Directive 2014/52/EU the description of the proposal comprises "...information on the site, design, size and other relevant features of the project".

A description of the Masterplan Site and the proposed Phase 4 application site and its surrounding is presented, together with the proposed design parameters. This description sets the basis against which the specialist assessments presented in this EIAR have been undertaken.

The vision for the proposed scheme is to create a new community living environment in an existing urban setting, proximate to established services and facilities, where car travel is minimised, and pedestrian and cyclist movements are prioritised.

It is proposed to deliver the overall community living environment in a series of phases with the proposed development comprising Delivery Stage 6 Phase 4 of an overall development of seven phases. The indicative masterplan for the overall 22.53 hectares site indicates the potential to accommodate circa 448 no. units. However, the proposed development comprises an application for 54 no. units only on a gross site area of 2.56 hectares and a net residential area of 1.81 hectares.

2.2 OVERALL MASTERPLAN

An indicative masterplan has been prepared for the overall 22.53 hectares site in the ownership of the applicant. Subsequent phases of development will be subject to separate applications for permission and are likely to be accompanied by a sub-threshold EIAR based on cumulative development in the area and overall site size. Initial studies suggest that the overall 22.53 hectares site, inclusive of the application site, has the capacity to accommodate circa 448 no. residential units with associated infrastructure.

A Masterplan drawing accompanies this application under separate cover and is detailed in Chapter 1.0 Figure 1.2. It illustrates the indicative design of the combined sites (Delivery 1 - 7) for information purposes.

2.3 THE LOCATION OF THE PROJECT

2.3.1 Site Location and Context

The site is located approximately 3.5km from Limerick City centre, in the western environs of the city, adjoining the built-up area and existing residential development. The general area comprising the masterplan site has a rural feel, notwithstanding significant residential and educational developments immediately to the east. The majority of site is surrounded by green fields apart from one off dwellings on the Pass Road to the east, the Willow Grove development on the southern side of the Cratloe Road,

and the County Club Bar adjoining the site to the east. at the Old Cratloe Road - Pass Road junction. Further to the east, developments such as Thomond Village, Clonile and Shannonvale lie next to the site and mark the edge of the built up area of the Limerick suburbs.

The proposed masterplan site is ideally located and is surrounded by an existing and future road network (currently under construction) with easy access to Limerick city centre, the national road network and the TUS (Technological University Shannon) campus formerly LIT. A well-lit roadside footpath and other pedestrian facilities extends from the site towards the city centre on the Old Cratloe Road. A 10 minute walk from the site to the bus stop provides connectivity across the city via bus route No.302 on the Old Cratloe Road.

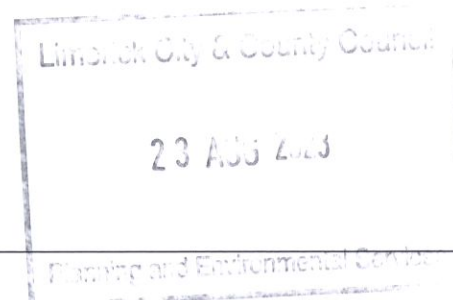
The masterplan site is bound by the Old Cratloe Road to the south and the Meelick Road to the east, both of which are being upgraded and realigned as part of the Coonagh–Knockalisheen Distributor Road scheme which is currently on site and expected to be complete by 2025/25. This part of the city is the gateway from the west, containing many housing developments from the 1960s all of which are low rise, in keeping with their surroundings.

The topography of the overall masterplan site is undulating with some localised peaks. The overall site has a high point of +18.00mAOD (Malin Head) in the north east corner. From here the land falls away to the Southeast, South and West. The ground profile falls to a low point of +5.00mAOD (Malin Head) along the southern boundary of the site. The land has typical gradients of 2.3% to the Southeast, 2.9% to the South and 7.7% to the West. Currently, the site comprises a parcel of agricultural land. The area proposed for development is set within a former golf course which was still in use in the 1990s but reverted back to agricultural use by 2000.

2.3.2 Landuse Zoning

The masterplan lands benefits from three different land use zonings, with the primary land use comprising 'New Residential Use'. The objective of this landuse is *"to provide for new residential development in tandem with the provision of social and physical infrastructure"*. The other landuse zonings are positioned fronting onto the Old Cratloe Road, including 'Open Space Use' (surrounding an existing archaeological monument) and a 'Local Centre Use'. Whilst the objective of the open space use is *"to protect, provide for and improve open space, active and passive recreational amenities"*, the objective of local centre use is *"to protect and provide local centre facilities to serve the needs of new/existing neighbourhoods and residential areas"*.

The application site is located wholly on lands zoned for 'New Residential Use'. The purpose of this zoning is intended primarily for new high quality housing development. The quality and mix of residential areas and the servicing of lands is intended as a priority to support balanced communities. It states that new housing and infill developments should include a mix of housing types, sizes and tenures, to cater for all members of society and design should be complimentary to the surroundings and should not adversely impact on the amenity of adjoining residents.



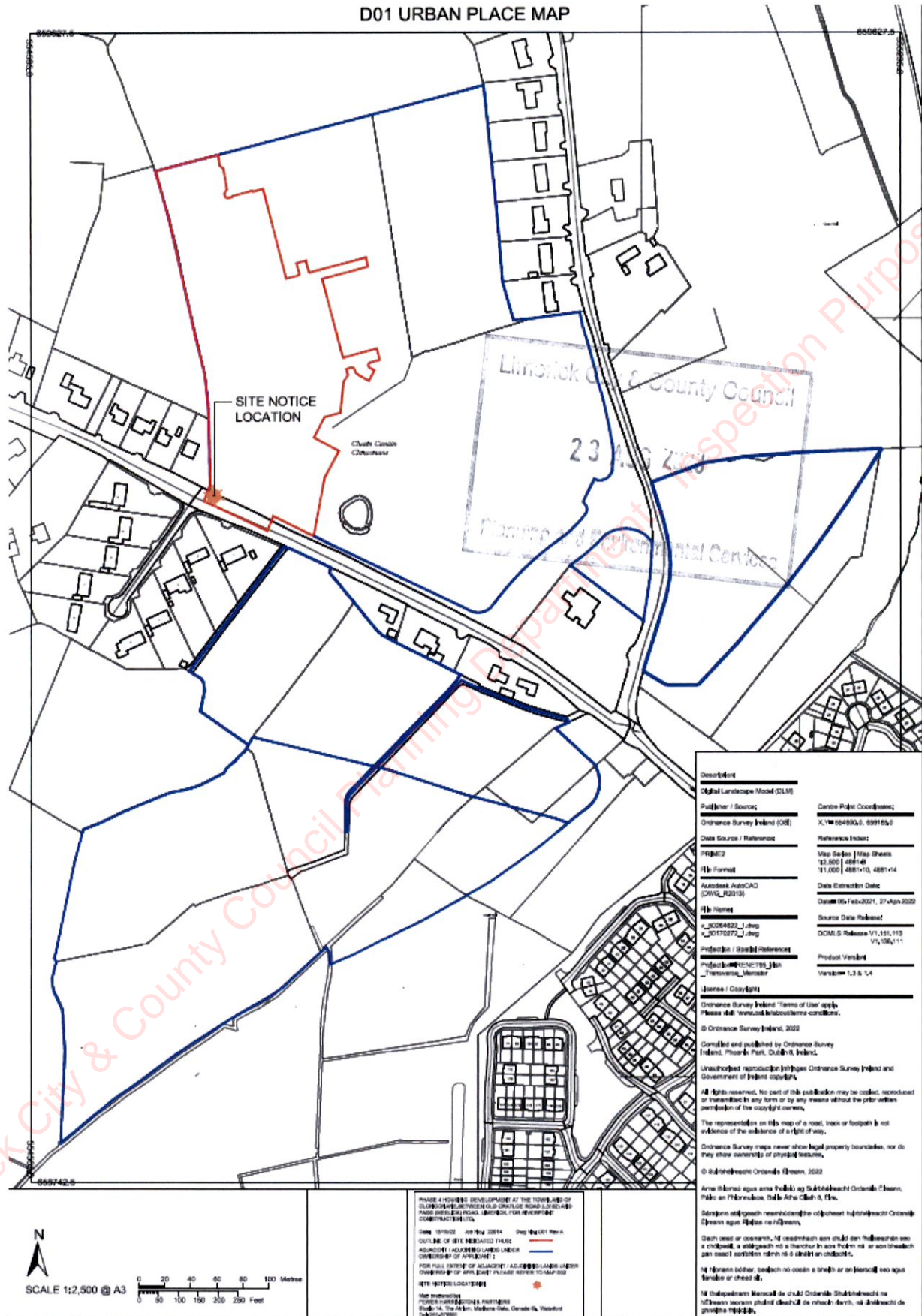


Figure 2.1 Site Location Map with Extent of Site Defined in Red

2.3.3 Planning History

The masterplan site is located within an established urban environment and in particular, is located in an area of the city which is benefitting from significant road infrastructure improvements. The area has been identified for growth, along with the regeneration of the Moyross area, located to the north. Invariably, this means that a number of sites could or will be developed in tandem with the subject proposal.

Four planning permissions have already been granted by Limerick City & County Council within the masterplan site. Under P21/1800 permission was granted for 99 no. residential units, identified as Phase 1 within the overall masterplan. This is the subject of a third party appeal to An Bord Pleanála. Under P22/790 planning permission was granted for a creche facility, under P22/817 planning permission was granted for 88 no. Units and under P22/959 planning permission was granted for 98 no. residential units. There are three other phases of development at varying stages within the planning application process as detailed in Chapter 1.0 Table 1.1.

There are no other significant planning permissions granted or being assessed, either adjoining or in proximity to the masterplan site.

2.3.4 Application Site

The 2.56 hectares application site sits within a wider undeveloped greenfield site for which a masterplan has been prepared. Figure 2.1 illustrates the location of the site within the context of the overall landholding (masterplan area), defined in blue. This has already been clarified in Chapter 1.0 of this EIAR. The site is irregular in shape, duly designed to accommodate future phases of development.

The topography of the site is undulating and falls from east to west. Existing site levels within the development lands are between 6.0 m and 18.0 m AOD. There are boundary hedgerows to the north and west of the site and a stream / drainage ditch also runs along the western boundary. A number of detached, one off houses fronting onto the Old Cratloe Road adjoins the western site boundary.

The Zone of Notification (ZoN) for one recorded archaeological site (as recorded by the Archaeological Survey of Ireland (ASI)) is located within the red line boundary of the application site, Children's burial ground (LI005-007---). The archaeological monument is to be preserved in situ and all development is removed from the ZoN surrounding it. Chapter 12.0 of this EIAR deals further with archaeology and cultural heritage.

Based on the OPW CFRAMs Map, the site is located outside Flood Risk Zones A and B and is, therefore located in Flood Risk Zone C. The 1 in 1000 year coastal and fluvial flood levels in this area are at 2.90m and 2.15m respectively. Existing site levels within the development lands are between 6.0 m and 18.0 m AOD more than 3m above the 1 in 100 year flood levels. The issue of flooding is dealt with further in Chapter 9.0.

The site is located within an area of built development and agricultural land, is currently grazed by horses and ponies and so is comprised of low value biodiversity habitats. Biodiversity is dealt with further in Chapter 7.0 of this EIAR.

The land is not located within or adjoining any Natura 2000 designated sites. The drainage ditch on the western boundary connects with the Lower River Shannon Special Area of Conservation (SAC) and River Shannon and River Fergus Estuaries Special Protection Area (SPA) some 1.7km distant from the site.

Given the local hydrological pathways links between the site and these designated areas to these areas, a Natura Impact Statement (NIS) has been undertaken and accompanies the planning application for development.

2.4 CHARACTERISTICS OF THE PROJECT

2.4.1 Description of the Proposed Development

The description of development as per the public notices state that:

Planning permission for the construction of 54 residential units comprising of the following: 30 No. 3 storey, 5 bed, semi-detached units; 2 No. 2 storey, 4 bed, semi-detached units; 14 No. 2 storey 3 bed semi detached units; 4 No. single storey 2 bed, end of terrace units and 4 No. single storey 2 bed, mid terrace units. Installation of all necessary and associated site works to include vehicular and pedestrian connections onto Old Cratloe Road (L3102), roadways, footpaths, green spaces, landscaping and boundary treatments, together with all associated drainage connection works and all ancillary site works.

Based on the key principles set out in the Limerick Development Plan 2022 - 2028, Fewer Harrington Architects have developed a comprehensive design for the overall masterplan site and the planning application site. Full details of the proposed development can be found in the plans and drawings accompanying the planning application. The Site Layout comprising the development proposal is detailed in Figure 2.2 and seeks to achieve a high quality landscaped park style environment, in accordance with the requirements of the Development Plan.

The Phase 4 application site is irregular in shape, purposively designed to accommodate future phases. The entrance to the site will be accessed from the Old Cratloe Road, with a number of internal access roads facilitating access internally within the development and providing access to the roundabout junction south east of the site.

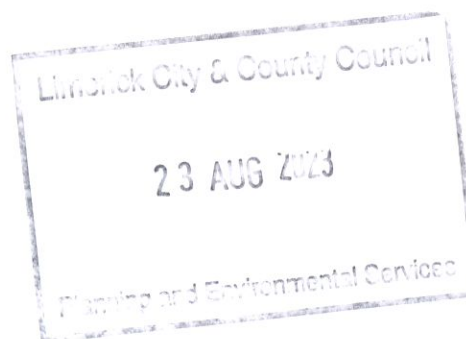
The design of the scheme provides for a row of houses along the eastern site boundary, directly overlooking a central area of open space proposed as part of Phase 3 development. The proposed development has been designed to tie into Phase 3 with views throughout the development looking towards the central communal open space for this phase and subsequent phases, thereby accommodating legibility within the site and contributing towards enhanced urban design within the overall scheme.

The row of houses along the western site boundary largely comprising three storey semi-detached units with two storey units at the southern end defining the entrance to the site and neighbouring existing two storey houses on adjoining land. Provision has also been made for a number of two storey houses on the opposite side of the proposed access road, flanking the area of proposed open space at the entrance to the development.

Development Statistics				
	Application Site		Indicative Masterplan Site	
No. of Units	54 units		448 units	
Unit Mix	Number	Percentage	Number	Percentage
2 bed house	8	10.1%	81	18%
3 bed house	14	42.9%	150	33.4%
4 bed house	2	47%	118	26.3%
5 bed house	30	0	30	6.6%
1 bed apartment	0	0	26	5.8%
2 bed apartment	0	0	44	9.8%
Site Area Gross	2.56 hectares gross		22.53 hectares	
Site Area Net	1.8 hectares		12.25 hectares	
Density	35.1 units per hectare		37.3 units per hectare	
Gross Floor Area	7,757.7sqm		TBC	
Building Height	1 & 2 & 3 storey		1 & 2 & 3 storey	
Public Open Space	16.7% of net residential area		13.6% proposed plus zoned open space area results in total of 17.9%	
Creche	No		Yes – 107 no. children & 8 no. staff capacity	
Local Centre	No		Yes – 2 no. retail units, coffee shop & foodstore	

Table 2.1 Development Statistics

A large area of public open space area is positioned on the eastern boundary of the application site, intended to serve the proposed development and the wider masterplan site. This open space area was also proposed within the Phase 3 development on adjoining land and is overlooked by housing within Phase 3 and the proposed Phase 4 developments. The development is distinct in character and will use a number of contrasting brick tones and a plastered finish. A consistent built form and design approach through the proposed development and future phases facilitates a sense of identity and place.



As part of Phase 3 of the masterplan, to the south of the application site, on the southern side of the Cratloe Road, it is proposed to develop and maintain an area of biodiversity of some 5.68 hectares in area.. The area primarily comprises wet grassland and it is proposed to develop a new grassland area with a water pool. It is intended that the habitats that will be lost as a result of the overall Masterplan development will be replaced with the proposed habitat area that have the potential to be of higher conservation value and therefore the overall evaluation of the biodiversity will be that of net gain (See Chapter 7.0 for further detail)). The habitat to be created is clearly identified on the Landscaping Plan accompanying the planning application.

The subject site has been designed in a highly permeable manner with good pedestrian, cyclist and future public transport links. Whilst a mobility management plan will be an important means of managing accessibility to the site, the proposed development has been designed cognisant of future transport proposals within the Limerick Shannon Metropolitan Area Transport Strategy (LSMATS) and Limerick Development Plan 2022 – 2028. To this end the proposed road network will connect with existing footpaths and public lighting on the Cratloe Road.

Existing levels are shown in the topographical survey. The proposed finished floor levels and levels of the roads, car parking and service areas are dictated by existing site levels with every effort made to achieve an overall earthworks balance with minimal cut and fill. Generally, levels rise from west to east across the site. The finished floor levels for the new buildings vary from 17.0m OD at the eastern site boundary to 12.0m OD at the western boundary.

2.4.2 Open Space & Landscaping

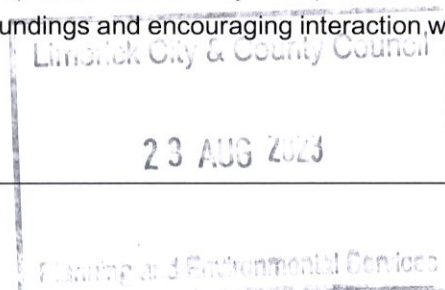
The design intent is to create a high quality and appropriate landscape for future residents which will meet their recreational needs and provide an attractive visual setting and associated social amenity spaces. The principles of inclusivity for all age groups, universal accessibility and sustainable development are applied to ensure an inclusive and environmentally responsible design solutions. The main objective of the landscape strategy for the residential area is to place the new residential and community facilities within a cohesive landscape that responds to and integrates the proposed development within the overall site.

The landscape approach seeks to create a permeable network of green infrastructure and open spaces throughout the development and pay attention to future links to the development lands outside this application boundary.

Some 16.7% of the residential development site is to be developed as public open space. A further area is to be developed as a natural biodiversity area as part of Phase 3. Key characteristics influencing the landscape design of the proposed site are:

- Landscaped open areas with soft grass and planted zones.
- High quality hard landscaped areas.
- New pedestrian links created between the site and surrounding areas.

Natural Play elements will be incorporated within the open spaces. Natural Play incorporates designed elements that enable play spaces to blend in with their surroundings and encouraging interaction with the natural landscape.



The proposed hard landscaping includes the following materials to the open spaces: compacted gravel paths/ asphalt paths within open spaces, concrete block pavers within specimen seating areas, reinforced grass/ bark within play areas; brushed concrete footpaths and concrete block to entrances/ thresholds.

2.4.3 Access & Layout

The Masterplan lands will be accessed at three separate locations including, the recently constructed roundabout on the realigned Pass /Meelick Road and two separate standard DMURS compliant property 'T' junctions located on the southern and northern side of the upgraded section of the Old Cratloe Road which has been designed as part of the Coonagh – Knockalisheen Distributor Road Scheme which is expected to be completed by 2025 / 26. The upgraded Old Cratloe Road immediately south of the site and the realigned Meelick Road to the east, will comprise a 6.6m carriageway with footpaths and cycle lanes on both sides.

The subject lands comprising Phase 4 will primarily be accessed via the proposed junction to the west on the Old Cratloe Road. It is estimated that 70% of construction traffic (staff/misc. via cars, etc) will arrive/depart via the proposed roundabout junction to the east and 30% of construction traffic (deliveries via HGV) will arrive/depart via a new proposed junction to the west on the Old Cratloe Road.

The development has been designed taking into account DMURS standards and the principles of safety, accessibility and sustainability. The alignment of the internal road layout has been carefully designed to ensure and encourage low vehicle speeds by means of measures such as signage, changes of horizontal alignment, raised table junctions, reduced junction radii and off street parking.

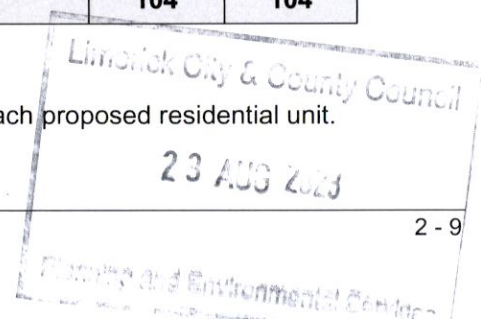
The key aim of the design is to provide a self-regulating traffic environment in the estate through the use of suitable road widths and road curvature, with minimum signage and road markings within the development, other than at junctions. The application site and masterplan layout is orthogonal thereby ensuring permeability and legibility in accordance with the key principles of DMURS

The proposed car parking provision takes into account the Zone 3 parking requirements set out in the Limerick Development Plan 2022 – 2028 as detailed in Table 2.2. Installation of appropriate infrastructure to enable installation of recharging point for EVs will be facilitated within the curtilage of all dwelling houses. In the case of apartment units and the 'local neighbourhood centre' proposed as part of the wider Masterplan development, a minimum of 1 no. EV Charge Point space per five car parking spaces shall be provided and in the case of apartment parking, ducting shall be provided for every parking space.

Car Parking Provision – Proposed Development				
Development Type	Units/GFA	Development Plan Requirement	Required	Provided
House 2 bed	8	1.5/unit < 3 bed	12	12
House 3 bed	14	2 /unit >= 3 bed	28	28
House 4 bed	2	2 /unit >= 3 bed	4	4
House 5 bed	30	2/unit >=3 bed	60	60
Total			104	104

Table 2.2 Car Parking Provision Proposed Development

Bicycle parking shall be accommodated within the curtilage of each proposed residential unit.



The proposed development has taken the provisions of the Limerick Shannon Metropolitan Area Transport Strategy (LSMATS) into consideration. Under the strategy, a bus corridor is to extend along the Old Cratloe Road beyond the application site, effectively providing connectivity between the site and the city centre. Further, cycling infrastructure will be accommodated within and adjoining the proposed development as per the 'Proposed Limerick Cycle Network Map' detailed in LSMATS, in particular the proposed 'Green Route' on the old, realigned section of the Meelick Road as it approaches the Old Cratloe Road.

2.4.4 Drainage Strategy

Foul Water

It is proposed to provide a single gravity foul sewer system to serve the development proposal. The foul sewerage from the overall development is planned to discharge to the foul network to be installed as part of the Old Cratloe Road upgrade works south of the development. The foul sewer network was designed in accordance with Irish Water Code of Practice July 2020 and to IS EN 12056/ IS EN 752, using hydraulic modelling software WinDes, which uses the Colebrook White equation.

A pre-connection enquiry was lodged with Irish Water for the development outlining the proposed flows and loads which would be generated by the development. This application was undertaken to determine if there is adequate capacity in the existing public foul sewer network to cater for this development. The proposal was accepted as feasible in principle by Irish Water.

Surface Water

The design of the storm water network and SUDS were based on a number of permeability factors from the CIRIA SUDS Manual for the developed site, including;

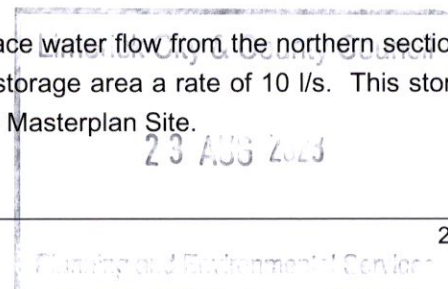
- Roofs; 100% runoff.
- Roads, driveways and footpaths; 100% runoff.
- Green areas; 0% runoff.

The design of the storm water network and SUDS allow for 30% climate change and 10% urban creep of the housing area for the developed site. The storm pipe network has been designed in accordance with IS EN 12056, IS EN752 and the Greater Dublin Strategic Drainage Study.

A new surface water sewer network shall be provided for the proposed development which will be entirely separate from the foul water sewer network. The design of the storm water network and SUDS allow for 30% climate change and 10% urban creep of the housing area for the developed site. The storm pipe network has been designed in accordance with IS EN 12056, IS EN752 and the Greater Dublin Strategic Drainage Study.

The storm drainage from the roads and footpaths will be collected in gullies and discharged via a traditional storm pipe network. Given the topography of the site and available green spaces, two networks with separate infiltration and storage areas are proposed in Phase 4.

The northern storage area infiltrates and attenuates the surface water flow from the northern section of phase 4 and discharges via a pipe network to the southern storage area a rate of 10 l/s. This storage area is oversized to cater for stormwater flows from the wider Masterplan Site.



The southern storage area infiltrates and attenuates the surface water flow from the southern section of Phase 4 and also caters for the restricted flow from the Northern storage area and other masterplan areas. Area 2 discharges to the existing watercourse at the western boundary at a rate of 20 l/s for the Phase 4. This storage area is also oversized to cater for stormwater flows from the wider Masterplan Site.

Surface water run-off from roof areas and hardstanding areas are designed to be collected by a gravity pipe network. Surface water will be collected and discharged via a mixture of traditional and Sustainable Urban Drainage Systems (SuDS). Prior to discharging to the existing open drains, surface water will flow through attenuation tank, class 1 bypass separators and flow control devices. Forward flow from the development will be restricted to either 2l/s/ha for the net drained area of the site or the greenfield runoff rate of the net drained area of the site which is in accordance with Limerick Development Plan 2022-2028. The restricted flows associated with the Phase 4 net drained area lands is limited to 4.5 litres per second, being the existing greenfield run off rate.

A variety of SuDS measures will also be adopted on the site. The SuDS processes decrease the impact of the development on the receiving environment by providing amenity and biodiversity in many cases. The specific measures adopted comprise the following:

1. Permeable Paving to be provided in the private parking areas.
2. Public parking areas will feature porous asphalt.
3. Rainwater harvesting at each individual property.
4. Bioretention Pods and tree planters to be provided in the road verges.

Water Supply

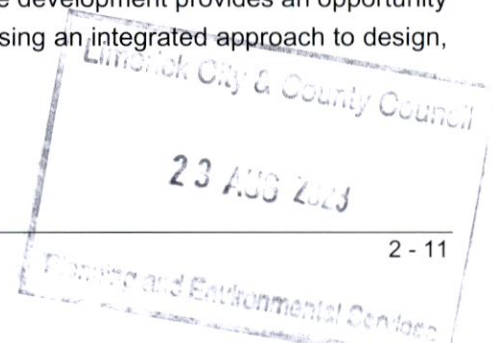
It is proposed to provide watermain around the development to form a fully looped network, ensuring security and quality of supply. Hydrants will be provided in accordance with Building Regulations. The proposed internal water supply network for the development has been designed in accordance with Irish Water Code of Practice July 2020.

It is proposed to connect the development to the 250mm diameter main to be installed as part of the Old Cratloe Road upgrade works south of the development. Individual houses will have their own connections to the distribution main via service connections and boundary boxes.

A pre-connection enquiry was lodged with Irish Water for the development outlining the proposed flows and loads which would be associated with the housing development. This application was undertaken to determine if there is adequate capacity in the existing public watermain network to cater for this development. The proposal was accepted as feasible in principle by Irish Water reference number CDS22003876.

2.4.5 Energy Strategy

The strategy to sustainable design uses robust, passive, cost effective measures to create a more efficient and healthier environment within the planned spaces. The development provides an opportunity to create environmentally sound and energy efficient homes by using an integrated approach to design, planning, construction and operation.



The design strategies employed include a whole life cycle approach to management and planning of the development, energy efficiency with specific focus on reducing the carbon footprint, improving the environmental quality of the building spaces, material selection and use, waste management, water management and conservation and enhancing the ecological value of the site.

The houses have been designed to be simple rectilinear forms. They can be extended to the rear without compromising the style of the house types and the layout of the outdoor space. Additional living accommodation can be easily added if required in the future.

Energy efficient M&E systems and plant- Heating Plant, LED Lighting and Triple E registered products, that minimises the consumption of energy are to be used. An integrated Water Management and Conservation Plan that incorporates the use of low water consumption equipment to ensure the minimal use of potable water, efficient sanitary appliances (e.g. low water WC cisterns & taps).

The development is being designed to NZEB (Nearly Zero Energy Buildings) standards. This standard is the equivalent of a 25% improvement in energy performance on the 2011 Building Regulations. Nearly Zero – Energy Buildings means a building that has a very high energy performance in which the nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on site or nearby. Air to Water Heat Pumps will be used for all housing units. It is envisaged that air to water heat pumps will also be used in the commercial units and creche but with gas fired back-up / assist.

Passive design measures include the use of the building fabric to take advantage of the site constraints/orientation to maximise the daylight factors, natural ventilation and solar benefits. Natural daylight factors in accordance with BRE and CIBSE recommendations have been targeted.

2.4.6 Utilities

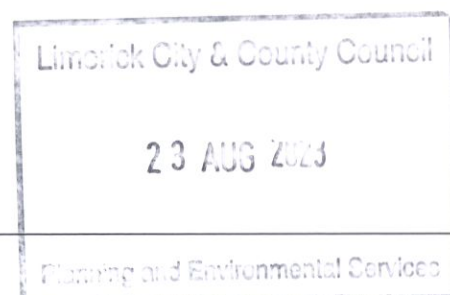
Electricity and Gas Infrastructure

ESB has low voltage (LV) lines traversing the site and medium voltage (MV) lines in close proximity which will be used to facilitate several cabinet Kiosk type MV/LV substations. There will be a separate Kiosk substation per 150 units. The LV network will be distributed via underground ducting and ESB Mini pillars.

Gas Networks Ireland has a capped 125mm PE 80 4 Bar gas supply in the area which will serve the proposed site.

Telecommunications

There are currently telecom services in the area, operated by SIRO or Virgin Media and these will be extended into the site to provide telecoms & broadband services to each home user. A full duct infrastructure to facilitate EIR FTTH (Fibre To The Home) 10Gigabit Broadband will be provided so each unit will have access to the national broadband plan. This infrastructure will ensure the provider can provide current and next generation broadband to each home.



2.4.7 Construction Characteristics

Construction Phase

It is anticipated that planning permission for the subject site will be secured in Q4 2023 and that construction will commence on site in Q3 2024 subject to permission and the discharge of any pre-commencement planning conditions. There is an anticipated completion timeframe of 9 months for the proposed 54 no. units the subject of this application.

Taking a holistic view of the entire masterplan site, it is anticipated that circa 100 no. units will be delivered per year dependent on sales and demand and the extent of house type and mix. This means that it could potentially take five years to complete development within the overall masterplan site, but this is dependent on securing relevant planning permissions in a timely manner. Development within the overall masterplan area will be phased as per the phasing plan detailed in Chapter 1.0.

Construction Works & Methods

Site Establishment and Security

The first activity to be carried out at the site will be the establishment of site facilities and security. The site office and welfare facilities (site compound) will be confirmed in advance of the commencement of site works. All the sub-contractors as well as the main contractor and project managers will occupy offices within the construction compound. The site parking for all staff, contractors and visitors will also be located in this area.

Erection of perimeter hoarding will take place at the start of the project alongside the site establishment and security works. The hoarding will be installed around each phase of development, except for dedicated access points. The extent of hoarding will be subject to the detailed phasing of the development and will ensure that areas under construction will be fenced off at all times. Gates will be provided at the access points and will be locked outside of working hours. Hoarding will consist of solid painted plywood on a timber support frame or similar. Hoarding will be properly designed to be secure and durable and will be maintained until it can be dismantled on completion of the development (or phase of the development).

Site Clearance

To facilitate the earthworks operation, site clearance will have to be carried out to remove vegetation. Removal of woody vegetation shall only take place outside the bird breeding season (1st March to 31st August). No removal of habitats or movement of construction machinery will occur outside of the development works area/footprint during the construction phase. Existing trees and hedgerows shall be retained where possible. Temporary surface water management measures will be put in place prior to stripping of topsoil and will remain in place until the completion of the development, or until the completion of each phase.

Topsoil will be stripped from the area to be developed and from the area where site won fill is to be excavated to bring the development to the correct level. All excavated topsoil will be stored in dedicated stockpiles with environmental controls in place.

Prior to topsoil clearance, an Invasive Species Management Plan and survey is recommended to ensure areas of invasive plant species (if any) are identified and managed prior to or during site clearance works.

There is a responsibility on the Environmental Manager or Ecological Clerk of Works (ECoW) to regularly inspect and supervise maintenance of the environmental controls throughout the process.

Earthworks

Once surface water management measures are in place and topsoil has been stripped, earthworks operations can commence. This will consist of moving fill from the higher ground at the east to the lower ground to the west. Material will be excavated by 360° excavators and transported to the deposition area by articulated dumpers. The fill will then be placed by dozers and compacted using vibratory rollers. A testing regime will be implemented to ensure the acceptability of the fill and that the degree of compaction is sufficient. Fill will be brought to the required level across the site to allow construction of roads and foundations.

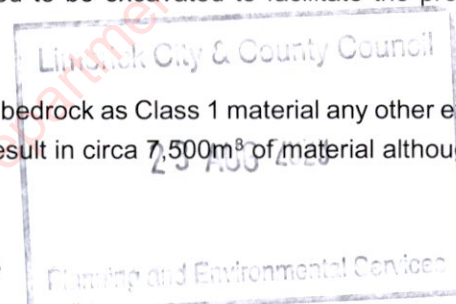
There is a quantity of subsoil material which will need to be excavated to facilitate the proposed development. A detailed review of the existing ground conditions on a regional, local site-specific scale are presented in Chapter 8.0 Land & Soils, Geology & Hydrogeology. The project engineers have estimated that circa 33,500m³ of subsoil material will need to be excavated to facilitate the Masterplan development and that imported fill of 25,500m³ is required. For the Phase 4 subject site it has been determined that circa 9,300m³ of subsoil material will need to be excavated to facilitate the proposed development and that imported fill of 9,500m³ is required.

The quantum of fill required will also be reduced by reusing bedrock as Class 1 material any other existing site won materials as appropriate. Top soil stripping will result in circa 7,500m³ of material although it is envisaged that circa 3,000m³ of this will be reused.

Construction of Housing, Creche & Neighbourhood Centre

On completion of the bulk earthworks, construction of foundations for housing will commence. The exact construction sequence has not been determined, but it will be similar to what is described below:

- Temporary roads will be constructed to provide access to each row of units. This will include the construction of surface water management and silt control infrastructure, including settlement ponds and silt fencing.
- Construction of foundations. It is envisaged that standard strip foundations will be used on this site. If poor ground conditions are experienced raft foundations may be required in certain locations. The locations of foundations will be set out on the ground. Importation of certified stone fill will be required for the layers under the foundations in compliance with the Building Regulations. Reinforcement will be fixed, formwork installed, and all required ducting placed prior to placement of concrete. Construction of foundations will require concrete deliveries to the site. Controls will be required to prevent any concrete material reaching local watercourses.
- Once foundations have cured, either timber frames will be delivered to site and erected or masonry blockwork will be erected, followed by roofs.
- Windows and doors will be installed, and first fix plumbing and wiring will be completed prior to external and internal rendering.
- On completion of rendering, second fix, plumbing wiring and carpentry will be completed, followed by floors, painting and finishing.
- At this stage, installation of drainage and services is likely to progress and the roads will be completed. Drives, footpaths, boundary walls and lawns will be finished and final road pavements will be installed.



Construction Working Hours & Personnel

The anticipated general construction hours are 07:00 to 18:00hrs, Monday to Friday and 08:00 to 14:00 on Saturdays. In exceptional instances where works are required outside of these hours, bespoke agreement will be sought from Limerick City & County Council prior to any works taking place. The appointed contractor will be required to prepare and adhere to a Site Environmental Policy Plan and any employed subcontractors will be required to buy into this document. Unscheduled deliveries will not be allowed access.

It is anticipated that between 50 – 60 work personnel will be employed on site during peak construction periods. As detailed in Chapter 12.0 Material Assets – Traffic & Transportation construction traffic levels are anticipated to be lower than those tested for the operational state.

Site Access and Egress

Construction site access will be from the Old Cratloe Road and the newly realigned Meelick Road. The road will be raised to the correct alignment using compacted stone fill. At the early stages of construction, the access road may be constructed from unbound stone. The access road will be paved and completed, including street furniture, cycle ways and footpaths, in advance of occupation of the first phase of the development.

The routing will be strictly managed and controlled, and details will be incorporated into a Site-Specific Traffic Management Plan. It should be noted that it is likely that construction traffic accessing and egressing the site will contain soil/stone as a result of the site clearance and construction works.

General Safety & Health Considerations

Health & Safety issues will be the primary concern for the appointed Contractors. This will apply in respect of persons working on the site and in respect of passing pedestrians, motorists or other transport carriers. In this regard the highest possible care will be taken in providing a detailed Construction Stage Health and Safety Plan in advance of works commencing on site.

It is intended to operate a Health, Safety & Environmental Management System in line with ISO 18001 & ISO 14001. This Management System translates the company policy into processes to ensure safety, health and environmental responsibilities and performance can be monitored, reported and improved.

A suitably qualified and competent Project Supervisor Design Process (PSDP) has been appointed and a suitably qualified and competent Project Supervisor Construction Stage (PSCS) will be appointed in line with those requirements laid down in the Safety, Health and Welfare at Work Construction Regulations 2013.

Monitoring During Construction

Appropriate Air Quality and Dust monitoring will be carried out and records will be kept of all such monitoring. Construction works will be carried out in such a way as to limit the emissions to air of pollutants (particularly dust and fine particles (PM10)), employing Best Practicable Means. Air Quality & Climatic issues associated with the propose development are dealt with in detail in Chapter 10 of this EIAR.

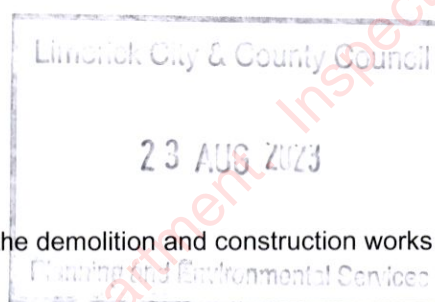
Noise monitoring will be carried out in accordance in accordance with Safety, Health and Welfare at Work (Construction) Regulations 2006 – 2012 Safety, Health and Welfare at Work Act 2005, BS 6187:2011 -

Code of Practice for Full & Partial Demolition, BS 5228:2009 Code of Practice for Noise & Vibration Control on Construction & Open Sites. Vibration monitoring will be carried out in accordance with BS 5228-1, 2009, Code of Practice for Noise & Vibration Control on Construction & Open Sites. Issues associated with Noise & Vibration are dealt with further in Chapter 11.0.

Construction Waste

Measures shall be undertaken to minimise the quantity of waste produced at the site and to handle the waste in such a manner as to minimise the effects on the environment. A site-specific *Construction Waste Management Plan* (CWMP) shall be prepared and will be employed to ensure sustainable and effective waste management throughout the construction and demolition phases of the project. It will ensure that the management of waste arising is dealt with in compliance with the provisions of the Waste Management Acts 1996 – 2015 and amendments. The waste management hierarchy to be adopted will be as follows:

1. Prevention and Minimisation
2. Reuse of Waste
3. Recycling of Waste:
4. Disposal



Typical waste materials that will be generated from the demolition and construction works will include:

- Soil and stones
- Concrete, bricks, tiles and ceramics
- Wood, glass and plastics
- Metals
- Gypsum-based construction material
- Paper and cardboard
- Mixed C&D waste
- Chemicals (solvents, paints, adhesives, detergents etc.)

The management of all hazardous waste arisings, if they occur, shall be coordinated in liaison with Health and Safety Management. Waste minimisation measures proposed are summarised as follows:

- Materials will be ordered on an 'as needed' basis to prevent over supply.
- Materials will be correctly stored and handled to minimise the generation of damaged materials.
- Materials will be ordered in appropriate sequence to minimise materials stored on site.
- A waste tracking log will be established.
- Sub-contractors will be responsible for similarly managing their wastes.
- All wood waste generated by site works will be inspected and examined and will be segregated as re-useable wood and scrap wood waste.

The main waste storage area will be located in the site compound A dedicated and secure area containing bins, and/or skips, and storage areas, into which all waste materials generated by construction site activities, will be established within the development.

Waste materials generated will be segregated at the site compound, where it is practical to do so. Where the on-site segregation of certain waste types is not practical, offsite segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source. All waste receptacles leaving

site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled.

The site Construction Manager will ensure that all staff are informed of the requirements for segregation of waste materials by means of clear signage and verbal instruction. Appointed employees will be made responsible for ensuring good site housekeeping.

2.4.8 Operational Characteristics

Pursuant to the EIA Directive an EIAR document is required to set out a description of the project processes, activities, materials and natural resources utilised; and the activities, materials and natural resources and the effects, residues and emissions anticipated by the operation of the project.

The proposed development is a residential development (with a creche and local neighbourhood centre comprising small commercial units), including associated infrastructural works and areas of open space. The primary direct significant environmental effects will arise during the construction stage. As a result, post-construction, the operation of the proposed development is therefore relatively benign and not likely to give rise to any significant additional impacts in terms of activities, materials or natural resources used or effects, residues or emissions which are likely to have a significant impact on population and human health, biodiversity, soils, water, air, or climate.

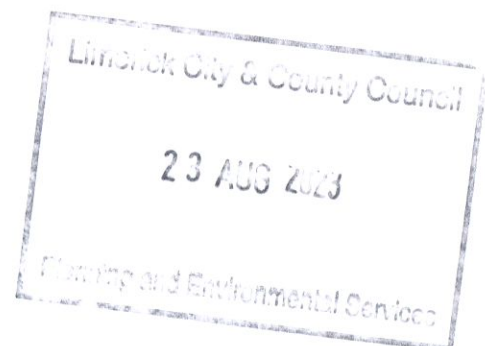
The primary likely and significant environmental impacts of the operation of the proposed development are fully addressed in this EIAR document; and relate to Population and Human Health, Landscape and Visual Impact and Noise and Air impacts associated with the traffic generated.

The proposed development also has the potential for cumulative, secondary and indirect impacts particularly with respect to such topics as traffic – which in many instances – are often difficult to quantify due to complex inter-relationships. However, all cumulative secondary and indirect impacts are unlikely to be significant; and where appropriate, have been addressed in the content of this EIAR document.

2.4.9 Description of Secondary and Off-Site Developments

The planning application includes details of the necessary road works, which are required to facilitate this development, namely connection of the site into a roundabout which was recently constructed on a realigned part of the Meelick Road.

These works, as detailed in Figure 2.3 comprised part of the proposed Coonagh to Knockalisheen Distributor Project which secured consent from An Bord Pleanála in 2021 and was subject to the preparation of an EIAR and Environmental Impact Assessment.



Whilst the works comprising realignment of the Meelick Road and provision of a roundabout to access the subject lands are now complete, delivery of the main carriageway is currently underway. These works will be considered in cumulation with the development proposal.

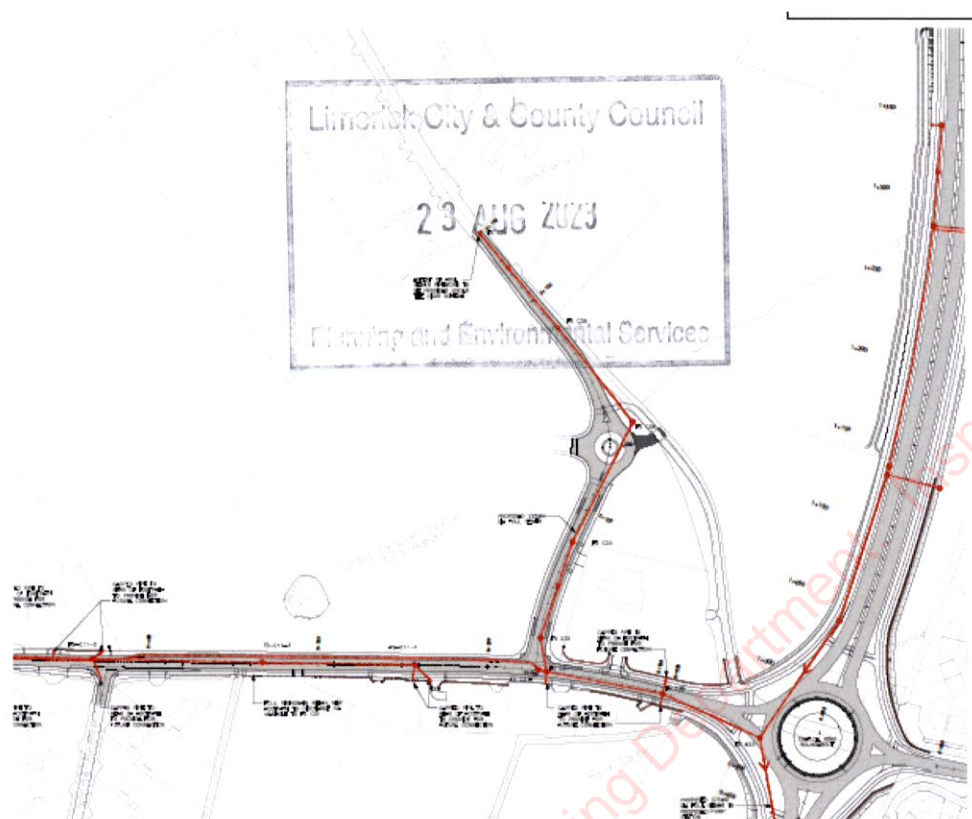


Figure 2.3 Coonagh – Knockalisheen Road (part of relevance to subject site)

2.5 PROJECT CHANGES – GROWTH & ALTERATIONS

Very few projects remain unaltered throughout their existence and have the potential to grow or even cease operation. As per the EPA Guidelines and in the interests of proper planning and sustainable development it is important to consider the potential future growth and longer-term expansion of a proposed development in order to ensure that the geographical area in the vicinity of the proposed development has the assimilative carrying capacity to accommodate future development.

The indicative masterplan accompanying the proposed development demonstrates that the proposed residential development has the future capacity to grow and expand such that in total, circa 448 no. residential units, a creche and local neighbourhood centre could be accommodated within the masterplan site. This growth is indicative only and is dependent on securing planning permission and market demand. Regard has been made to this future growth potential in various chapters of this EIAR in so far as possible. Whilst all baseline information relates to the masterplan site, the impacts are generally limited to those of the proposed development. Drainage infrastructure and traffic generation impacts has been assessed having regard to the entire masterplan area, given the importance to future proof key infrastructure provision within the site to accommodate future growth.

The parameters for the future development of the area in the vicinity of the subject site are governed by the Limerick Development Plan 2022 – 2028 which has zoned the subject site and the wider masterplan

site for new residential development, open space and local centre use. Any adjacent undeveloped lands, will be the subject of separate planning applications in the future, where they are identified as being suitable for development, and where the provision of the requisite physical and other infrastructure is available.

2.6 DESCRIPTION OF THE RISK OF ACCIDENTS – HAVING REGARD TO SUBSTANCES OR TECHNOLOGIES USED

The risk of accidents can arise during construction and operation phases as part of normal construction measures and day to day living and activities. The risk of accidents and mitigation measures considered necessary to address same, has been considered and are presented under an assessment of each environmental variable assessed in this EIAR, where relevant.

Operation of the proposed development as a new residential neighbourhood is relatively benign and not likely to give rise to any significant impacts.

2.7 OTHER RELATED PROJECTS AND POTENTIAL FOR EX-SITU EFFECTS

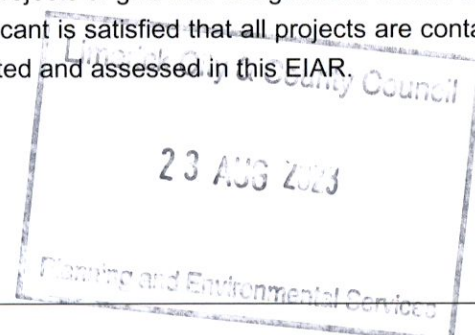
The proposed development within the application site is reliant on the delivery of service infrastructure across the masterplan site including the surface and foul water network and road transport infrastructure.

Further, the development is reliant on the delivery of community infrastructure proposed under separate planning applications as separate phases of development. Importantly these services and facilities are located within the wider masterplan area, are under the control of the applicant in terms of delivery and are already the subject of two different planning applications (P22/790 & P22/917). The creche has already been granted planning permission.

Regard is had to the overall masterplan proposal for the site where relevant and necessary, although it is important to note that the true impacts of development can only be established from what is actually proposed as part of the planning application. All other works are 'potential' future works.

These works, as detailed in Figure 2.3 comprised part of the proposed Coonagh to Knockalisheen Distributor Project which secured consent from An Bord Pleanála in 2021 and was subject to the preparation of an EIAR and Environmental Impact Assessment. Whilst the works comprising realignment of the Meelick Road and provision of a roundabout to access the subject lands are now complete, delivery of the main carriageway is currently underway. These works will be considered in cumulation with the development proposal.

This project does not involve or rely on any other related projects or give rise to significant ex-situ effects that should be considered as part of this EIAR. The applicant is satisfied that all projects are contained within the confines of the masterplan boundary as presented and assessed in this EIAR.



Limerick City & County Council Planning Department. Inspection Purposes Only!

Limerick City & County Council
23 AUG 2023
Planning and Environmental Services