ENVIRONMENTAL IMPACT ASSESSMENT REPORT

VOLUME I NON-TECHNICAL SUMMARY

Direct Application for Approval to An Bord Pleanála in accordance with Section 175 of the Planning and Development Act 2000 (as amended)

PROPOSED RESIDENTIAL AND MIXED USE DEVELOPMENT

AT

EMMET ROAD, INCHICORE, DUBLIN 8

Prepared by

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In Conjunction with

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DOCUMENT CONTROL SHEET

Client:	**Dublin City Council**
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LIST OF ABBREVIATIONS

AA Appropriate Assessment

ABP An Bord Pleanála

CDP County Development Plan

CEMP Construction Environmental Management Plan

CA Competent Authority (An Bord Pleanála)

CSO Central Statistics Office

DAHG Department of Arts, Heritage and the Gealtacht

DCENR Department of Communications, Energy and Natural Resources

DEHLG Department of Housing, Planning and Local Government

DCC Dublin City Council

EIA Environmental Impact Assessment

EIAR Environmental Impact Assessment Report

EMP Environmental Management Plan

EPA Environmental Protection Agency

ESRI Economic and Social Research Institute

GDP Gross Domestic Product

GSI Geology Survey Ireland

IAA Irish Aviation Association

IEEM Institute of Ecology and Environmental Management

IFI Inland Fisheries Ireland

NHA/pNHA Natural Heritage Area / proposed Natural Heritage Area

NIAH National Archive of Architectural Heritage

NPWS National Parks and Wildlife Service

NRA National Roads Authority

NPF National Planning Framework

OPW Office of Public Works

OCMP Outline Construction Management Plan

RMP Record of Monuments and Places

RPS Record of Protected Structures

SAC Special Area of Conservation

SDZ Strategic Development Zone

SDRA Strategic Development Regeneration Area

SMR Sites and Monuments Record

SPA Special Protection Area

SUDS Sustainable Drainage System

TMP Traffic Management Plan

WFD Water Framework Directive

GLOSSARY OF TERMS[1]

Alternatives *A description of other options that may have been considered during the conception of a project; these include alternative locations, alternative designs and alternative processes.*

Baseline Scenario *The current state of environmental characteristics – including any evident trends in its status.*

Competent Authority (CA) *The term 'competent authority' means the Minister or public authority to which an EIAR is required to be submitted, i.e. the authority charged with examining an EIAR with a view to issuing a consent to develop or operate.*

Development *A project involving new works [including alteration and/or demolition] or altered patterns of activity.*

'Do-nothing' Scenario *The situation or environment which would exist if a proposed, development, project or process were not carried out. This scenario needs to take account of the continuation or change of current management regimes, as well as the continuation or change of trends currently evident in the environment.*

Effect / Impact *A change resulting from the implementation of a project.*

Environmental Impact Assessment – EIA *The process of examining the anticipated environmental effects of a proposed project – from consideration of environmental aspects at design stage, through consultation and preparation of an Environmental Impact Assessment Report (EIAR), evaluation of the EIAR by a competent authority, and the subsequent decision as to whether the project should be permitted to proceed, encompassing public response to that decision.*

Environmental Impact Assessment Report *– EIAR A report or statement of the effects, if any, that the proposed project, if carried out, would have on the environment. EPA The Environmental Protection Agency.*

Impact / Effect *A change resulting from the implementation of a project*

Impact Avoidance *The modification of project decisions (about site location or design, for example) having regard to predictions about potentially significant environmental effects.*

Infrastructure *The basic structure, framework or system which supports the operation of a project, for example roads and sewers, which are necessary to support development projects.*

Land Use *The human activities which take place within a given area of space.*

Likely Effects (or Likely Impacts) *The effects that are specifically predicted to take place – based on an understanding of the interaction of the proposed project and the receiving environment. (See also Potential Effects and Residual Effects.)*

Methodology *The specific approach or techniques used to analyse impacts or describe environments.*

Mitigation Measures *Measures designed to avoid, prevent or reduce impacts. These measures can mitigate impacts: \ by Avoidance When no impact is caused (often through consideration of alternatives). \ by Prevention When a potential impact is prevented by a measure to avoid the possibility of the impact occurring. \ by Reduction When an impact is lessened.*

Monitoring *The observation, measurement and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures and to record any unforeseen effects in order to be able to undertake appropriate remedial action. This is typically a repetitive and continued process carried out during construction, operation or decommissioning of a project.*

Pathway *The route by which an effect is conveyed between a source and a receptor.*

[1] Selected – From Guidelines on the information to be contained in Environmental Impact Assessment Reports – EPA, May 2022

Planning Application Report *Documentation that accompanies the planning application which describes the conformity of the proposal with relevant legislation and planning matters – such as the County, City or Local Area Plans – and sectoral policies, as well as social and economic activity.*

Pollution *Any release to the environment which has a subsequent adverse effect on the environment or man.*

Potential Effect/ Impact *The effect / impact that would occur without mitigation.*

Processes *The activities which take place within a project.*

Project *For the purposes of the Guidelines, the term project is used to encompass all of the various forms of development, works and activity which are subject to EIA requirements, as set out in the relevant legislation and as understood by the Directive.*

Sensitivity *The potential of a receptor to be significantly affected. Significance (of impact) The importance of the outcome of the impact (or the consequence of change) for the receiving environment. Source The activity or place from which an effect originates.*

1.0 INTRODUCTION AND METHODOLOGY

This Environmental Impact Assessment Report (EIAR) has been prepared by John Spain Associates Chartered Town Planning Consultants and a team of consultants on behalf of Dublin City Council for a residential mixed-use development at Emmet Road, Inchicore, Dublin 8. The EIAR has been prepared to accompany an application for approval to An Bord Pleanála under Section 175 of the Planning & Development Act 2000 as amended to enable an Bord Pleanála to undertake and Environmental Impact Assessment (EIA) in accordance with the requirements of Directive 2011/92/EU of the European Parliament and Council of the 13th December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) as amended by Directive 2014/52/EU of the European Parliament and Council of the 16th April 2014 ('the EIA Directives').

This '*Non-Technical Summary'* (NTS) relates to Volume I of an EIAR prepared in respect of a development comprising 578 no. apartments supplemented and supported by community facilities (community hub/library, creche, retail/café units), a plaza in a mixed-use scheme which includes a supermarket fronting onto Emmet Road, Inchicore, Dublin 8.

The central purpose of the Environmental Impact Assessment Report (EIAR) is to undertake an appraisal of the likely and significant impacts on the environment of the proposed development in parallel with the project design process, and to document this process in the EIAR. This is then submitted to the competent/ consent authority to enable it assess the likely significant effects of the project on the environment.

A full description of the proposed development lands together with a description of the proposed development is provided in Chapter 2 of this EIAR document and a summary is provided below.

1.1 DEFINITION OF EIA AND EIAR

As 578 no. units are proposed an EIA is required, and Dublin City Council is required to submit the application to An Bord Pleanála who are the decision maker on the application. The EIAR is prepared by the developer (in this case Dublin City Council) and is submitted to a Competent Authority (CA) – in this case, An Bord Pleanála as part of the Part 10 consent process.

The CA uses the information provided to assess the environmental effects of the project and, in the context of other considerations, such as Government and Local Policy to inform its decision as to whether consent should be granted. The information in the EIAR is also used by other parties to evaluate the acceptability of the project and its effects and to inform their submissions to the CA.

The EIAR provides a systematic analysis and evaluation of the potentially significant effects of a proposed project on the receiving environment. The amended EIA Directive prescribes a range of environmental factors which are used to organise descriptions of the environment and these factors must be addressed in the EIAR.

The EIAR should be prepared at a stage in the design process where changes can still be made to avoid adverse effects. This often results in the modification of the project to avoid or reduce effects through redesign.

Where significant and likely environmental effects are identified that are unacceptable, the EIA process aims to quantify and minimise the impact specified development projects have on the environment through appropriate mitigation measures. The preparation of an EIAR requires site-specific considerations and the preparation of baseline assessment (which is assessment of the current environmental status of the receiving environment) against which the likely impacts of a proposed development can be assessed by way of a concise, standardised and systematic methodology. The baseline refers to the current state of environmental characteristics and *"involves the collection and analysis of information on the condition, sensitivity and significance of relevant environmental factors which are likely to be significantly affected by the project."* (EPA Guidelines 2022).

1.2 EIA PROCESS OVERVIEW

The main purpose of the EIA process is to identify the likely significant impacts on the human environment, the natural environment and on cultural heritage associated with the proposed development, and to determine how to eliminate or minimise these impacts. The EIAR summarises the environmental information collected during the impact assessment of the proposed development.

Several interacting steps typify the early stages of the EIA process and include:

- Screening;
- Scoping;
- Assessing alternatives; and
- Assessing and evaluating.

Screening: Screening is the term used to describe the process for determining whether a proposed development requires an EIA.

Scoping: This stage firstly identifies the extent of the proposed development and associated site, which will be assessed as part of the EIA process, and secondly, it identifies the environmental issues likely to be important during the course of completing the EIA process through consultation with statutory and non-statutory stakeholders. Scoping request letters were issued to a range of stakeholders at the commencement of this EIA process and the responses received have been considered as part of the compilation of the EIAR.

Assessing Alternatives: This stage outlines the possible alternative approaches to the proposed development. A description of other options that may have been considered during the conception of a project; these include alternative locations, alternative designs and alternative processes. Consideration of alternatives are set out in Chapter 2 of this EIAR.

Assessing and Evaluating: The central steps of the EIA process include baseline assessment (desk study and field surveys) to determine the status of the existing environment, impact prediction and evaluation, and determining appropriate mitigation measures where necessary. This stage of the EIAR is presented in Chapters 3 to 15 of Volume II of the EIAR and summarised below in section 3 of this NTS.

1.3 SCREENING – REQUIREMENT FOR EIA

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

Projects needing environmental impact assessment are listed in Schedule 5 of the Planning and Development Regulations 2001 (as amended). Schedule 5 (Part 2) of the Planning & Development Regulations 2001 (as amended) set mandatory thresholds for each project class.

Paragraph 10((b)(i) refers to Infrastructure projects comprising the construction of more than 500 dwelling units. The proposed development which comprises 578 no. dwellings is above the threshold and a mandatory EIA is required.

1.4 SCOPING

Project scoping has been undertaken to inform the development project. Consultation was undertaken with statutory consultees and relevant Departments within Dublin City Council as well as consultations with local groups (including public meetings) to draw on local knowledge and experience of the subject lands and Inchicore area and to identify issues of particular environmental significance.

The purpose of the informal scoping process was to establish aspects of the environment to be considered in the Environmental Impact Assessment Report (EIAR) and in particular those sensitive aspects requiring more in-depth study. The exercise has resulted in an iterative design process, such that the proposal and design has been modified to address the issues raised as part of consultations and scoping.

1.4.1 Informal Scoping Request

Scoping by the design team was supplemented by a written request for information to a number of statutory and non-statutory consultees in May 2022. The consultees were provided with information on the site and the proposed development including a set of preliminary drawings and the overall site masterplan. The purpose was to gather any relevant information that they may have had on the site. Further they were invited to highlight any issues that they felt should be addressed within the scope of the EIAR. A copy of the letter and associated drawings is detailed in Appendix A (Volume III of the EIAR).

1.4.2 Internal DCC Scoping Consultation

Extensive internal consultation has been undertaken within Dublin City Council at various stages throughout the development proposal.

1.5 PUBLIC CONSULTATION

Public consultation has been ongoing since December 2020 and there has been a dedicated website (https://emmetroad.ie).

Public Consultation 2020
Initial Research - 22nd December 2020

Public Consultation 2021
22nd February 2021 - Summary of Survey Results December 2020
24th March 2021 - Online Worksheet Report January 2021
20th April 2021 - Online Consultation Event March 2021
21st April 2021 - Outdoor Exhibition at Richmond Barracks
26th April 2021 - 'Your Favourite Place to Play' – Pupils Drawings
26th April 2021 - 'The Dream Hangout Spot' – Core Youth
27th September 2021 - Outdoor Exhibition Now Available to View
21st October 2021 - Feedback Survey Deadline Announcement
29th November 2021 - Emmet Road Drone Video
29th November 2021 - Outdoor Exhibition Feedback Phase Two Consultation
Summary Report of Phase 2

Public Consultation 2022
9th March 2022 Webinar on Concept Design Prestation
Phase 3 Public Consultation March 2022

Appendix A (Volume III of this EIAR) provides a summary of the public consultation undertaken.

1.6 INFORMATION TO BE CONTAINED IN AN EIAR

The content of this Environmental Impact Assessment Report has been prepared in accordance with the provisions of Article 5(1) and Annex IV of the EIA Directives to include:

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

Article 94 and Schedule 6 of the Planning and Development Regulations 2001, as amended, transpose into Irish law the EIA Directive requirements in relation to information to be contained in an EIAR.

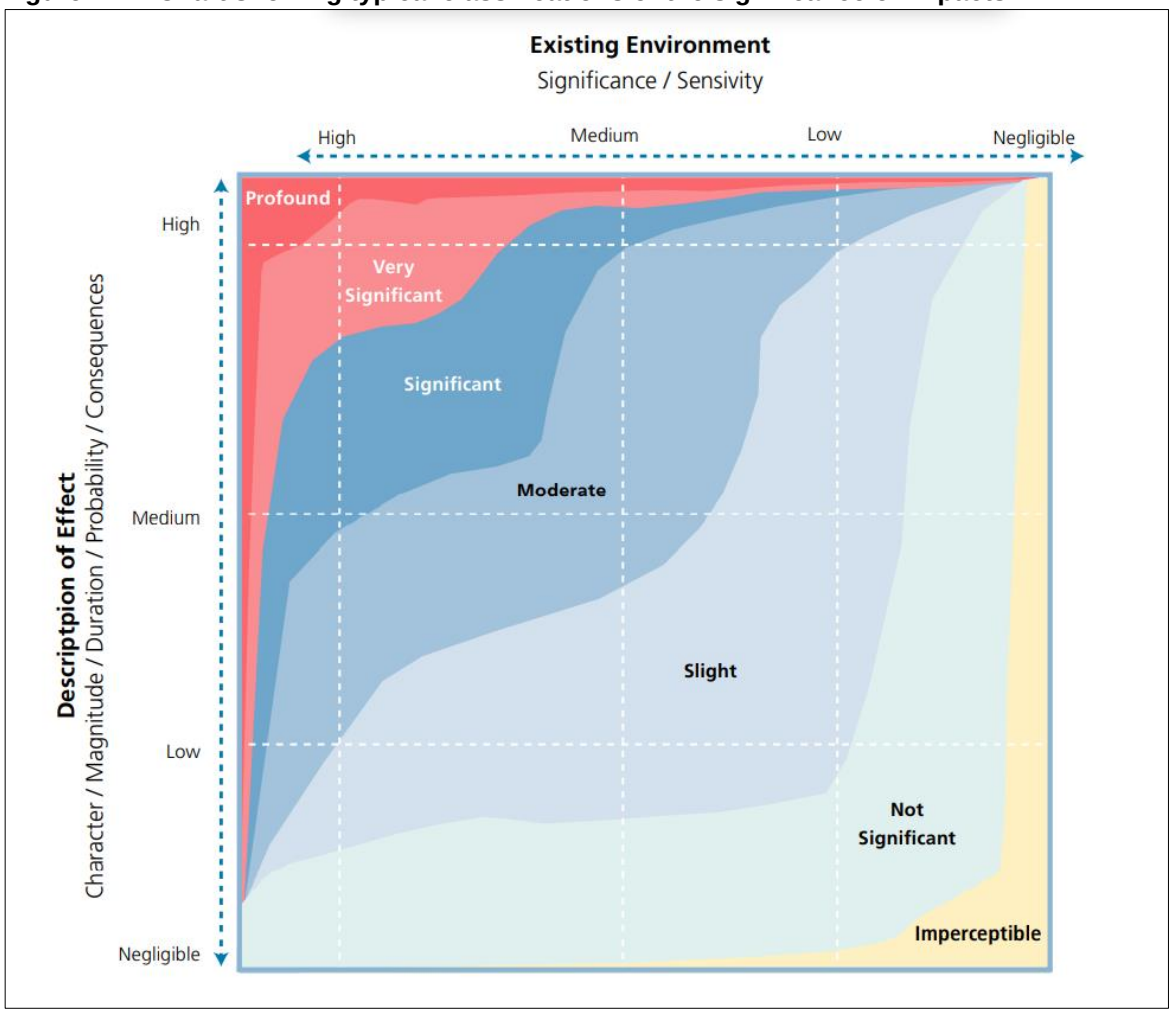
1.7 IMPACT ASSESSMENT METHODOLOGY

The likely significant effects in this EIAR are, unless otherwise indicated in a particular Chapter, described using the terminology in Table 3.4 in the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, EPA, May 2022 (the EPA Guidelines 2022), which are presented in the Table below. The use of these terms for the classification of impacts ensures that the EIA employs a systematic approach, which can be replicated

across most disciplines covered in the EIAR. The consistent application of terminology throughout the EIAR facilitates the assessment of the proposed development on the receiving environment.

The diagram below shows how comparison of the character of the predicted impact to the sensitivity of the receiving environment can determine the significance of the impact.

Figure 1.1 – Chart showing typical classifications of the significance of impacts



Source: Figure 3.4 of EPA Guidelines 2022

1.8 PURPOSE OF THIS EIAR

The EPA Guidelines 2022 state that the main purpose of an EIAR '*is to identify, describe and present an assessment of the likely significant effects of a project on the environment'*. This informs the competent authority's assessment process, its decision on whether to grant consent for a project and, if granting consent, what conditions to attach.

It is intended that this EIAR will assist An Bord Pleanála, statutory consultees and the public in assessing all aspects of the application proposals.

1.9 INFORMATION TO BE CONTAINED IN A NON-TECHNICAL SUMMARY

The EPA guidelines 2022 note that the non-technical summary of the EIAR should facilitate the dissemination of the information contained in the EIAR and that the core objective is to ensure that the public is made as fully aware as possible of the likely environmental impacts of projects prior to a decision being made by the Competent Authority.

This Non-Technical Summary (NTS) has been prepared in accordance with *inter alia* the requirements of the EU 2014 EIA Directive, Planning and Development Acts 2000-2018 as well as the Planning and Development Regulations, 2001, as amended (in particular by the European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018.

The non-technical summary is generally laid out in a similar, but condensed, format to the main EIAR, i.e. describing the project, existing environment, effects and mitigation measures, etc.

1.10 FORMAT AND STRUCTURE OF THIS EIAR

The structure of the EIAR is laid out in the preface of each volume for clarity. It consists of three volumes as follows:

- **Volume I: Non-Technical Summary**

This is a non-technical summary of the information contained within Volume II.

- **Volume II: Environmental Impact Assessment Report.**

This is the main volume of the EIAR. It provides information on the location and scale of the proposed development, details on design and impacts on the environment (both positive and negative) as a result of the proposed development.

Each of the environmental aspects as listed below are examined in terms of the existing or baseline environment, identification of potential construction and operational stage impacts and where necessary proposed mitigation measures are identified. The interaction of the environmental aspects with each other is also examined. Each chapter below includes an assessment of potential cumulative impacts with other existing and planned developments, where relevant. Environmental aspects considered include:

Chapter 3 Population and Human Health;
Chapter 4 Biodiversity;
Chapter 5 Land and Soils;
Chapter 6 Water;
Chapter 7 Air Quality and Climate;
Chapter 8 Noise and Vibration;
Chapter 9 Landscape & Visual;
Chapter 10 Material Assets – Traffic;
Chapter 11 Material Assets - Waste Management;
Chapter 12 Material Assets – Utilities;
Chapter 13 Cultural Heritage – Local History, Archaeology;
Chapter 14 Cultural Heritage – Architectural Heritage;
Chapter 15 Risk Management for Major Accidents and or Disasters;
Chapter 16 Interactions of the Foregoing and Cumulative Impacts;
Chapter 17 Summary of EIA Mitigation and Monitoring Measures;

- **Volume III: Technical Appendices**

Volume III contains specialists' technical data and other related reports.

1.10.1 EIAR Volume II Structure

The preparation of an EIAR document requires the assimilation, co-ordination, and presentation of a wide range of relevant information in order to allow for the overall assessment of a proposed development. For clarity and to allow for ease of presentation and consistency when considering the various elements of the proposed development, a systematic structure is used for the main body of this EIAR document.

The structure used in this EIAR document is a Grouped Format structure. This structure examines each environmental topic[2] in a separate chapter of this EIAR document.

[2] In some instances similar environmental topics are grouped.

1.11 EIAR PROJECT TEAM

1.11.1 EIAR Project Management

The preparation of this EIAR was project managed, co-ordinated and produced by John Spain Associates. John Spain Associates role was to liaise between the design team and various environmental specialist consultants. John Spain Associates were also responsible for editing the EIAR document to ensure that it is cohesive and not a disjointed collection of disparate reports by various environmental specialists. John Spain Associates does not accept responsibility for the input of the competent specialist consultants or the design team.

1.11.2 EIAR Competent Experts/Environmental Specialists

Environmental specialist consultants were also commissioned for the various technical chapters of the EIAR. The amended EIA Directive (Directive 2014/52/EU) states the following in relation to the persons responsible for preparing the environmental impact assessment reports:

'Experts involved in the preparation of environmental impact assessment reports should be qualified and competent. Sufficient expertise, in the relevant field of the project concerned, is required for the purpose of its examination by the competent authorities in order to ensure that the information provided by the developer is complete and of a high level of quality'.

The relevant specialist consultants who contributed to the EIAR and their inputs are set out below.

Table 1.1 – EIAR List of Competent Experts

Organisation	EIAR Specialist Topics / Inputs
John Spain Associates, Planning & Development Consultants, 39 Fitzwilliam Place, Dublin 2, D02 ND61 T: 01 662 5803 Rory Kunz, BA (MOD), MScERM, MAT&CP, Dip EIA Mgmt	Introduction and Methodology Project Description and Alternatives Examined Population and Human Health Interactions of the Foregoing Principal Mitigation and Monitoring Measures Non-Technical Summary
Enviroguide Consulting Claire Clifford BSc., MSc., PGeo, EurGeol Technical Director Dr Siobhán Atkinson Senior Ecologist Liam Gaffney (BSc, MSc) Senior Ecologist	Biodiversity (including Bat and Bird Surveys)
Ian Crehan, Associate OCSC Consulting Engineers. BE, CEng, MIEI., MIStructE, RConsEI	Land and Soils/ Human Health
Mark Killan, Associate OCSC Consulting Engineers. BEng, MSc, CEng, MIEI	Water and Hydrogeology / Human Health
Patrick Raggart, Associate OCSC Consulting Engineers BEng, PGDipPrjMgt, PFDipH&S, CEng MIEI, Chartered Civil Engineer	Material Assets-Traffic
Byrne Environmental Ian Byrne Managing Director, MSc, MIOA, Diploma in Environmental & Planning Law	Material Assets (Waste Management)
Daniel Gray Senior Electrical Engineer, IN2 Consulting Engineers. Ian Crehan, Associate OCSC Consulting Engineers. BE, CEng, MIEI., MIStructE, RConsEI	Material Assets (Utilities)
Byrne Environmental Ian Byrne Managing Director, MSc, MIOA, Diploma in Environmental & Planning Law	Air Quality and Climate (Population and Human Health)

Organisation	EIAR Specialist Topics / Inputs
Byrne Environmental Ian Byrne Managing Director, MSc, MIOA, Diploma in Environmental & Planning Law	Noise and Vibration (Population and Human Health)
Richard Butler, BL Arch MSc MILI MIPI Modelworks	Landscape and Visual Impacts
Brian Mills, Safety Manager, Linesight	Risk Management
Faith Bailey MA, BA (Hons), MCIfA Associate Director IAC Kevin Blackwood Conservation Architect RIAI Grade 1 accredited	Archaeology, Architectural Heritage and Cultural Heritage
John Spain, BBS, MRUP, MRTPI, MIPI, Managing Director, John Spain Associates	Review of EIAR

1.12 AVAILABILITY OF EIAR DOC

A copy of this EIAR document and Non-Technical Summary of the EIAR document is available for purchase at the offices of An Bord Pleanála and Dublin City Council (Planning Authority) at a fee not exceeding the reasonable cost of reproducing the document. It can also be viewed on the application website: https://emmetroad.ie set up by the applicant.

1.13 IMPARTIALITY

This EIAR document has been prepared with reference to a standardised methodology which is universally accepted and acknowledged. Recognised and experienced environmental specialists have been used throughout the EIA process to ensure the EIAR document produced is robust, impartial and objective.

1.14 STATEMENT OF DIFFICULTIES ENCOUNTERED

No particular difficulties, such as technical deficiencies or lack of knowledge, were encountered in compiling any of the specified information contained in this statement, such that that the prediction of impacts has not been possible. Where any specific difficulties were encountered these are outlined in the relevant chapter of the EIAR.

1.15 EIAR QUALITY CONTROL AND REVIEW

John Spain Associates is committed to consistently monitoring the quality of EIAR documents prepared both in draft form and before they are finalised, published and submitted to the appropriate competent authority taking into account latest best-practice procedure, legislation and policy. The EPA published draft guidelines on information to be contained in Environmental Impact Assessment Report[3] and the Department of Housing, Planning, Community and Local Government have published a consultation paper[4], which have been consulted in the preparation of this EIAR. This document includes a detailed EIAR Review Checklist which has been used to undertake a review of this EIAR document.

1.16 ERRORS

While every effort has been made to ensure that the content of this EIAR document is error free and consistent there may be instances in this document where typographical errors and/or minor inconsistencies do occur. These typographical errors and/or minor inconsistencies are unlikely to have any material impact on the overall findings and assessment contained in this EIAR.

[3] *Guidelines on the Information to be contained in Environmental Impact Assessment Reports, Environmental Protection Agency, 2022*

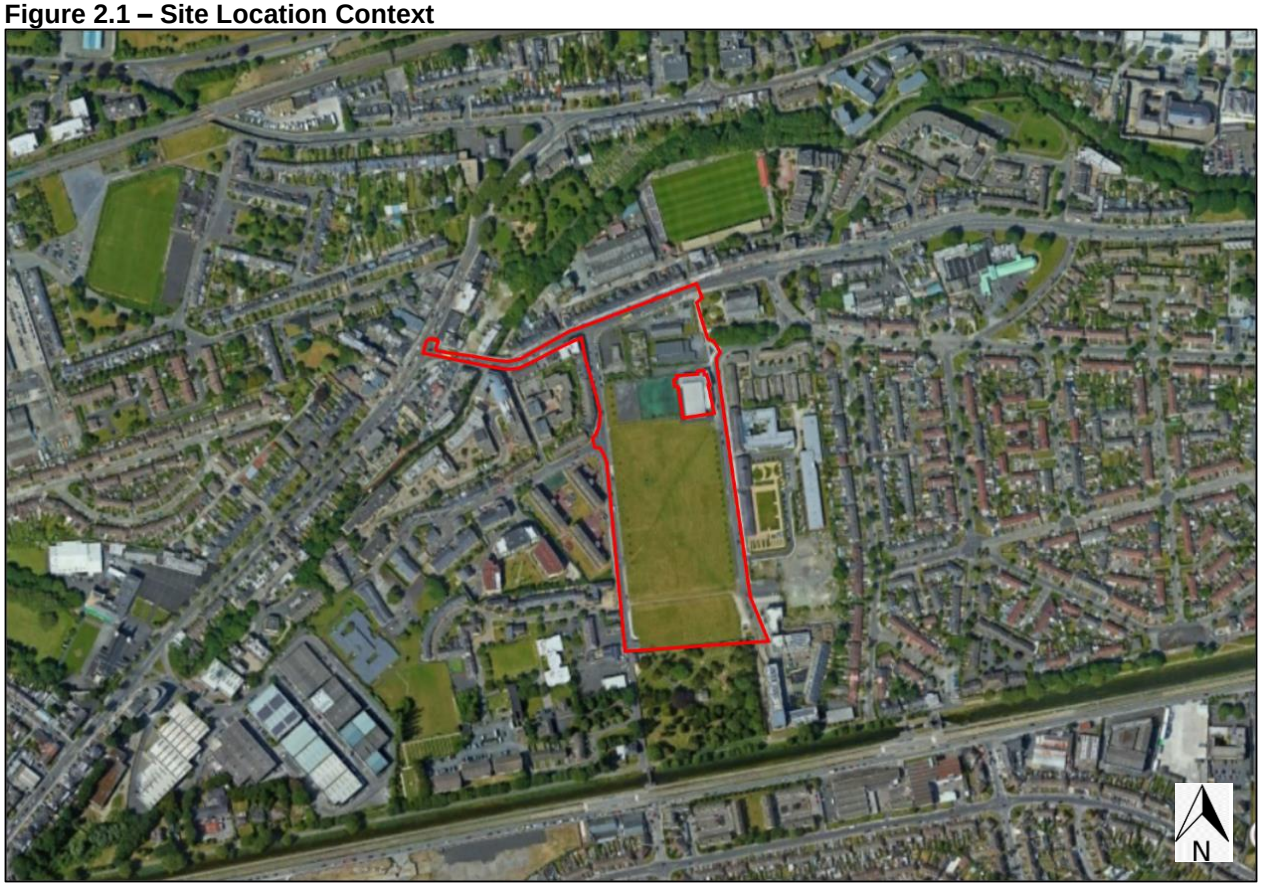
4 *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems - Key Issues Consultation Paper, Department of Environment, Community and Local Government, 2017.*

2.0 DESCRIPTION OF THE PROJECT AND ALTERNATIVES EXAMINED

2.1 DESCRIPTION OF THE LOCATION OF THE PROJECT

The project site is located on a site of c. 4.68 hectares in Inchicore, Dublin 8. The overall site includes watermain works along Emmet Road to the junction with Tyrconnell Road/Grattan Crescent as well as tie in works surrounding the site. The main development site (c. 3.72 hectares) is bounded by bounded by Emmet Road to the north, Goldenbridge Cemetery to the south, "Patriot's Path" and Richmond Barracks to the east and St. Vincent's Street West to the west. The project site is located in the heart of Inchicore village within a well-established setting. The site is approximately 350m long with width varying from 105-115m in an east west direction.

Figure 2.1 – Site Location Context



Source: Google Maps

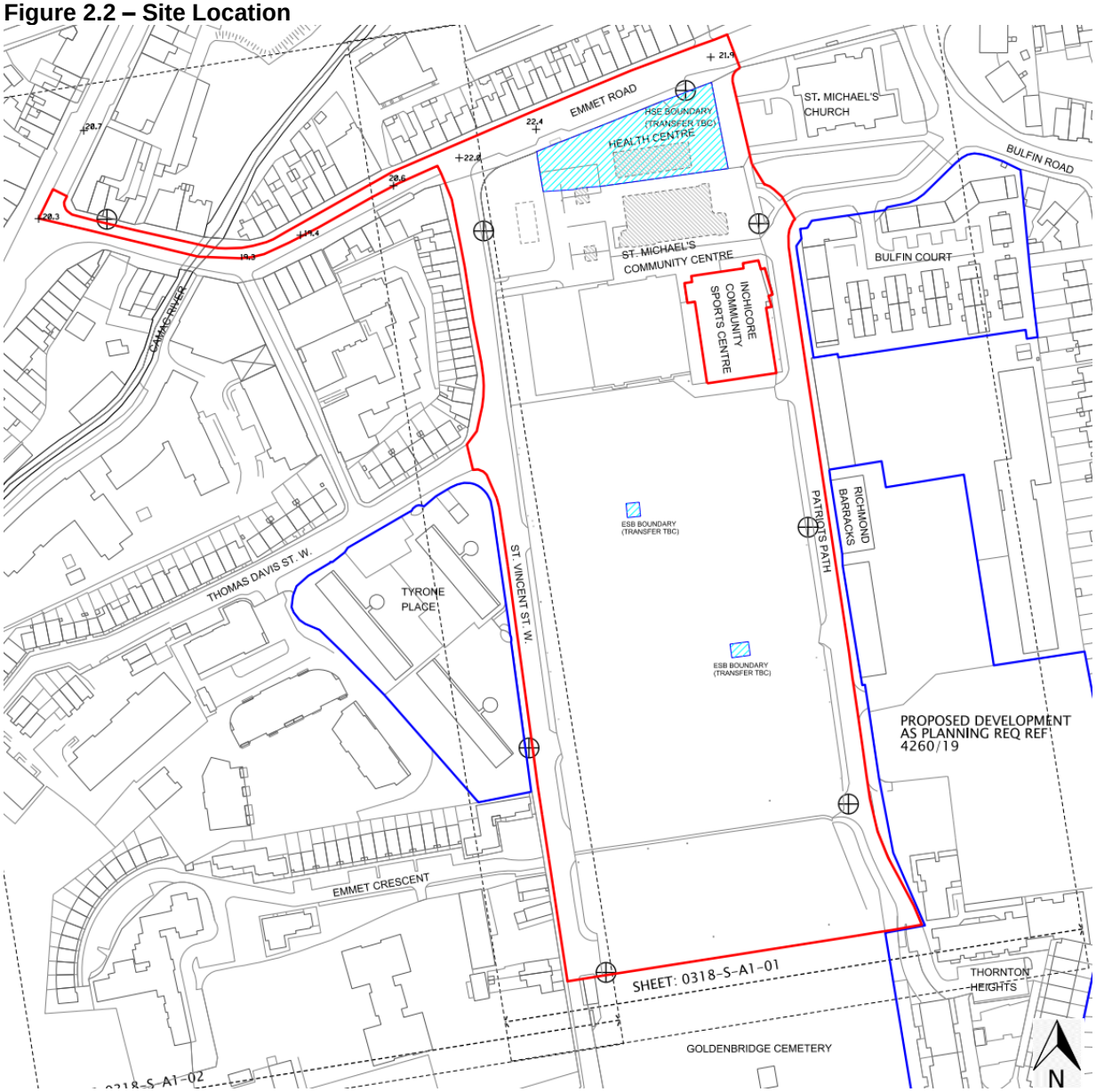
2.1.1 Roads/Access

Principal road access to the subject site is from Emmet Road, designated R810, which provides a direct link between the city centre and the M50 motorway (Red Cow Junction). The R810 connects to the R111 to the north east of the site, which routes around the southern side of Dublin adjacent to the Grand Canal. The R810 is connected to the site area by Saint Vincent Street West and Bulfin Road/Patriots Path (which becomes Thornton Heights at its southern end). These roads provide access to the western and eastern sides of the site respectively. There is currently no connection between these two roads through the site though there had been in the past.

2.1.2 Previous Uses

The site of the proposed development has a long history of previous uses. It originally formed part of the Richmond Barracks-a British Army Barracks first occupied in 1814. Following the formation of the Irish Free state, the barracks changed into Irish hands in 1922 and remained in use as a barracks until its closure in 1925. Subsequently the site was handed over to Dublin Corporation with the development of Keogh Square purpose-built residential accommodation in 1947. A large-scale social housing development known as St Michaels Estate was completed in the 1970s consisting of a number of tower blocks. The buildings were in use up until the early 2000s with demolition of the various blocks being undertaken between 2004 and 2013.

Figure 2.2 – Site Location



2.1.3 Existing Buildings/Structures on the subject site

The site currently comprises of a mixture of brownfield areas which previously housed the St Michaels Estate development together with buildings permitted for demolition under a separate Part 8 development (Planning Reg. Ref. 2221/21) as follows:

- St Michael's Community Centre
- Eve Tuiscint Health Centre

In addition, the Inchicore Community Sports Centre comprises a two-storey structure constructed in the early 2000s which will remain in place and the design of the proposed development has been formulated to take into account this existing community resource.

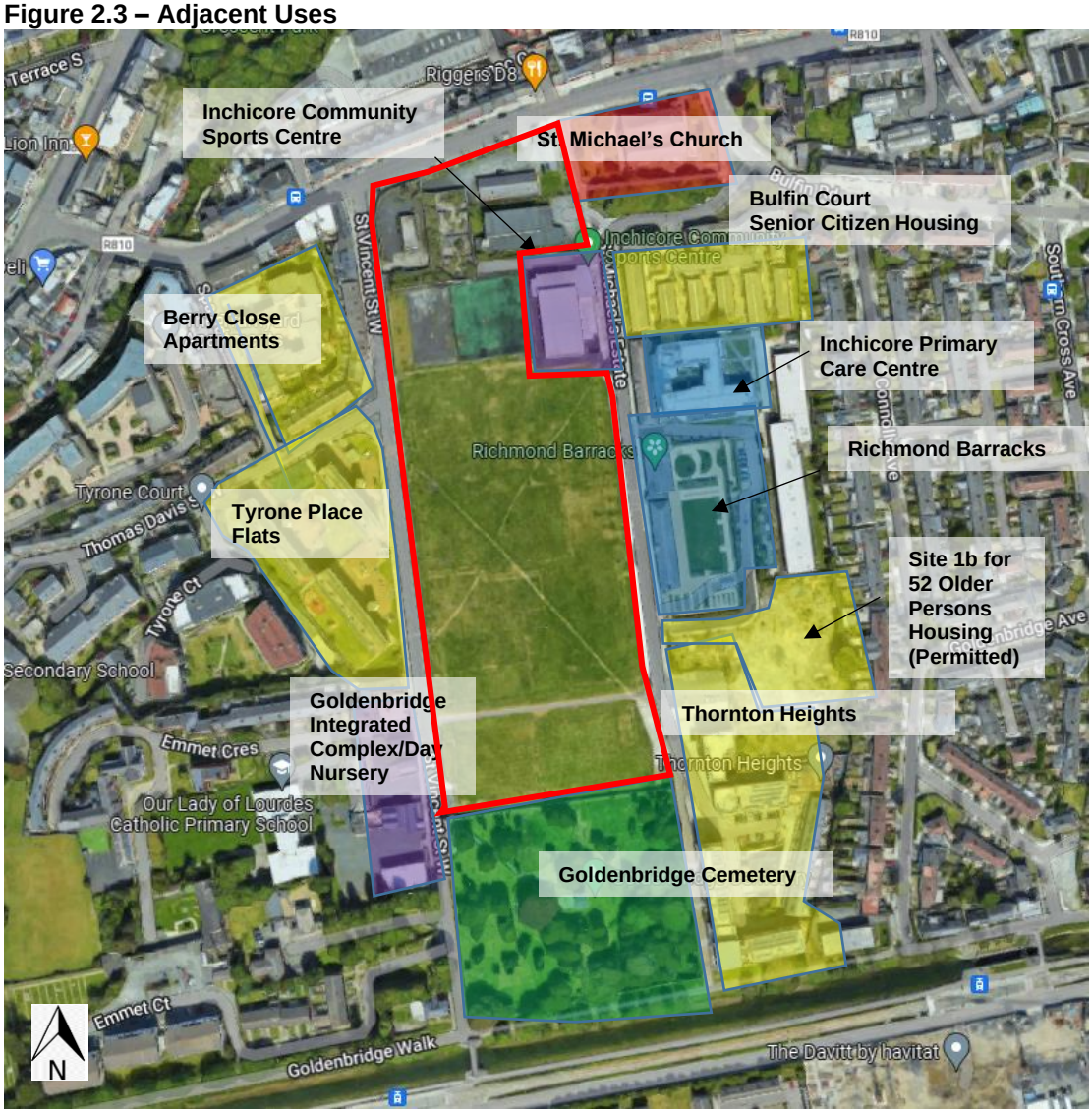
The north western corner of the site is delineated by a section of historic walling, which previously formed the boundary of the Richmond Barracks. The wall is approximately 60m in length with frontage onto St Vincent Street West and Emmet Road. The wall is approximately 3.5m in height along St Vincent Street West with the top of wall dropping to be approximately 2.5m above footpath level at the junction with Emmet Road.

Inchicore Community Sports Centre

Adjacent to the project site, the Sports Centre consists of a two-storey structure with a portion of the centre consisting of a double height sports hall. The building measures approximately 30m x 45m on plan with highest roof level approximately 10m above surrounding ground levels. The building was constructed in the early 2000s and is currently in use as a sports centre and creche, together with ancillary uses.

2.1.4 Existing Buildings/Structures on and in the vicinity of the subject site

Figure 2.3 – Adjacent Uses



Note: Site Outline excludes works on public road

Richmond Barracks

Built in 1810 in response to the threat of a French invasion in the Napoleonic Wars, it was one of the British Army's largest barracks in Dublin at the time. (Nearly every British Regiment would spend time at the Richmond Barracks fighting in conflicts including the Crimean War, the Boer War, and World War 1.)

After the 1916 Easter Rising, Richmond Barracks would become a centrepiece in the fight for Irish Independence, housing over 3,000 suspected rebels before their sentencing. When the site was turned over to the Free State Army in 1922, it ultimately included a housing estate and a Christian Brothers' School.

In 2016, major refurbishment works were completed on Richmond Barracks as part of a Dublin City Council Community Partnership to restore and commemorate the heritage of the building. Richmond Barracks is now also

home to a library, garden, and Culture Connects, a programme of cultural activities that celebrate the experiences and interests of the local communities and people.

The buildings that remain of the original barracks are located on the eastern side of Patriots Path. They are currently occupied in part by the HSE to form part of Inchicore Primary Care Centre with the remaining elements converted in recent times to use as a museum.

Inchicore Primary Care Centre

The Primary Care Centre is part of the original Richmond Barracks built in 1810 and offers a number of health services to the local community including Public Health Nurses, Physiotherapists, Occupational Therapists, Dental Services and Mental Health Services

Goldenbridge Cemetery

To the south of Richmond Barracks the Goldenbridge Cemetery was established following Catholic Emancipation and was established in 1828. It is significant in that it is the first Catholic Cemetery established post Catholic Emancipation in the 1820's predating Glasnevin. It is beautifully laid out with a wonderful neo-classical mortuary chapel, designed walkways and planting and surrounded by high walls with a small 2-storey gate lodge at its entrance and much of it has been recently restored. The site is significant for both its architectural features and its social and political history. It also has to be acknowledged that the site has changed considerably over time, particularly after the Barracks ceased to be used post-independence, and the majority of the barracks buildings and grounds were lost.

Thornton Heights

Thornton Heights is located to the south east of the site. It is a social housing development completed by Dublin City Council in 2014 and consisting of 75 units in a mix of 5-6 storey apartment blocks and 2 storey terraced housing.

Our Lady of Lourdes Primary School

This school is located to the south-east of the site. It comprises a two-storey permanent structure together with a two storey prefabricated structure along the St Vincent Street West elevation.

Tyrone Place

Tyrone Place consists of 3 blocks of apartments 5 storeys tall located directly to the west of the site.

Bulfin Court

Bulfin Court is located to the east of the site and is a housing development for Senior Citizens. It consists of a series of 8 blocks with a mixture of single and two storey structures.

St. Michaels Church

St Michael's Church is located to the north east of the site. The structure was originally constructed as the garrison church for Richmond Barracks before becoming a catholic church for the people of Inchicore in 1926. The structure consists of a cut stone building set in church grounds surrounded by low level railings.

2.2 DESCRIPTION OF THE PHYSICAL CHARACTERISTICS OF THE WHOLE PROPOSED DEVELOPMENT

2.2.1 Main Characteristics of the Operational phase of the project

The application for approval to An Bord Pleanála under Section 175 of the Planning & Development Act 2000 (as amended) (the Act) is accompanied by detailed drawings and a detailed Architectural Design Statement, prepared by BMCEA Architects, which provides a rationale for the design of the proposed scheme and the dwelling types proposed.

The proposed development has been comprehensively described in the public notices accompanying the submission to An Bord Pleanála. A Site Layout Plan is detailed in Figure 2.4.

The proposal will consist of a mixed use development comprising c. 578 no. apartments, community facilities (community hub/library, creche, 5 no. retail/retail services units 2 no. café/restaurant units) including a supermarket and public plaza fronting onto Emmet Road on a site of c. 4.68 hectares and also includes upgrade water supply works along Emmet Road to the junction of Tyrconnell Road and Grattan Crescent. The proposal entails works to a protected structure (8705 - Richmond/Keogh Barracks, relating to rubble stone boundary walls).

The main development area comprises a site of c. 3.72 hectares bounded generally by Emmet Road to the north, Goldenbridge cemetery to the south, "Patriot's Path" and Richmond Barracks to the east and St. Vincent's Street to the west and also includes upgrade water supply works along Emmet Road to the junction of Grattan Road/Tyrconnell Road.

Table 2.1 – Summary of Key Site/Development Statistics

Site Area	4.86 ha. (including Irish Water main upgrade) 3.72 hectares main development area (net site) 3.89 hectares (including 'taken in charge' areas)
Land Use Zoning 2016-2022 City Plan	Z14 *"To seek the social, economic and physical development and/or rejuvenation of an area with mixed use, of which residential and 'Z6' would be the predominant uses."*
Land Use Zoning 2022-2028 Draft City Plan	Z14 *"To seek the social, economic and physical development and/or regeneration of an area with mixed use, of which residential would be the predominant use".*
No. of Apartments	578
Density	155 units per hectare (based on 3.72 ha. site area)
Creche	816 sq. m
Community hub/library	2,810 sq. m
Retail Neighbourhood Shop	2,476 sq. m GFA (c. 1,765 sq. m net retail sales area)
5 no. retail/retail service units	564 sq. m
2 no. café/restaurant units	285 sq. m
Public Open Space	7,230 sq. m 19.4% of Main Development Site (3,720 sq. m required – DCC CDP). Emmet Place 3,166 sq. m Richmond Place 1,165 sq. m Goldenbridge Place 1,038 sq. m "Sports Zone" beside Inchicore Community Sports Centre 1,861 sq. m
Communal Open Space	4,307 sq. m (3,464 sq. m required Apartment Guidelines 2020)
Building Heights	3-7 storeys
Car Parking	106
Motorcycle spaces	8
Bicycle Parking	1,285
Total Gross Floor Area	56,838 sq. m

Source: BMCEA Schedule of Areas

2.2.2 Demolition

The demolition of the existing buildings on the site to facilitate the mixed-use development has been approved under a separate approval (Planning Reg. Ref. 2221/21) and therefore approval for this element of the project is not being sought as part of the current application. Notwithstanding this the environmental effects associated of these demolition works have been included in the assessment undertaken as part of this EIAR.

Figure 2.4 – Layout of Project Site

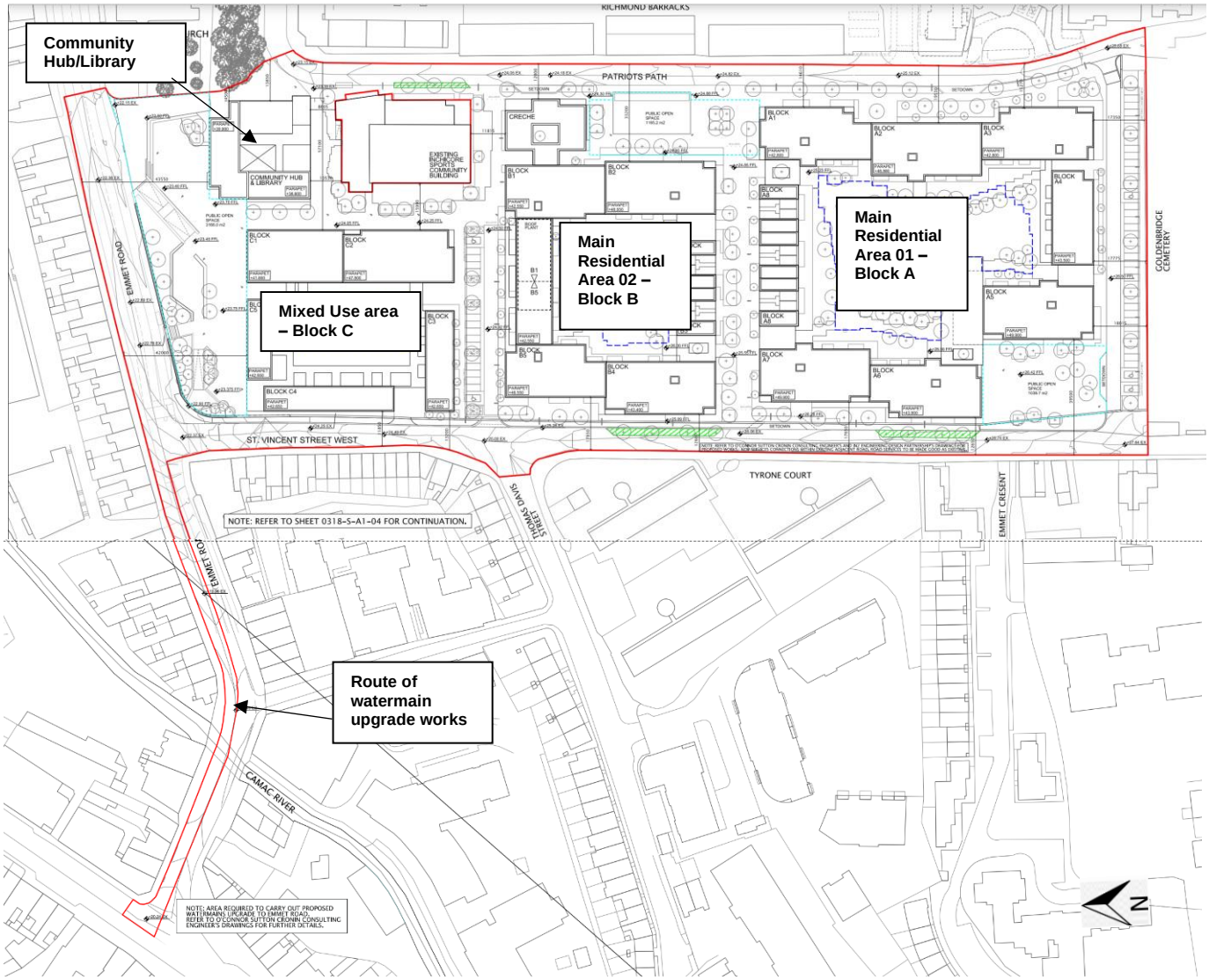
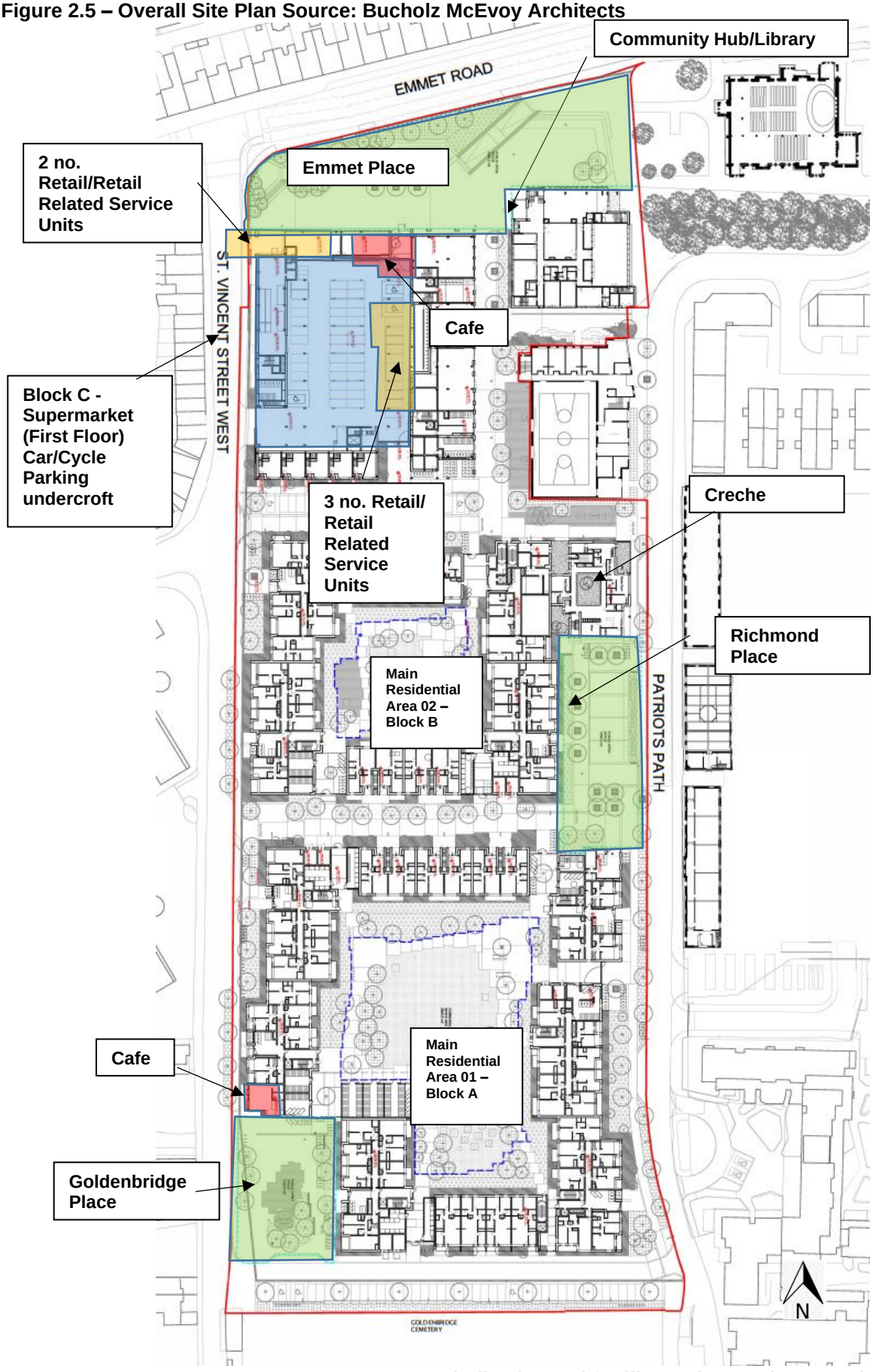


Figure 2.5 – Overall Site Plan Source: Bucholz McEvoy Architects



Note: Names on Open Spaces indicative and for illustration - to be agreed

2.2.3 Residential Summary

The following table provides a summary of the overall dwellings mix within the Part 10 development.

Table 2.2 – Overall Dwelling Mix

Unit type	Studio	1 bedroom	2 bedroom	3 bedroom	
Total	110	172	250	46	578
Overall Mix	19%	29.8%	43.3%	7.9%	100%

Source: BMCEA Schedule of Areas

The supporting community and commercial elements of the proposed development (of some 6,951 sq. m) will comprise:

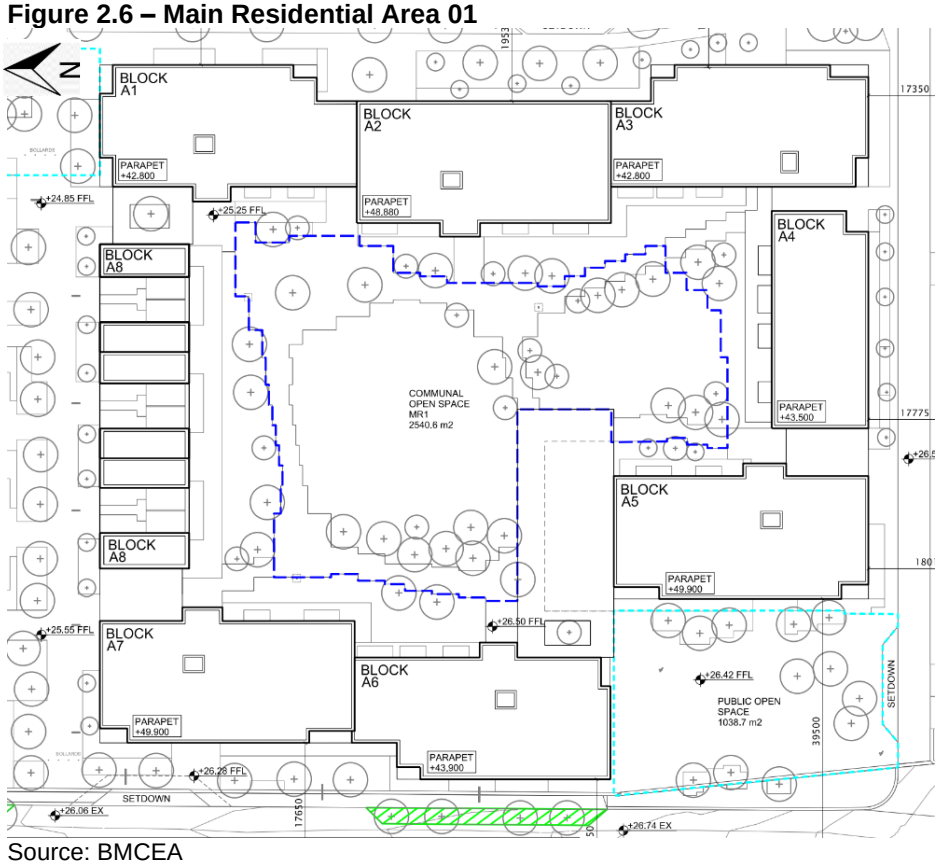
Table 2.3 – Summary of Proposed Cultural/Community and Commercial Elements

Use	Area
Creche	816 sq. m
Community hub/library	2,810 sq. m
2 no. café units	285 sq. m
Supermarket	2,476 sq. m
5 no. retail/retail related service units	564 sq. m
Total	6,951 sq. m

2.2.4 Main Residential Area 01

In the southern portion of the site ('*Main Residential Area 01*'), comprises a Courtyard perimeter building in a series of blocks consisting of 'Block A' (306 no. apartments comprising 76 no. studio apartments, 100 no. 1 bedroom apartments, 104 no. 2 bedroom apartments and 26 no. 3 bedroom apartments as well as a management office).

Figure 2.6 – Main Residential Area 01



Source: BMCEA

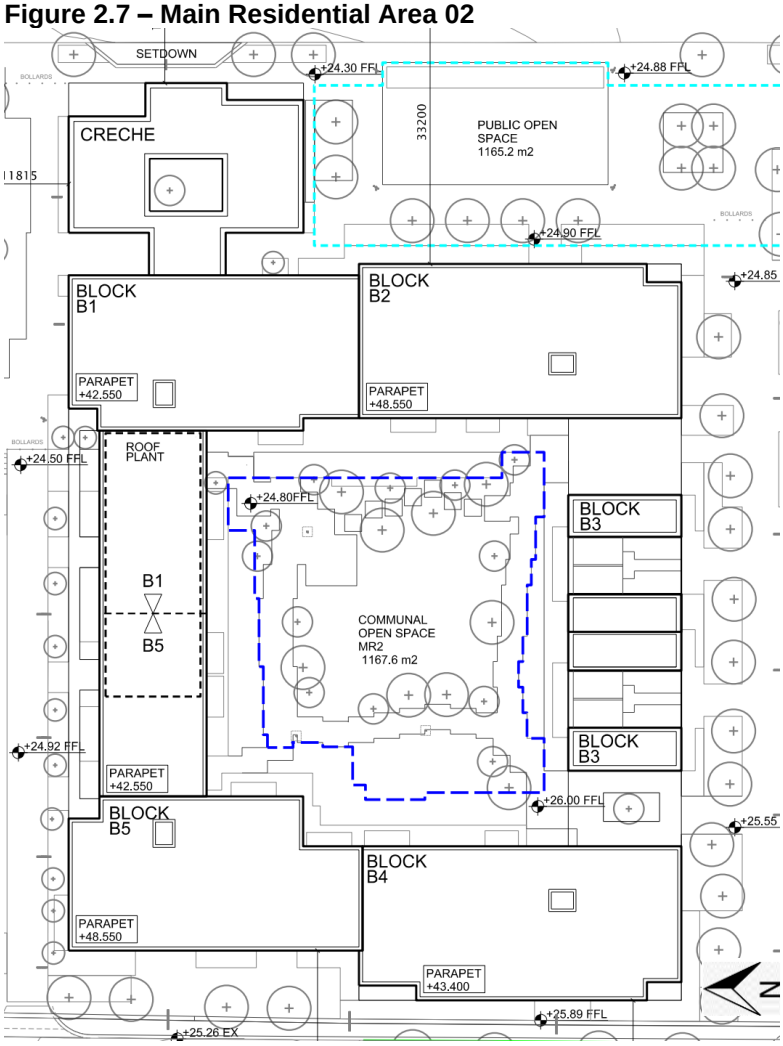
The southern part of the site includes a public open space area (Goldenbridge Place c. 1,039 sq. m), which is surrounded by active frontages which include a café c. 80 sq. m (at ground floor level of Block A6) and the entrance areas to the communal open space to the north and to the adjacent blocks to the east. Further detail is provided below and in the BSLA Landscape Report.

Within Main Residential Area 01 there is a centrally located area of communal open space for residents of c. 2,540 sq. m (1,766 sq. m required as per Apartment Guidelines 2020).

2.2.5 Main Residential Area 02

In the central portion of the site ('*Main Residential Area 02' Block B*), comprises a Courtyard perimeter building in a series of blocks consisting of Block B' (181 no. apartments comprising 24 no. studio apartments, 43 no. 1 bedroom apartments, 103 no. 2 bedroom apartments and 11 no. 3 bedroom apartments)

Figure 2.7 – Main Residential Area 02



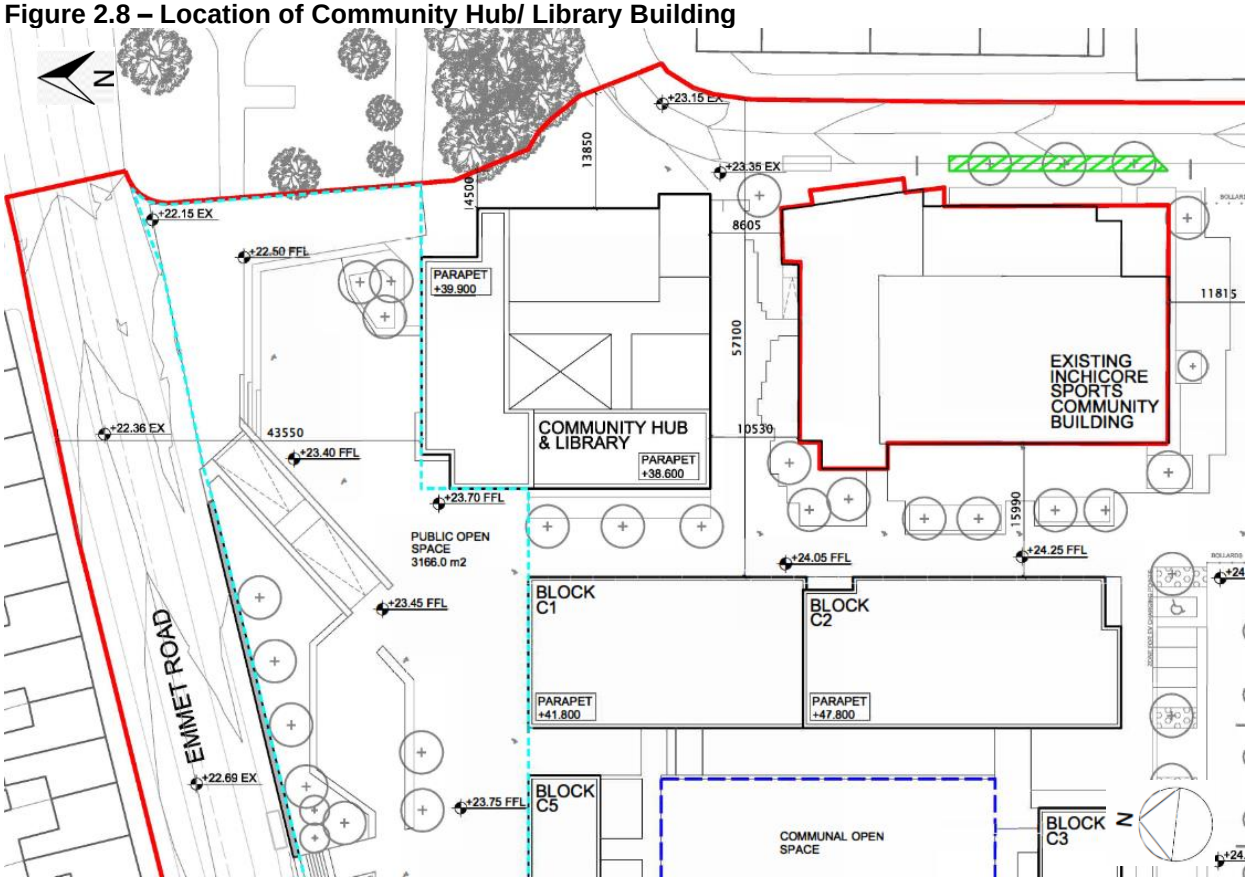
Source: BMCEA

Within Main Residential Area 02 is a centrally located area of communal open space of c. 1,167 sq. m (1,131 sq. m required as per Apartment Guidelines 2020).

2.2.6 Community Hub/Library

It is proposed to provide a community hub/ library building (4 no. storeys) of c. 2,810 sq. m. The building offers an opportunity to co-locate community facilities, a public Community Hub/Library, with mutual benefits arising from the synergies between both. The building presents its main façade to the new civic plaza opening up to Emmet Road, framed by St. Michael's church and the remains of Richmond Barracks boundary wall. A shared corner entrance addresses both the civic plaza and the north-south pedestrian route on its western façade.

Figure 2.8 – Location of Community Hub/ Library Building



Internally the building is organised around a central double height space shared by community hub and library users, which offers a gathering and orienting space for small events, information evenings etc. The large multi-purpose hall with flat floor can facilitate both sports and larger group activities (with ample storage for demountable stage and seating for temporary performance use directly adjacent).

The library element along the northern side comprises casual journal reading area at entrance level, children's library at first floor, with teenagers and adult reference and study spaces at the upper levels. A high-ceilinged reading space overlooking the civic plaza comprises the top level. The community hub comprises a range of different sized meeting and activity spaces to accommodate various group sizes for community groups, with shared break-out and ancillary spaces organised around the central space. Shared roof gardens offer planted spaces for relaxation, with places to sit in the sun, with views of the tree canopy and Richmond Barracks on the East.

Figure 2.9 – Emmet Road Frontage

2.2.7 Mixed Use Development Area – Block C

Located to the west of the community hub/library building the northern portion of the project site includes the provision of a mixed-use block (5 storeys with a 7 storey element) consisting of 91 no. apartments (10 no. studio apartments, 29 no. 1 bedroom apartments, 43 no. 2 bedroom apartments & 9 no. 3 bedroom apartments), communal open space at second floor level along with a supermarket of c. 2,476 sq. m GFA (c. 1,765 sq. m net retail sales area, including off-licence area), café (c. 205 sq. m), 5 no. retail/retail service units (c. 564 sq. m), with undercroft car and cycle parking.

Figure 2.10 – Location of Block C

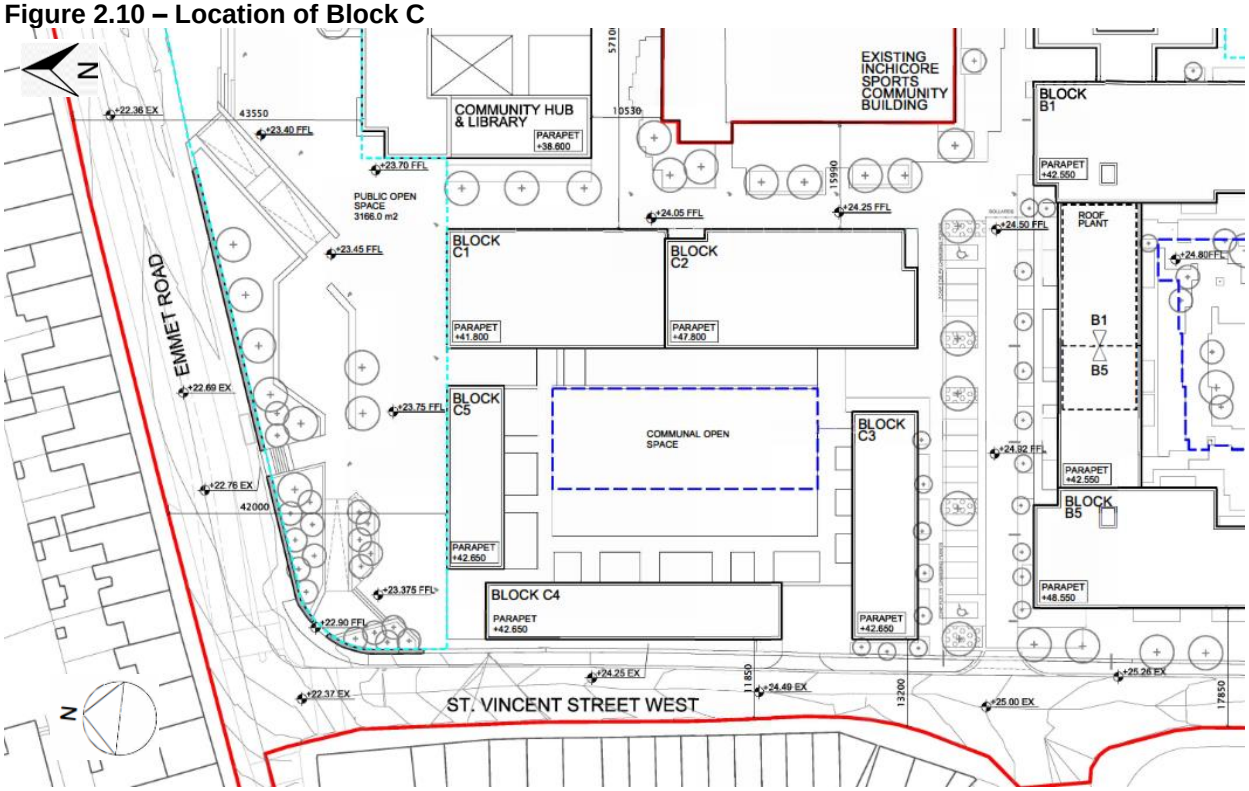
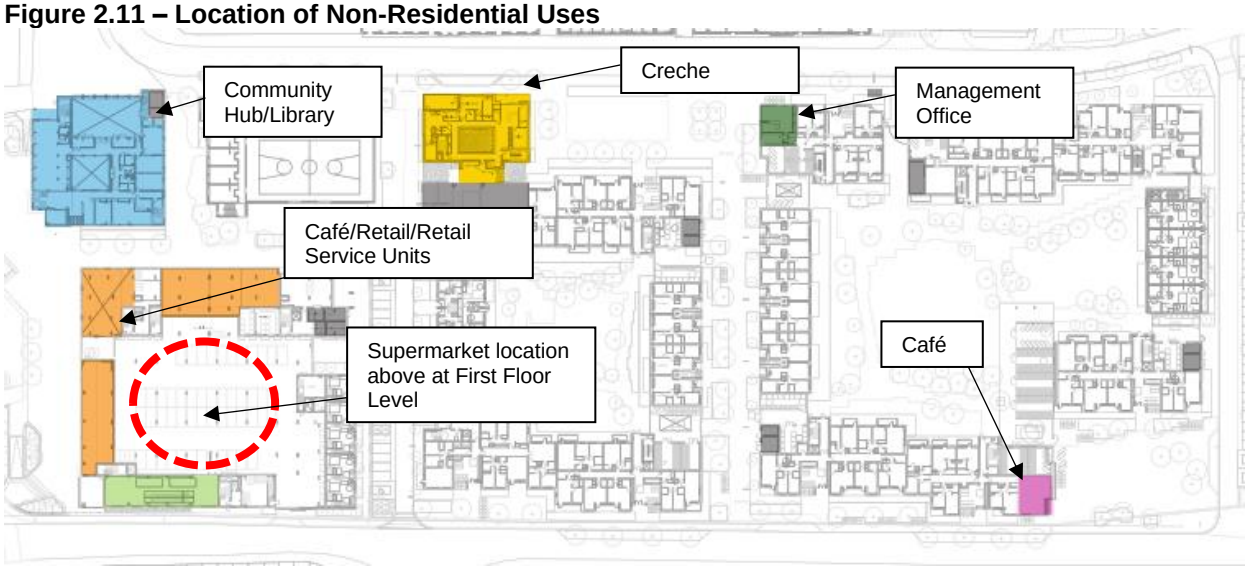


Figure 2.11 – Location of Non-Residential Uses



2.2.8 Neighbourhood Shop (Supermarket)

At first floor level, the mixed-use building provides a supermarket of c. 2,476 sq. m GFA (c. 1,756 sq. m net retail sales area, including off-licence area). The mixed-use building will comprise a supermarket at first floor level, a village car-park below on ground floor (undercroft) level, five retail/retail related service units at ground floor level with two facing Emmet Road along the North façade and two facing the community hub/library building and the existing Inchicore Sports Community Building, as well as 91 residential apartment units located above the supermarket.

The communal open space is located on the roof of the supermarket and accessed via the cores and galleries provided. Screens are provided along the gallery decks to provide privacy to the individual apartments from the residences.

Along the southern edge the residential block consists of own-door accessed duplex units at the ground floor, with gallery accessed units above. Along the western edge the residential block sits above the escalator to the grocery store with the residential entrance being located at the centre of the block. Along the eastern edge the residential units sit above the café and retail spaces; there are two residential entrances to the blocks above which start at first floor level. The dedicated residential bicycle parking is located adjacent to the entrances consistent with the approach taken generally on the development.

The undercroft "*Village Carpark"* is accessed from St. Vincent Street West in the southern portion of the block, Immediately adjacent to the carpark entrance is the truck loading bay access; a roller-type gate will be used to close both the carpark and truck loading bay after hours and will be able to close the truck loading bay when it is not in use. The carpark is naturally ventilated and naturally lit thanks to the large openings provided along the north south axis.

2.2.9 Café/Retail/Retail Related Services Units

It is proposed to provide a mixture of commercial units in the development comprising 2 no. café/restaurant units as well as 5 no. retail/retail service units (c. 564 sq. m). In the northern part of the site, the proposed cafe c. 205 sq. m is located to the west of the proposed community hub/library building and fronts onto Emmet Place presenting an active frontage which will provide animation and activity and enhanced passive surveillance.

In addition it is proposed to provide 5 no. retail/retail service units either side of the proposed café, which includes 2 no. retail/retail service units fronting onto Emmet Place and 3 no. retail/retail service units located along the internal north/south pedestrian link, located between the community hub/library/(existing Inchicore Sports Centre) and Block C.

In the southern part of the site, it is proposed to provide a café unit of c. 80 sq. m which will front onto the Goldenbridge open space located beside the cemetery.

2.2.10 Crèche

Located centrally within the development, it is proposed to provide a creche of c. 816 sq. m, which will front onto the Richmond Barracks open space.

The creche has capacity to serve the development proposal. In accordance with the publication *"Childcare Facilities - Guidelines for Planning Authorities",* 2001, provision has been made for 20 no. childcare spaces per 75 no. residential units, excluding 1 bed and studio units. The creche can cater for c. 79 no. childcare spaces but could cater for more children depending on final layout and breakdown of children (as composition impacts on floorspace required per child).

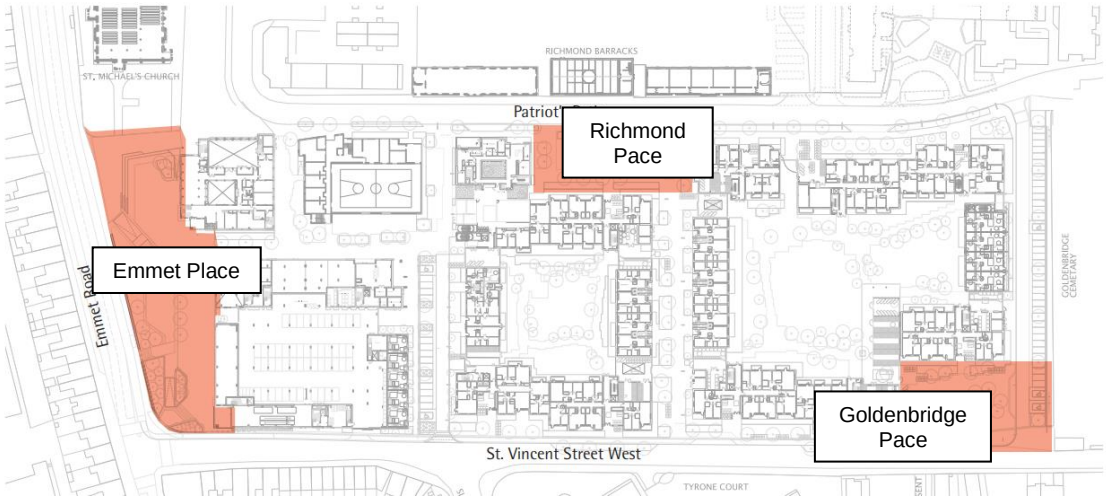
2.2.11 Management Office

The management office (c. 59 sq. m) is located centrally within the scheme at ground floor of Block A1 which fronts onto Richmond Place.

2.2.12 Public Open Space

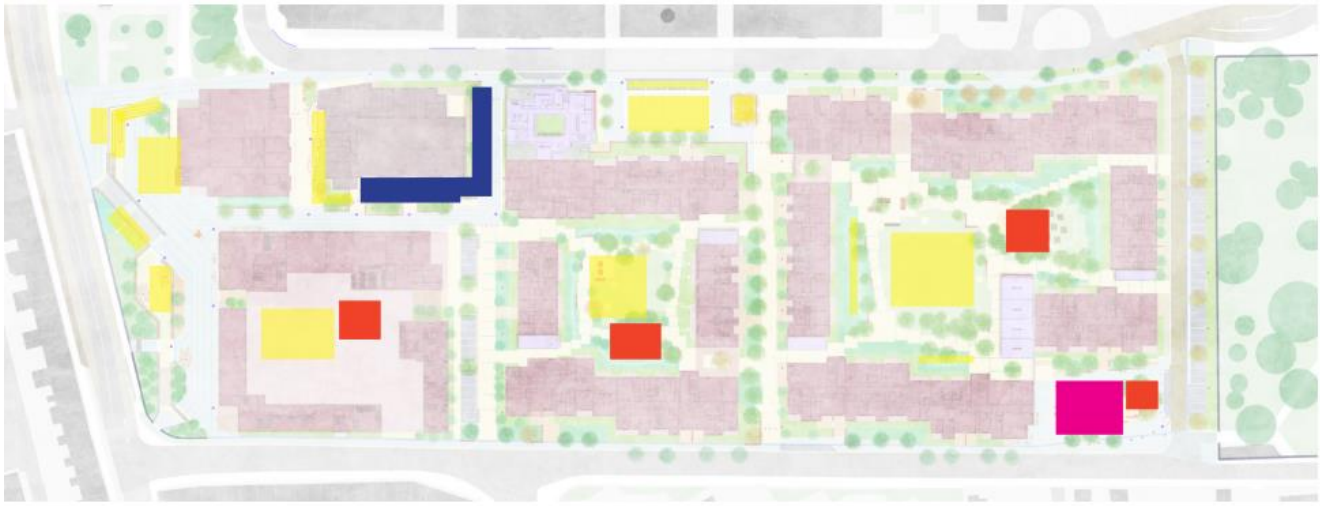
It is proposed to provide three new public spaces, Emmet Place, Richmond Place, and Goldenbridge Place, and activates the north-south connection between Emmet Place and Richmond Place. (Note: Placeholder names above used for the purpose of drawing/planning reference only).

Figure 2.12 – Location of Main Public Open Space Areas



To the north, south, west and of the existing Inchicore Community Sports Centre building new "parklets" are offered to enhance the level of flexible urban use focused on the young adult and teen. These three edges provide an element of 'parcours' (see Landscape report for details), which are carefully separated from pedestrian access to the retail units at ground floor of the commercial block, the fire tender access zone to the south.

Figure 2.13 – Play Areas Age Classifications and Types Overview



Young Children 325m2 (approx)

Suggested Equipment, Timber-style (eg.. Kompan)
- Springer (4no.)
- Seesaw (4no.)
- Multiplay Hut (3no.) (Playhouse, Slide, Climbing)
- Balance Beams/Posts (2no.)
- Carousel (2no.)

Children (+Teenager) 280 m2 (approx)

Equipment Shown
- Bespoke multi-activity feature (swings, climbing, jumping, balancing)
- Play Hill
- Play Stage
- Bicycle Repair Station
- Stepping Stone Stools (40no.)

Teenager (+Children) 400 m2 (approx)

Equipment Shown
- Basketball practice Hoops (2no.)
- Parkour Climbing Frame
- Parkour Jumping Walls
- Stepping Stone Stools (40no.)

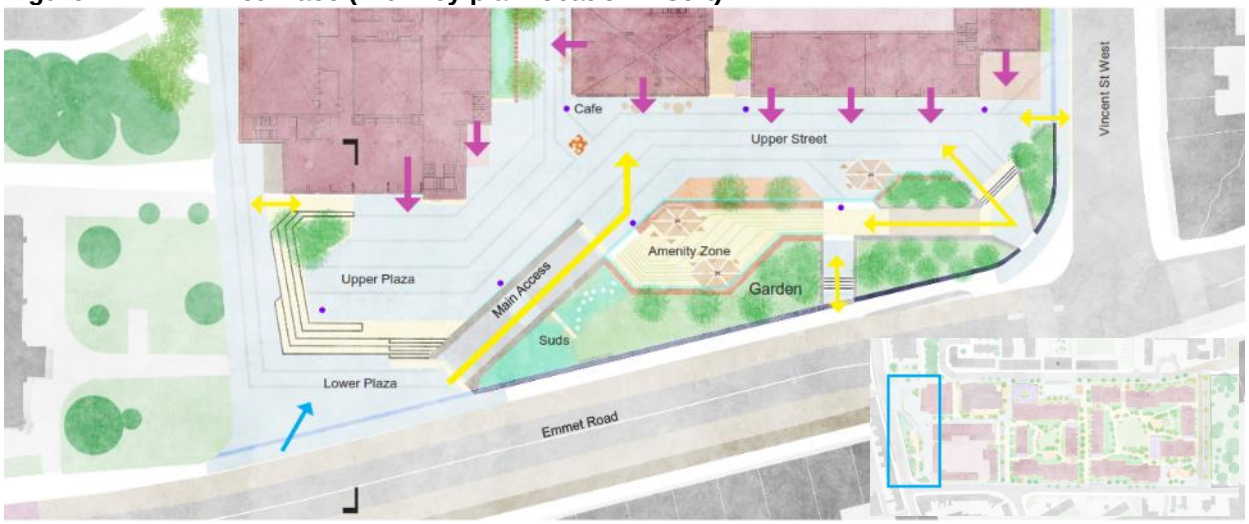
Informal Play (n/a) m2

Equipment Shown
- Stepped Seating (Emmet Rd)
- Stepped Seating (Sports Hall)
- Stepping Stones (200+ no.)
- Rain Shelters (3no.) (Emmet Place)
- Lawns + Plazas

2.2.12.1 Public Open Space Emmet Place (Place holder name)

Located along the northern extent of the site, fronting Emmet Road it is proposed to provide a substantial area of open space comprising some 3,166 sq. m in extent.

Figure 2.14 – Emmet Place (with key plan location insert)

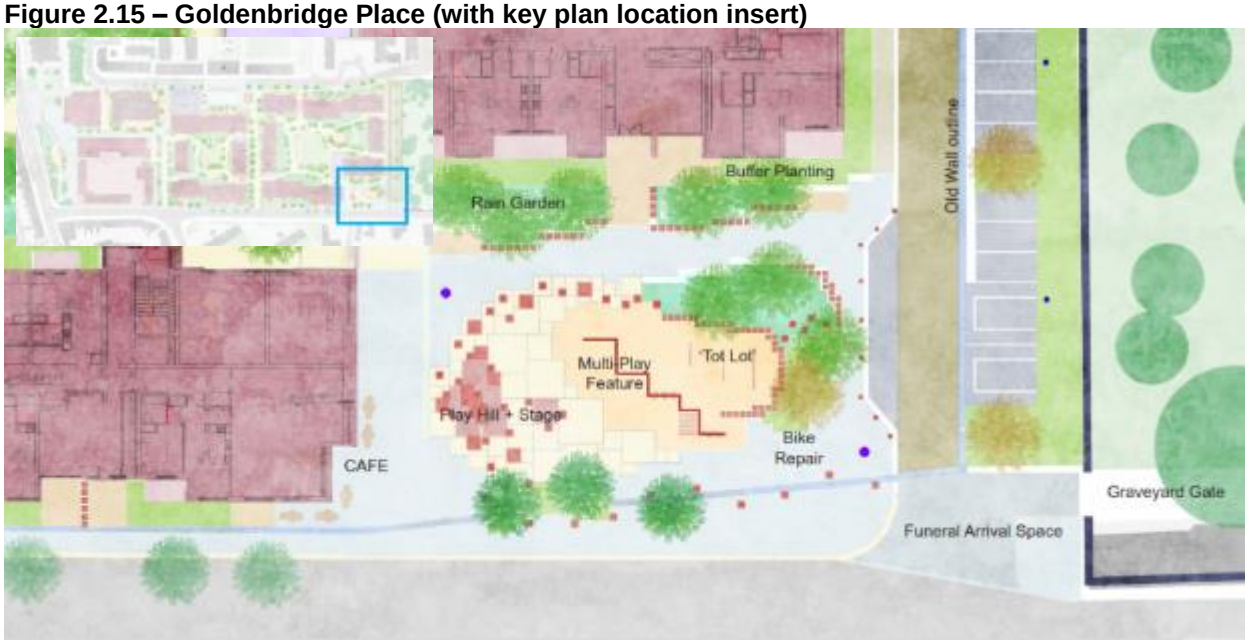


Emmet Place along the norther frontage of the site relates to the busiest street bounding the site in Emmet Road, thereby building on this activity to encourage further public life. The new builds will face Emmet Rd and create new street frontage with the supermarket, cafe and retail, as well as the Community Hub/ Library building facing onto it, attracting footfall. The plaza is bounded on the other two sides by St. Michaels' Church as the eastern backdrop, and the preserved barracks wall to the west. The space itself is designed to encourage day-to-day life while also allowing the flexibility of organised events, and also to increase the nature value in the site, with a garden sheltered behind the heritage wall.

2.2.13 Public Open Space - Goldenbridge Place (Place holder name)

The southern part of the site includes a public open space area (Goldenbridge Place c. 1,038 sq. m), which is surrounded by active frontages which include a café c. 80 sq. m (at ground floor level fronting onto the space.

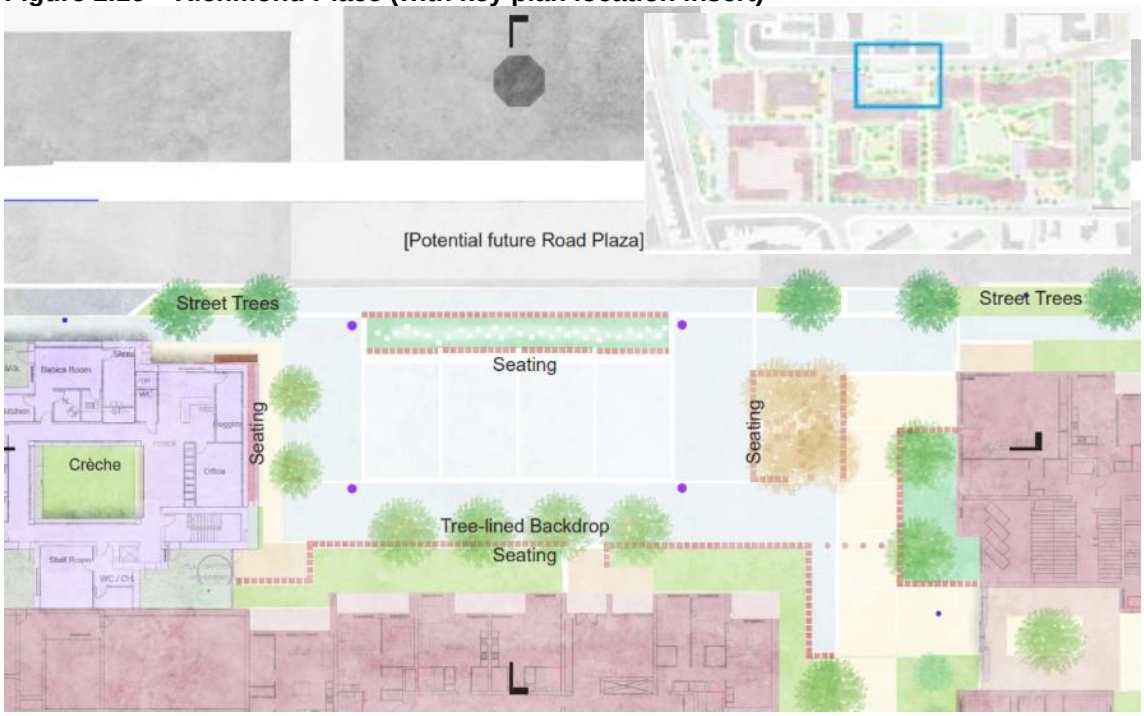
Figure 2.15 – Goldenbridge Place (with key plan location insert)



2.2.14 Richmond Barracks Open Space (Richmond Place - place holder name)

The central part of the site includes a public open space area (Richmond Barracks Open Space c. 1,404 sq. m), which is surrounded by active frontages which include a creche and the entrance areas to the communal open space to the west. The open space provides an appropriate area to integrate with the entrance to Richmond Barracks to the east.

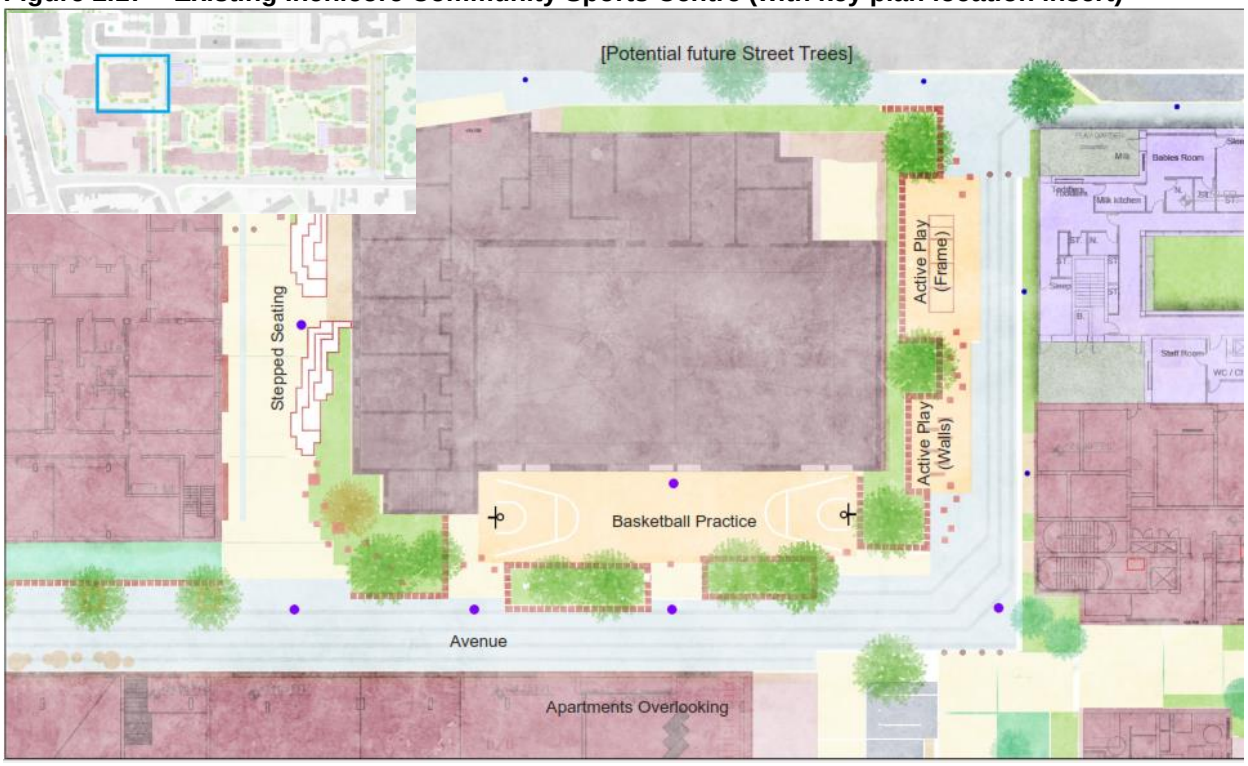
Figure 2.16 – Richmond Place (with key plan location insert)



2.2.15 Integration of Existing Inchicore Community Sports Centre into the Layout

An important amenity on the site is the play provision for older children/ teenagers, and in conjunction with the youth consultations, it was agreed that the environs around the existing Sports Hall would be a very suitable spot. Currently the building presents the surroundings with tall, mostly blank facades, that are not the most inviting interfaces. A key outcome of the proposed scheme would be to soften this impression and to help integrate this building into the wider landscape masterplan.

Figure 2.17 – Existing Inchicore Community Sports Centre (with key plan location insert)



2.2.16 Communal Open Space Areas

In the mixed-use Block C, it is proposed to provide communal open space for the residents of some 600 sq. m above the supermarket at second floor level as shown below.

Figure 2.18 – Communal open space (Please refer to BSLA material for layout)

Communal Open space is also provided within the courtyards of the main residential blocks (Blocks A & B). The Communal Open space is accessible only to residents. Privacy buffer gardens protect the private amenity space of the ground floor units from the communal open space. There are two double-height residents only entrances provided, one along the northeast edge of the middle courtyard building (Block B) and one along the eastern edge of the southern courtyard building (Block A). These openings provide important visual connections between the public open space and the communal open space.

Within Main Residential Area 01 there is a centrally located area of communal open space for residents only of c. 2,540 sq. m (Figure 6.9) (1,766 sq. m required as per Apartment Guidelines 2020).

Within Main Residential Area 02 is a centrally located area of communal open space for residents only of c. 1,167sq. m (Figure 6.9) (1,131 sq. m required as per Apartment Guidelines 2020).

2.2.17 Private Amenity Space

All residential units within the scheme are provided with private amenity space in the form of balconies on upper floors or private patio/terrace at ground floor level which meet and exceed the minimum required areas set down in Appendix 1 of the Apartment Guidelines.

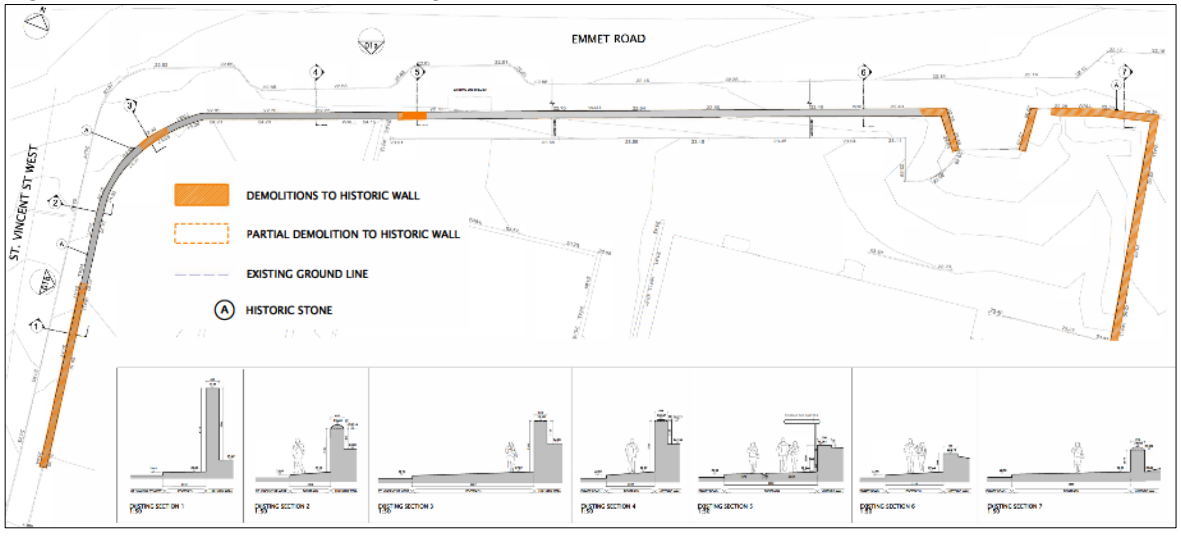
2.2.18 Lighting Strategy

The landscaping proposals include a Lighting Strategy, and this is supported by an External Lighting Design Report prepared by IN2. The overarching principle of the strategy is to create a safe night-time environment, ensuring no undue harm to neighbouring residents, and including bat friendly lighting. The lighting columns indicated are to be agreed post planning.

2.2.19 Works to Boundary Wall (a protected structure)

Located at the north eastern part of the subject lands the boundary wall associated with Richmond Barracks presents an opportunity and also a constraint in relation to the proposed development. With regard to the opportunity for the proposed development, what remains of the wall has the potential to provide legibility and inform future residents and visitors to the subject site of the long history associated with the site. The constraints in relation to the wall relate primarily to the lack of permeability and as a barrier to movement in the north western corner of the site, reducing the interaction with the existing neighbourhood. In addition, the wall also presents potential difficulties with regard to passive surveillance. Noting the above, the proposal includes for some discrete interventions to the wall to provide permeability, which will entail some removal of the protected wall. We refer the Board to Chapter 14 of the EIAR, prepared by Blackwood Associates for the Architectural Heritage impact assessment.

Figure 2.19 – Location of Boundary Wall



2.2.20 Access

Vehicular access to the site is provided from Emmet Road directly to the site, via Saint Vincent Street West to the west of the site and via Bulfin Road/Patriots Path to the east of the site. Pedestrian links are also provided on these routes with additional pedestrian linkages via public paths along the Grand Canal to the south of the site.

2.2.21 Parking

2.2.21.1 Car Parking

The proposal also includes 106 no. car parking spaces comprising 50 no. car parking spaces for the residential and the remainder allocated to the other uses including accessible spaces car share spaces and 10% Electric Vehicle charging points. The Village car parking spaces (54 no.) will be predominantly provided in a Village Mobility Hub located beneath the Supermarket. 2 no car parking spaces will also be located adjacent to Goldenbridge Cemetery

2.2.21.2 Cycle Parking

It is proposed to provide 1,285 no. bicycle spaces as follows:

Community Hub & Library	30
Supermarket	28
Retail / Commercial / Café	8
Creche	10
Residential in Commercial Mixed Use - Block C	152
Main Residential - Block A & B	768
Residential Visitors in Commercial Mixed Use - Block C	46
Main Residential Visitors - Block A & B	243
Bicycle Parking / Storage Subtotal	1,285

2.2.22 Surface Water Drainage

2.2.22.1 Proposed

It is proposed to separate the surface water and wastewater drainage networks, which will serve the proposed development, and provide independent connections to the local surface sewer network and local wastewater sewer network respectively. The development will discharge treated and attenuated (to greenfield equivalent rate) rainfall runoff to the adjacent public surface water networks, that discharge to the River Camac.

The overall surface water drainage system, serving both catchments in the proposed development, is to consist of a gravity sewer network that will convey runoff from the roofs and paved areas to the outfall manhole. The new gravity networks will discharge a controlled attenuated flow rate to both the existing public network (southern catchment) and the open ditch / stream at the north-western corner of the site (northern catchment).

Please refer to OCSC drawing B967-OCSC-ZZ-GF-DR-C-0500 for detail on the proposed surface water drainage layouts.

2.2.23 Foul Sewer

The proposed development is to be served by a gravity wastewater drainage network ultimately discharging to the existing wastewater sewers located at the eastern boundary of the site.

It is proposed that the existing sewer be diverted slightly to the east to facilitate the proposed development.

Please refer to OCSC drawing B967-OCSC-ZZ-GF-DR-C-0500 for detail on the proposed foul drainage layouts.

2.2.24 Water Supply and Distribution

It is proposed that all connections for the proposed development will be from the existing 150mm diameter main along St Vincent Street West.

A pre-connection enquiry has been submitted to Irish Water and a Confirmation of Feasibility subject to upgrades has been received. It is required that an approximate 180m length of the 6-inch watermain along Emmet Road be upgraded to a 200mm diameter pipe to facilitate the proposed development.

Please refer to OCSC drawing B967-OCSC-ZZ-GF-DR-C-0550 for detail on the proposed watermain layouts.

2.2.25 Irish Water Upgrade

The proposed development also will entail the upgrade for approximately 200m of existing 6" water main to 200mm on Emmet Road to the junction of Tyrconnell Road/Grattan Crescent.

2.3 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE OPERATIONAL PHASE OF THE PROJECT

The proposed development is a mixed use residential development including associated infrastructural works, creche 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, climate, or landscape.

The primary likely and significant environmental impacts of the operation of the proposed development are fully addressed in the 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, cumulative secondary and indirect impacts are unlikely to be significant and are addressed in the content of this EIAR document.

2.4 AN ESTIMATE, BY TYPE AND QUANTITY, OF EXPECTED RESIDUES AND EMISSIONS DURING THE CONSTRUCTION AND OPERATION PHASES

Details of an estimate, by type and quantity of expected residues and emissions during the construction and operational phases of the project are outlined in Chapters 3-15 which deal with *'Aspects of the Environment Considered'*. The following provides a summary to be read in conjunction with the relevant chapters.

The development will require the excavation of soils and removal of soils from site as part of the design. Estimated bulk excavation volumes for the development are estimated at 35,289 m^3.

A Project Specific Resource and Waste Management Plan (RWMP) has been prepared by Byrne Environmental as a stand-alone report to accompany the application. Approximately 53,409 tonnes of waste is anticipated to be generated during the construction phase.

Chapter 11 of the EIAR (Material Assets – Waste Management) and the Construction and Demolition Waste and By-Product Management Plan, prepared by Byrne Environmental, included with the application, provides detail on the construction related waste management for the proposal, including the demolition of the existing structures on the subject site (as part of the permitted Part 8 – Planning Reg. Ref. 2221/21). The demolition of the buildings and associated clearance is anticipated to generate 3,853 tonnes of material.

Effluent arising from foul drainage from the proposed development will be discharged through piped systems to the local authority sewers. The envisaged peak flow from the proposed development is 11l/s.

The development will require diversion of existing live underground services crossing the site and removal of redundant services which served previous developments on the subject site. All proposed power cables within the development will be underground or internal within the building. The estimated maximum demand for the proposed development is in the region of *2.7*MVA. .

2.5 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE CONSTRUCTION PHASE

2.5.1 Introduction

It is estimated that the construction programme for the works associated with the proposed works will last in the order of 36-48 months from the date of commencement. This estimation is based on the typical construction programmes for other similar developments that are currently underway. In the event that the phases were not developed (due to unforeseen circumstances) the construction period may extend, having regard to the nature of the project and the need for flexibility, contractor pricing etc. It is important to note that the mitigation measures outlined in the EIAR will ensure that an extension to the construction period will not have a negative impact on the receiving environment.

A Construction Management Plan (CEMP) has been prepared by OCSC Consulting Engineers and is included with the application, which includes further detail on timing and phasing. The CEMP will be developed and submitted to Dublin City Council prior to commencement of development and will include the mitigation measures set out in this EIAR.

2.5.2 Liaison with Neighbouring Properties

A monitoring regime will be put in place to protect neighbours & neighbouring properties with a full and detailed vibration, noise, dust and groundwater monitoring regime put in place for the duration of the works.

It is proposed that vibration monitoring will be conducted at properties adjacent to the site as required using calibrated vibration monitors and geophones capable of transmitting live text and email alerts to ensure that if vibration levels approach or exceed specified warning and limit values.

Chapter 2 of the EIAR and the CEMP provides further detail on the main stages of construction, site accommodation, parking, traffic management and hours of operation.

It is proposed that standard construction working hours should apply i.e.: 7am to 6pm Monday to Friday (excluding Bank Holidays) 8am to 3pm on Saturdays.

Any works proposed outside of these periods shall be strictly by agreement with the Local Authority in advance (such as Concrete pouring, foul or water main connections).

2.5.3 Construction Traffic Management Plan

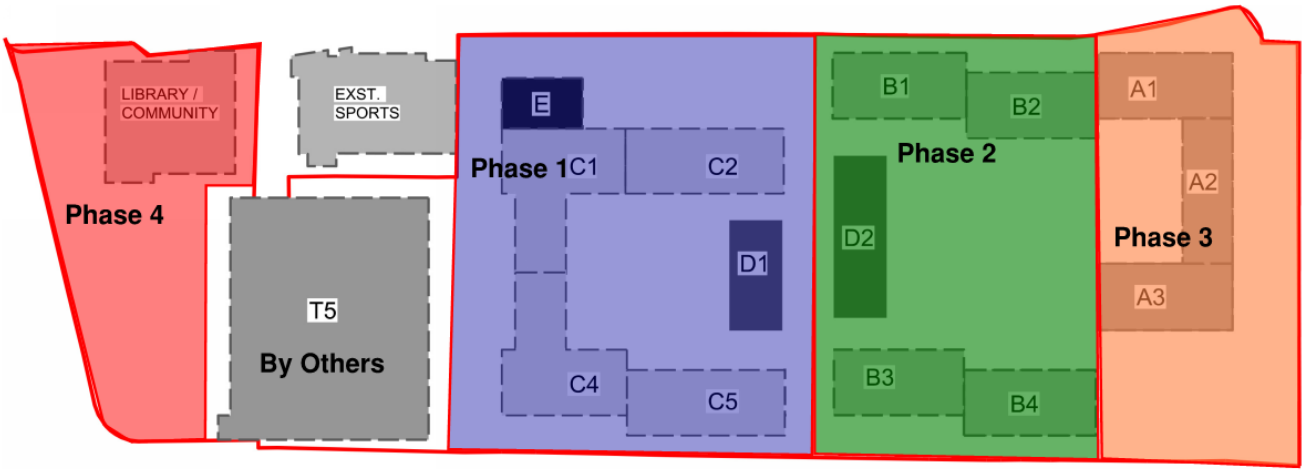
A Construction Traffic Management Plan (CTMP) will be developed by the main contractor and agreed with the Planning Authority and An Garda Siochana prior to commencement of development in the event of a grant of permission. The CTMP will implement the mitigation measures contained in this EIAR (including CEMP).

2.5.4 Construction Phasing

It is anticipated that construction will commence on site in Q2 2024 subject to the discharge of any pre-commencement requirements. Based on initial contracting feedback to date, an overall construction duration of circa 3-4 years would be reasonably achievable.

The delivery of the main residential/library portion will be delivered in one build but completed in sub phases. Those phases are likely to follow the below approach but subject to change when detailed design is carried out and contractor appointed. These are indicative sub phases of the main build contract.

Figure 2.20 – Proposed Phasing



The timeframes provided are indicative only and there is likely to be overlap between phases. Generally, the foundation and structural works of each phase is likely to proceed at the same time as the fit out and commissioning of the previous phase. The phasing plan as proposed is relevant to the current market and economic climate. Should circumstances change, then a revised (extended) phasing approach may be necessary. The phasing plan as proposed is relevant to the current market and economic climate. Should the current market significantly shift, then a revised phasing approach may be necessary.

It is noted the timing and sequency of the phases may be subject to change, depending on funding, but it is not considered that there would be any material impact on the assessment contained in the EIAR.

2.6 EMISSIONS AND WASTE

2.6.1 Effluents

Effluent arising from foul drainage from the proposed development will be discharged through piped systems to the local authority sewers. Operation of the development will involve the discharge of uncontaminated surface water from the impermeable areas to a proposed network all linking into the established public system in the environs. Details of the impacts and mitigation measures for surface water and foul drainage are recorded at Chapter 6 of this Environmental Impact Assessment Report. Mitigation measures include measures designed to avoid, reduce, remedy or offset impacts.

2.7 DIRECT AND INDIRECT EFFECTS RESULTING FROM USE OF NATURAL RESOURCES

Details of significant direct and indirect effects arising from the proposed development are outlined in Chapters 3-15 which deal with *'Aspects of the Environment Considered'*. No significant adverse impact is predicted to arise from the use of natural resources.

2.8 DIRECT AND INDIRECT EFFECTS RESULTING FROM EMISSION OF POLLUTANTS, CREATION OF NUISANCES AND ELIMINATION OF WASTE

Details of emissions arising from the development together with any direct and indirect effects resulting from same have been comprehensively assessed and are outlined in Chapters 3-15 which deal with '*Aspects of the Environment Considered'*. There will be no significant direct or indirect effects arising from these sources.

2.9 FORECASTING METHODS USED FOR ENVIRONMENTAL EFFECTS

The methods employed to forecast and the evidence used to identify the significant effects on the various aspects of the environment are standard techniques used by each of the particular individual disciplines. The general format followed was to identify the receiving environment, to add to that a projection of the *"loading"* placed on the various aspects of the environment by the development, to put forward amelioration measures, to lessen or remove an impact and thereby arrive at net predicted impact.

Where specific methodologies are employed for various sections they are referred to in the Receiving Environment (Baseline Scenario) sections in the EIAR. Some of the more detailed/specialised information sources and methodologies for a number of the environmental assessments are outlined hereunder.

2.10 TRANSBOUNDARY IMPACTS

Large-scale transboundary projects[5] are defined as projects which are implemented in at least two Member States or having at least two Parties of Origin, and which are likely to cause significant effects on the environment or significant adverse transboundary impact.

2.11 ALTERNATIVES EXAMINED

The EIA Directive requires that Environmental Impact Assessment Reports include:

"A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

Chapter 2 of the EIAR (Volume II of the EIAR) provides a description of the alternatives which were considered for the proposed development of the subject lands. These options were considered as the scheme progressed and the key considerations and amendments to the design having regard to the key environmental issues.

The design approach for the proposed development is presented in the Architectural Design Statement prepared by the project architects, BMCEA Architects and it should be considered in conjunction with this chapter of the EIAR. During the design process for the proposed Project a range of iterations of the proposed Site layout were considered. The planning application and this EIAR demonstrates that the Site and the surrounding area have the environmental capacity to accommodate the proposed Project without significant risk of impact upon environmental sensitivities.

The key considerations which influenced the design of the proposed Project were as follows:

- To provide and promote a mixed-use development in the Inchicore areas of the City, with regard to the need for high standards of urban design/architecture and to successfully integrate the development with the character of the surrounding area, including protected structures.
- The need to promote sustainable development of vacant or under-utilised sites and to consider higher density proposals.
- The need to provide sustainable neighbourhoods by achieving suitable levels of amenity.
- The need to provide suitable social infrastructure and other support facilities are available in the neighbourhood.
- The need to include community hubs, sports and recreational green open spaces and suitable shops contributing to the creation of sustainable and mixed-income neighbourhoods.
- The quality of the urban environment to be delivered and the associated impact on human health.

2.11.1 Proposed Preferred Alternative - Main reasons for the option chosen, including a comparison of the environmental effects

With reference to the final layout, the iterative process outlined above, which included alternative site layouts were considered with the objective of producing a new high quality residential development, which has undergone a robust consideration of relevant alternatives having regard to the comparison of environmental effects and meets the requirements of the EIA Directive, based on the multidisciplinary review across all environmental topics.

[5] The definition is based on Articles 2(1) and 4 of the EIA Directive and Article 2(3) and (5) of the Espoo Convention, respectively. http://ec.europa.eu/environment/eia/pdf/Transboundry%20EIA%20Guide.pdf

The multidisciplinary EIAR team reviewed the Development Framework layout against all environmental topics and proposed alternatives to achieve environmental improvements while remaining compliant with the Development Plan objectives to achieve regeneration of the site. This approach is consistent with the requirements of the EIA Directive.

The preferred alternative provides an appropriate intensification of development on the strategically located site, close to public transport options.

The proposed development provides for new mixed use residential development on lands within an SDRA, which was subject to the SEA process. As such, consideration of alternative sites for the construction of apartments proposed in this residential development was not considered necessary.

The height strategy under all 3 scenarios is to increase height above the existing surrounding context. This will change the local landscape and visual character and is consistent with the principles of compact growth. Increased height is appropriate, considering the location of the site within the canal cordon.

The comparison of main environmental effects are similar for the alternatives as they relate to the redevelopment of the Project Site with a mixed use residential development.

The Project Site is considered appropriate for a mixed use residential development for the following reasons:

- The redevelopment of the site offers the opportunity to underpin the principles of compact growth.
- The site's location within walking distance of public transport options (Luas and bus), in conjunction with the reduced parking strategy would promote a modal shift from the private car to more sustainable forms of transport.
- This in turn would assist with achieving overarching environmental objectives such as improved air quality and a reduction in noise pollution.
- The site is not subject to any statutory nature conservation designation.
- The site is not located within an area identified as susceptible to flooding.

In summary, the overall design of the proposed development takes into account all environmental effects and provides for a sustainable development that has been optimised to emphasise positive environmental effects whilst reducing negative environmental impacts wherever possible. The preferred alternative is not considered to give rise to any significant adverse environmental impacts following the mitigation measures to be implemented at the construction and operational phases. The final proposed scheme also responds to the characteristics and constraints of the subject site vis a vis the previous iterations of the scheme and the alternative layouts considered.

Having regard to the above, it is considered that the application area is an appropriate site from an environmental perspective for the proposed development of a mixed-use scheme.

2.11.2 Risks of Major Accidents and/or Disasters

The surrounding context consists of a mix of residential cultural, cemetery and commercial lands. It does not include any man-made industrial processes (including SEVESO II Directive sites (96/82/EC & 2003/105/EC) which might result in a risk to human health and safety. From a review of the Dublin City County Council Development Plan Map E there are no SEVESO Site as defined by the Health and Safety Authority, on the subject site of the proposed development, in the immediate vicinity, or in the surrounding Inchicore Village.

2.12 RELATED DEVELOPMENT AND CUMULATIVE IMPACTS

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.

3.0 NON-TECHNICAL SUMMARY OF EIAR CHAPTERS AND EFFECTS ON THE ENVIRONMENT

Consideration of environmental impacts in the EIAR were generally restricted to areas that initial scoping had indicated could be impact upon by the proposed development. These comprise:

Each of the above was considered in detail, having regard to both the environment as it currently exists prior to development, the likely impacts that a development of this kind would have, and the means of reducing the impacts of the development when it is in operation.

3.1 POPULATION AND HUMAN HEALTH

It should be noted that there are numerous inter-related environmental topics described throughout this EIAR document which are also of relevance to Population and Human Health. Issues such as the potential likely and significant impacts of the proposed development on landscape and visual impact, biodiversity, archaeology, architectural and cultural heritage, air quality and climate, noise and vibration, water, land and soils, material assets including traffic and transport impacts, residential amenity etc. are of intrinsic direct and indirect consequence to human health. The specific chapters of the EIAR (4-15) assess the environmental topics outlined in the EIA Directive.

The proposed development complies with the statutory land Z14 use zoning under the current and Draft Dublin City Development Plan. There will be no severance of land, loss of rights of way or amenities as a result of the proposed development. Development of the subject site is aligned with the objective to achieve compact growth contained within the National Planning Framework and will realise the efficient use of currently-underutilised brownfield land with higher housing density that is well served by public transport. The impact is likely and will have a permanent significant positive effect that will achieve local and wider county, regional and national objectives.

It is not anticipated that this will generate a temporary increase in population locally as employees will travel to the site from their existing place of residence. The likely impact on population is thus neutral.

In addition to direct employment, there will be substantial off-site employment and economic activity associated with the supply of construction materials and provision of services such as professional firms supplying financial, architectural, engineering, legal and a range of other professional services to the project. The impact of the construction phase will at least extend to the eastern region in terms of the requirement for labour, goods and services. The effect is likely and will be significantly positive in the short-term.

There are numerous inter-related environmental topics described throughout this EIAR document which are also of relevance to Population and Human Health. For detailed reference to the residual impacts of particular environmental topics please refer to the relevant corresponding chapter of the EIAR (land and soils, water and hydrology, air quality and climate, noise and vibration, traffic, and risk management).

3.1.1 Construction Phase

The construction phase of the proposed development will primarily consist of demolition, site clearance, excavation and construction works, which will be largely confined to the proposed development site. Notwithstanding the implementation of remedial and mitigation measures there will be some minor temporary residual impacts on population (human beings) and human health most likely with respect to nuisance caused by construction activities, predominantly related to noise and traffic as detailed in chapters, 8 and 10.

It is anticipated that subject to the careful implementation of the remedial and mitigation measures proposed throughout this EIAR document, and as controlled through the Construction Management Plan, any adverse likely and significant environmental impacts will be avoided. The overall predicted likely impact of the construction phase will be short-term not significant, and neutral. A CEMP (with the mitigation contained in this EIAR and CEMP) will be prepared by the contractor and submitted to the Local Authority.

Imperceptible, positive short-term impacts are likely to arise due to an increase in employment and economic activity associated with the construction of the proposed development.

3.1.2 Operational Phase

The proposed development complies with the Z14 statutory land use zoning under the Dublin City Development Plan 2016-2022 and the Draft Dublin City Development Plan 2022-2028 all use classes proposed are permissible in principle.

The anticipated effect of a high-density mixed-use development at this location for the city is positive, significant and of permanent duration as it would realise the objectives of urban consolidation through the efficient use of a zoned and serviced landbank to provide inter alia much needed housing together with high-quality amenities for future occupants.

The proposed development includes a community hub/library of c. 2,810 sq.m, a supermarket c. 2,476 sq. m GFA (1,733.2 sq. m net) as well as 2 no. cafes 285 sq. m and 5 no. retail/retail related service units (564 sq. m) as well as a creche of 816 sq. m. The estimated employment that will be generated from the non-residential uses is c. 190 jobs. This is based on a number of information sources including the Homes & Communities Agency, Employment Density Guide (2015). The overall effect on employment locally is moderate, positive and permanent.

The cumulative impact of the proposed development, along with other permitted, existing and proposed developments in the vicinity, will be a further increase in the population of the wider area. This will have a slight positive impact on the population in the area. This impact is likely to be long term and positive, having regard to the zoning objective for the subject lands, and their strategic location in close proximity to public transport, and the high level of demand for new housing in the area.

3.2 BIODIVERSITY

A biodiversity impact assessment of the Site was undertaken by Enviroguide Consulting. The proposed development Site (hereafter referred to as 'the Site') is not designated for nature conservation. The closest designated site to the Site is the Grand Canal proposed Natural Heritage Area (pNHA), located c. 100m to the south. The Site is hydraulically linked to the River Camac via the local sewerage network, and therefore is also linked to several designated pNHAs, Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) within Dublin Bay. However, a hydrological and hydrogeological risk assessment prepared for the Site determined that there was no identified risk to the hydraulically connected designated sites, even in the absence of mitigation and design avoidance measures.

A range of field surveys have been carried out at the Site to inform the Biodiversity Chapter, namely habitat surveys, bat surveys, breeding and wintering bird surveys, mammal surveys and invasive flora surveys.

Habitats recorded within the Site boundary included buildings and artificial surfaces, amenity grassland, recolonising bare ground, flower bed and borders, dry meadows and grassy verges and stonewalls. By virtue of the current use of the Site, and the urban nature of the surrounding lands, these habitats are limited in their ecological importance. The invasive Butterfly Bush was abundant throughout the Site, the largest stand was recorded growing within the recolonising bare ground habitat, however, plants were also recorded growing within walls and other areas of hardstanding within the Site.

Bats were recorded foraging within the Site, but no bat roosts were detected. Based on field surveys carried out, the Site is not currently utilised in any significant manner by any breeding birds or wintering waterbird species.

In the absence of the proposed development there will be no change to the existing habitats. Potential impacts of the proposed development on local ecology and sensitive habitats linked to the Site (e.g., the River Camac) were predicted to range from moderate to imperceptible at the local scale only and can be readily addressed with standard mitigation measures. In addition, a suite of mitigation measures to protect wildlife from light pollution have been integrated into the lighting design. Given that the Site is in an urbanised area and is of low ecological value comprising mainly of amenity grassland, the proposed landscape plan will result in a net gain in vegetative diversity at the Site which will be of value to birds, pollinators and insects. Residual impacts of the proposed development are predicted to be negligible.

Provided all mitigation measures are implemented in full and remain effective throughout the lifetime of the Development, no significant negative impacts on the local ecology or on any designated nature conservation sites are expected from the proposed development.

3.3 LAND AND SOILS

An initial assessment was carried out which; defined the project in terms of location, type and scale; established the baseline conditions; established the type of soil/ geological environment; established the activities associated with the project and; initial assessment and impact determination.

Geological Survey Ireland (GSI) online mapping service was consulted regarding areas of geological interest in the area of the site. The nearest area of geological heritage is the Phoenix Park (site code DC009) which is located approximately 0.9 km north of the site. Given the distance to the building and its nature it is considered to be outside of the zone of influence of the proposed development in relation to land and soils as no physical works for the proposed development will occur near the Phoenix Park.

The subsoil in the vicinity of the site and watermain upgrade has been classified as Limestone Till (Carboniferous). This is the dominant subsoil type in the region and is a glacial deposit which is known as Dublin Boulder Clay. Boulder clays generally exhibit very low permeability.

An assessment carried out under the Water Framework Directive has concluded that the groundwater within the Dublin Urban GWB is presently of “Good status”. The objective is to protect the “Good status”.

The site and area for the proposed watermain upgrades has undergone many changes in land use.

The site is considered to be a brownfield site given the historic site use. An assessment of soil contamination/waste classification was carried out.

A summary of the site geology is outlined thus:

- The development site and proposed watermain upgrade area are essentially a brownfield site with previous military and residential land use and transport infrastructure use, respectively; The majority of the site is underlain by made ground;
- The subsoils predominantly comprised of glacial till consisting of fine to coarse sandy Gravel within a matrix of Sandy Gravelly Clay (Dublin Boulder Clay);
- Bedrock was encountered at varying depths from 3.05mbgl (metres below ground level) to 12.6mbgl (metres below ground level) and was comprised of strong, thinly laminated, grey, fine grained, argillaceous LIMESTONE with occasional calcite veins interbedded with weak to medium strong, thinly laminated, black, fine-grained calcareous MUDSTONE with pyrite lamination.
- The only known potential contamination sources on the development site are any contaminants within the material associated with the past/current site use, former military operations, former fuel storage tanks, construction and demolition works, and possible Asbestos Containing Materials (pACMs). The risks associated with this contamination has been assessed in the OCSC GQRA (2022).
- Potential contamination sources associated with the watermain upgrade area are contaminants associated with transport infrastructure, primarily petroleum hydrocarbons. It is not considered that these represent any particular increased risk to land or soils or hydrology. Solely this material will need to be managed in accordance with all relevant waste management legislation if requiring offsite disposal.
- Potential pollutant linkages associated with the development site and the watermain upgrade area were identified. However, provided the mitigation measures inherent in the design and included in the Construction and Environmental Management Plan (CEMP) are implemented, the pollution risk will be reduced to an insignificant level.

The primary residual impacts from the construction phase are the land take/change of use and the removal of soil. These impacts are unavoidable given the nature, requirement, and design of the proposed development. The construction impact is assessed to be slight, negative, and permanent.

During the operational phase of the development there will be no requirement for any fuel oil stores There are no proposals to connect to the gas supply to serve the development as it will be heated by air source heat pumps. The residual impact is primarily associated with drainage services on the site and is assessed to be a negative, imperceptible, and permanent.

3.4 WATER HYDROGEOLOGY AND HYDROLOGY

No watercourses or surface water features of any type are present within the site boundary. The closest such features are the Grand Canal, located approximately 50m to the south of the site; and the Camac River, located approximately 150m to the north. Historic development in the area has resulted in a large percentage of local surface water runoff from the site being discharged to the combined sewerage infrastructure, which ultimately drains to the Ringsend Wastewater Treatment Works. There are some public surface water infrastructure in the immediate vicinity of the site that discharge directly, and largely untreated, to the Camac River.

The primary Groundwater Body (GWB) in the region is the Dublin Urban GWB. The Dublin Urban GWB covers 837km^2 and includes most of Dublin City to the eastern seaboard and extends west to include parts of Kildare and Meath. In addition to the Carboniferous limestones and shales, there are also some sandstones present. The bedrock aquifer is a fractured system i.e., it is dominated by secondary (fracture or fissure) flow with very little to no flow within the matrix i.e., the bedrock is largely impermeable.

The Grand Canal is located approximately 50m to the south from the project site but is not hydrologically linked to the subject site.

Dublin City is a highly urbanised area. The ground is generally made up of a cement and tarmacked impermeable cap which limits recharge to the bedrock. The only open areas where recharge may occur are at parks and gardens. It is conservatively estimated that 10% of the City area is available for recharge. Some recharge occurs from leaking sewers, mains and storm drains. Elsewhere diffuse recharge will occur via rainfall percolating through the subsoil. The proportion of the effective rainfall that recharges the aquifer is largely determined by the thickness and permeability of the soil and subsoil, and by the slope. Due to the generally low permeability of the aquifers within the Dublin Urban GWB, a high proportion of the recharge will run off and discharge rapidly to surface waterbodies via the upper layers of the aquifer, effectively reducing further the available groundwater recharge to the aquifer.

A Site-Specific Flood Risk Assessment has been carried out by OCSC, submitted with the Part 10 application, which assesses the potential flood risk to, and as a result of, the proposed development site. This assessment indicates that there is currently no apparent flood risk as a result of fluvial or coastal flooding i.e. it is located within Flood Zone C.

As the local surface water network discharges to the River Camac, approximately 150m north from the proposed development, the possibility of negative impact on the receiving environment would likely be brief, with possible slight effect. Overall, the construction phase will not pose a risk to the current status of the waterbody.

During the operational phase, the development will have a positive, moderate, permanent effect on the groundwater at the site and local area scale. This will be as a result of the construction of buildings and hard paved surfaces over a large portion of the site. The groundwater will be protected against infiltration by contaminated surface water, for example caused by oil leaks from cars or delivery vehicles.

The proposed development is to discharge all surface water runoff to the local surface water network, which itself discharges to the River Camac nearby. The development comprises significant landscaping which allows for slight benefit to the receiving groundwater, however, site investigations confirmed the existing ground to be unsuitable for infiltration systems. The implemented SuDS across the new development will result in a positive impact on the current status of the waterbody, and assist in the WFD's ai of achieving an overall Good status in the lower reaches.
Residual impacts are potential impacts after mitigation measures have been applied. As expected by definition residual impacts are therefore generally not quantifiable in terms of significance in terms of potential effects on the environment.

The impacts of the construction phase on hydrology and groundwater post mitigation will be slight, insignificant, temporary and at the site scale.

The use of Sustainable Urban Drainage Systems (SUDS) mitigation measures in the Operational Phase will result in improved quality of surface water run-off to the off-site drainage network and in the quality the water percolating to the groundwater beneath the site. The impacts of the Operational Phase on hydrology and groundwater post mitigation will consequently be positive, significant, permanent and at the site scale.

The provision of the proposed integrated sustainable drainage network and significant landscaping, as part of the proposed development in the urban environment, offers slight permanent positive impacts on the receiving environment i.e., the hydrology and hydrogeology, as part of the existing site contains buildings and hardstanding that discharge runoff untreated and unattenuated to the local infrastructure. Overall, the implemented SuDS across the new development will result in a positive impact on the current status of the waterbody and assist in the Water Framework Directive's WFD's aim of achieving an overall Good status in the lower reaches.

3.5 AIR QUALITY AND CLIMATE

The general area surrounding the subject site is currently comprised of residential, retail and commercial developments which will generate emissions to air associated with heating. The local road network will also have an impact on local air quality arising from combustion engine emissions.

The existing ambient air quality at and in the vicinity of the site is typical of an urban location and as such, domestic and commercial heating sources and road traffic are identified as the dominant contributors of hydrocarbon, combustion gases and particulate emissions to ambient air quality.

Annual air quality monitoring programs have been undertaken in recent years by the EPA and Local Authorities. The most recent annual report on air quality "Air Quality in Ireland 2020 (Published 2021) details the range and scope of monitoring undertaken throughout Ireland. The Dublin Conurbation is categorised as Zone A.

The most recent 2020 EPA publication includes a number of Zone A monitoring locations which would be comparable to the expected air quality at the subject site at Emmet Road.

The nearest meteorological station to the subject site is at Dublin Airport which is located approximately 10km north of the Emmet Road site and as such, long-term measurements of wind speed/direction and air temperature for this location are representative of prevailing conditions experienced at the subject site. Recent meteorological data sets for Dublin Airport were obtained from Met Éireann for the purposes of this assessment study.

Precipitation data from the Dublin Airport meteorological station for the period 2011-2021 indicates a mean annual total of about 762 mm. This is within the expected range for most of the eastern half of the Ireland which has between 750 mm and 1000 mm of rainfall in the year.

The annual mean temperature at Dublin Airport (2011-2021) is 9.5ºC with a mean maximum of 15.3ºC and a mean minimum of 4.0ºC. Given the relatively close proximity of this meteorological station to the proposed development site, similar conditions would be observed. Table 8.4 sets out meteorological data for Dublin Airport from 2011-2021.

Wind is of key importance for both the generation and dispersal of air pollutants. Meteorological data for Dublin Airport indicates that the prevailing wind direction, in the Dublin area, is from the West and Southwest and blows Northeast across the proposed development. The mean annual wind speed in the Dublin area between 2009 - 2021 is 5.7 m/s.

Impacts to air quality and climate can occur during both the construction and operational phases of the proposed development. With regard to the construction stage the greatest potential for air quality impacts is from fugitive dust emissions impacting nearby sensitive receptors. Impacts to climate can occur as a result of vehicle and machinery emissions. In terms of the operational stage air quality and climate impacts will predominantly occur as a result of the change in traffic flows in the local areas associated with the proposed development.

Best practice mitigation measures are proposed for the construction phase of the proposed development which will focus on the pro-active control of dust and other air pollutants to minimise generation of emissions at source. The mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the proposed development is likely to be negative, short-term and imperceptible with respect to human health.

Any potential dust impacts can be mitigated through the use of best practice and minimisation measures which are outlined in Chapter 7. Therefore, dust impacts will be short-term and not significant at all nearby sensitive receptors. It is predicted that impacts to climate will be short-term and imperceptible during the construction stage due to the duration and nature of the works.

Various elements (demolition, site set up, construction works) associated with the construction phase of the proposed development have the potential to impact local ambient air quality, human health and climate. However, the potential construction phase impacts will be mitigated to ensure there is no adverse impact on ambient air quality for the duration of all construction phase works. It is predicted that the operational phase of the development will not generate air emissions that would have an adverse impact on local ambient air quality or on local human health or on the local micro-climate or the wider macro-climate.

The sustainable features that are incorporated into the design of all residential units will ensure that the operational phase of the development will not have an adverse impact on human health, local air quality or on local or global climate patterns. The residential units will be designed to ensure that they can withstand the potential changes in climate which may generate more extreme and prolonged meteorological events in the future.

It is predicted that fossil fuel combustion gas emissions including Carbon Dioxide, Sulphur Dioxide, Nitrogen Oxides, Carbon Monoxide and hydrocarbon particulate emissions will be negligible as the proposed centralized air source heat pump will provide heat throughout the development and will not have an adverse significant impact on the existing ambient air quality in the vicinity of the proposed development site.

As the National and EU standards for air quality are based on the protection of human health, and concentrations of pollutants for both the construction and operational stages of the proposed development are predicted to be significantly below these standards, the impact to human health is predicted to be negative but overall imperceptible in the short and long term. No significant impacts/effects to either air quality or climate are predicted during the construction or operational phases of the proposed development.

3.6 NOISE AND VIBRATION

The existing ambient noise climate was observed to be relatively quiet for an urban environment during the daytime and nightime periods as the site is setback from Emmett Road to the north and Davitt Road and the Red LUAS line further south of the site.

Baseline noise and vibration measurement surveys were conducted at site boundaries and 6 no. locations overall.

that the impact of road traffic or LUAS noise on the proposed development is below the noise limit criteria specified in the Dublin Agglomeration Environmental Noise Plan 2018 - 2023 and that the proposed development will not be subject to unacceptable or adverse road traffic noise.

Various elements of both the construction and operational phases of the proposed development have the potential to impact on the receiving on the local receiving noise environment, on adjacent residential properties and on human health. The proposed development involves the ground clearance of the existing site to facilitate the proposed development including soils and rock to foundation level. During the construction phase there will be extensive site works, involving construction machinery, construction activities on site, and construction traffic, which will all generate noise. The construction noise levels will be of relatively short-term duration and will only occur during daytime hours.

During the construction phase there will be extensive site works, involving construction machinery, construction activities on site, and construction traffic, which will all generate noise. The construction noise levels will be of relatively short-term duration and will only occur during daytime hours.
The potential noise aspects to be considered for the completed operational development will include additional traffic noise associated with the development, the operation of mechanical plant and the operation of the retail/cafe units, cultural hub/library and the creche.

The development will include residential units, retail units, resident amenity spaces, an energy centre and a creche.

The operation of these aspects of the development will require them to be designed to ensure that they are acoustically insulated and their operation will not generate noise that will have a negative impact on existing noise sensitive receptors or on residential units within the development itself.

The predicted construction noise levels that will be experienced at the nearest residential receptors as a result of construction activities have been calculated. The closest noise sensitive receptors to the proposed development site are located at distances of approximately 10m. Provided that noise mitigation measures are implemented, it is predicted that the daily noise limits will not be exceeded at the closest receptors to the site.

Prior to the commencement of the site construction activities, a programme of continuous noise monitoring at the closest receptors to the site shall be undertaken to assess and manage the impact that site activities may have on ambient noise levels at receptors. These surveys will establish the noise impact of site activities at the closest noise sensitive receptors to assess compliance with the specified construction noise limit criteria and to ensure that mitigation and control measures are being implemented as required.

All noise monitoring data will be compiled into a monthly technical monitoring report which will include a full assessment of the potential noise impacts arising from site construction activities.

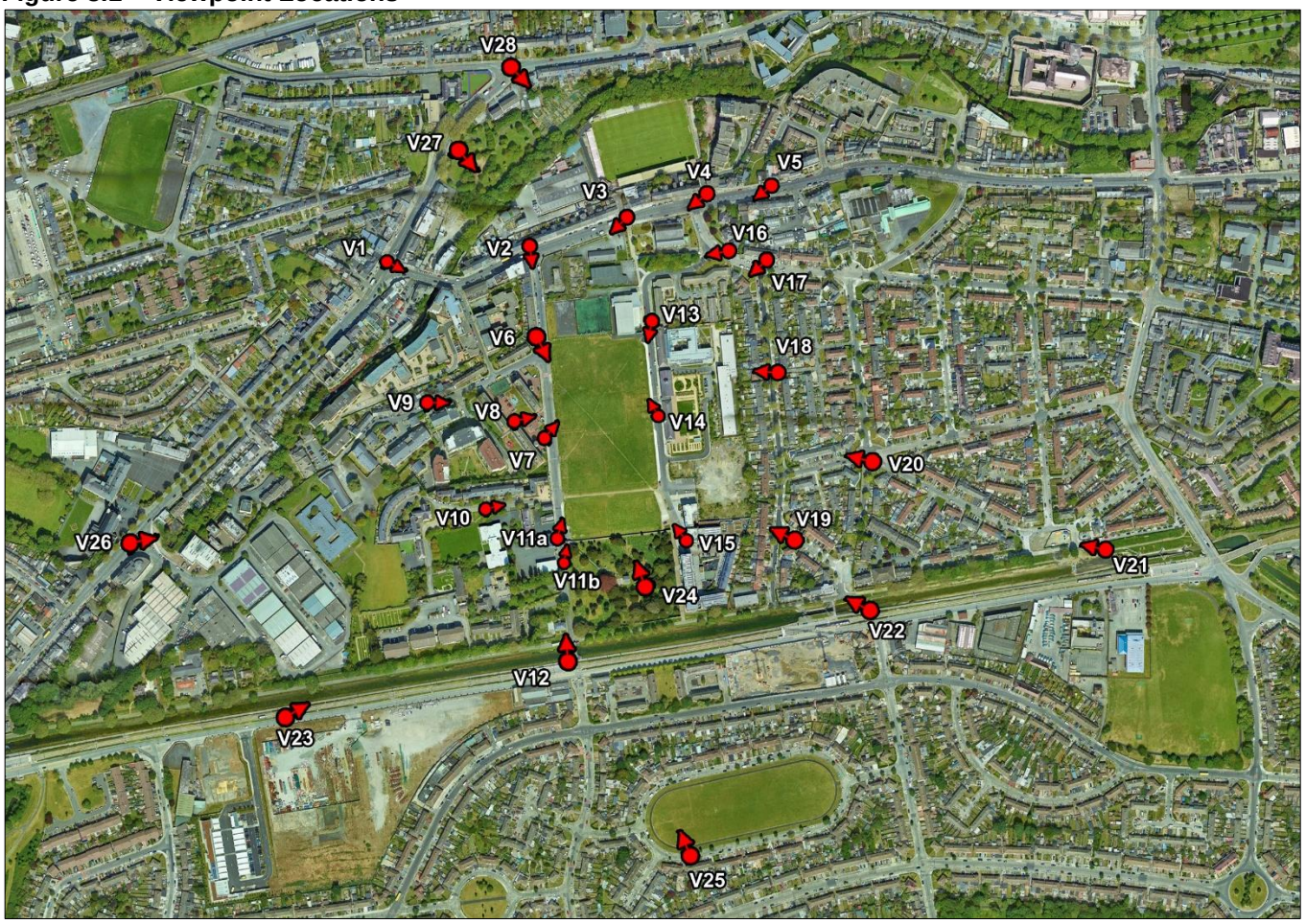
3.7 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

The site is located adjacent to the urban core of Inchicore. Amongst Dublin's neighbourhood centres Inchicore has a particularly complex, 'urban' character. This derives from the area's topography, its industrial and military heritage and its social history. It is an area that has undergone several periods of rapid change, resulting in a townscape made up of diverse pockets of local character, with a lack of cohesion in places.

In addition to the streets/ public realm and residential neighbourhoods, there are a number of heritage features in the receiving environment which could be affected by changes in their setting which include Richmond Barracks, St. Michael's Church, Goldenbridge Cemetery, The Grand Canal, and Sister's of Mercy Convent.

28 no. representative viewpoints were selected for detailed visual effects assessment informed by verified photomontages. The viewpoints were selected to represent the key elements, character areas and groups of visual receptors in the receiving environment,

Figure 3.1 – Viewpoint Locations



While the largest number of people potentially affected by the development are in the public realm (i.e., the users of the footpaths and roads), the most sensitive receptors of visual change are the residents of the surrounding neighbourhoods. The site's receiving environment includes several distinct neighbourhoods with varying degrees of visual exposure to the site, including Houses on Emmet Road, Houses fronting St Vincent Street West, Tyrone Court, Emmet Crescent, Thomas Davis Street West and Thornton Heights.

During construction the site and immediate environs would be heavily disturbed by the above activities and the incremental growth of the buildings on site. Construction is an inherently unsightly process and there is limited potential for mitigation of the negative townscape and visual effects – apart from site hoarding to screen ground level activity, and best practice site management.

The magnitude of change to the townscape and views would be high in the immediate environs of the site (the adjacent streets/public realm and properties/ developments adjoining or facing the site across the streets). The magnitude of change would reduce with distance from the site.

Some of the affected townscape and visual receptors, e.g. the residential properties facing the site, the Richmond Barracks buildings and St Michael's Church, are of high sensitivity to townscape/visual change.

Taking account of the existing townscape character (see Section 9.3 of the EIAR) and relevant policy, the sensitivity of the receiving environment to townscape change can be classified medium.

The proposed development would have positive effects on all the main elements of the townscape/determinants of townscape character, including (a) the land use mix, (b) the urban grain and movement patterns, (c) the mix of plot and building typologies and architecture, (d) the network of public and communal open spaces and green infrastructure, and (e) the overall perception of quality and liveliness of the townscape. In summary, the townscape effects of the proposed development in the operational phase are predicted to be 'significant positive'. These effects would be long term to permanent.

The predicted effects on 28 no. representative viewpoints in the receiving environment are summarised in Table 9.6 below. (For explanation of the individual viewpoint assessments refer to Sections 9.5.3.1 – 9.5.3.29.)

Table 3.1 – Summary of Visual Effects Assessment

Viewpoints	Viewpoint Sensitivity	Magnitude of Change	Significance & Quality of Visual Effects		
			Construction (Temporary)	Operation (Permanent)	Residual (Permanent)
01 – Junction of Emmet Rd & Tyrconnell Rd, Inchicore Centre	Low-medium	Low-medium	Slight negative	Moderate positive	Moderate positive
02 – Junction of Emmet Rd & St Vincent St West	Low-medium	High	Moderate negative	Very significant positive	Very significant positive
03 – Emmet Rd	Low-medium	High	Moderate negative	Very significant positive	Very significant positive
04 – Emmet Rd View of St Michael's Church	Medium	Medium	Moderate negative	Moderate positive	Moderate positive
05 – Emmet Rd Approaching Inchicore from the East	Medium	Negligible	Not significant neutral	Not significant neutral	Not significant neutral
06 – St Vincent St West at Junction with Thomas Davis Street West	Low-medium	High	Moderate negative	Significant positive	Significant positive
07 – St Vincent St West outside Tyrone Place apartments	Low-medium	High	Moderate negative	Significant positive	Significant positive
08 – Tyrone Place apartments	Low-medium	High	Moderate negative	Significant positive	Significant positive
09 – Thomas Davis St West	Low-medium	Medium	Slight negative	Moderate positive	Moderate positive
10 – Emmet Crescent	Low-medium	Medium	Slight negative	Moderate positive	Moderate positive
11 – St Vincent St West at South West Corner of Site	Low-medium	High	Moderate negative	Significant positive	Significant positive
11b – St Vincent St West approaching cemetery house (p.s.)	Medium	Medium-High	Moderate negative	Significant positive	Significant positive

Viewpoints	Viewpoint Sensitivity	Magnitude of Change	Significance & Quality of Visual Effects		
			Construction (Temporary)	Operation (Permanent)	Residual (Permanent)
12 – Drimnagh Luas Stop south of the Grand Canal	Medium-high	Low	Slight negative	Slight positive	Slight positive
13 – Patriot's Path – View from the North	Medium	Medium-High	Moderate negative	Significant positive	Significant positive
14 - Patriot's Path alongside Richmond Barracks	Medium	Medium-High	Moderate negative	Significant positive	Significant positive
15 – Thornton Heights	Medium	Medium	Slight negative	Moderate neutral	Moderate neutral
16 - Bulfin Road near St Michael's Church	Medium	Low	Slight negative	Slight positive	Slight positive
17 – Bulfin Road local centre	Medium	Low	Not significant negative	Slight neutral	Slight neutral
18 – Conolly Avenue	Medium-high	None	No effect	No effect	No effect
19 - Goldenbridge Terrace, off Connolly Avenue	Medium-high	None	No effect	No effect	No effect
20 - Goldenbridge Avenue	Medium-high	Low	Slight negative	Slight neutral	Slight neutral
21 - Grand Canal Greenway near 1st Lock/Suir Road	Medium	Low-medium	Slight negative	Slight neutral	Slight neutral
22 - Grand Canal Greenway near Goldenbridge Luas Stop	Medium	Low	Not significant negative	Slight neutral	Slight neutral
23 - Davitt Road to south west of site	Medium	None	No effect	No effect	No effect
24 – Goldenbridge Cemetery	Medium-high	Low-medium	Slight negative	Slight positive	Slight positive
25 - Benmadigan Rd South of the Grand Canal	Medium	None	No effect	No effect	No effect
26 - Mary Immaculate Church, Tyrconnell Road	Low	None	No effect	No effect	No effect
27 - Grattan Crescent Park	Medium	Negligible	Not significant neutral	Not significant neutral	Not significant neutral
28 - Inchicore Road and Grattan Crescent	Medium	None	No effect	No effect	No effect

The proposed development is predicted to have only positive or neutral townscape and visual effects and can be considered an appropriate intervention in the townscape of Inchicore.

3.8 TRAFFIC AND TRANSPORTATION

The primary road artery in the study area is Emmet Road which includes a number of existing junctions with minor roads as well as on-street car parking. It facilitates both through traffic and bus services as well as local access. St. Vincent's Street West and St. Michael's Estate are local access routes only which also facilitate on-street parking.

The surrounding road network includes good quality pedestrian infrastructure with public lighting throughout. There are existing pedestrian crossing facilities on Emmet Road to the northeast of the site and at major signalised junctions in the wider area. The site is within a short walking distance of a wide variety of amenities including supermarkets, convenience stores, schools, gyms, cafes, restaurants, bars etc. as well as Dublin City Centre and other employment areas such as the industrial uses to the west.

In terms of local amenities, the site is located in Inchicore Village which provides access to a variety of retail, leisure and community amenities within a short walking distance.

The site is considered highly accessible by public transport with high quality rail and bus services operating in the local area.

The Luas Red Line is located immediately south of the development site approximately 190m (3 minutes) walk from the Drimnagh Stop and 350m (4 minutes) walk from the Goldenbridge Stop which includes a fully accessible route. The Luas Red Line offers a high frequency service between Tallaght/Saggart and Connolly/The Point Village while also interchanging with other notable public transport services at Heuston Station, Connolly Station and Busáras. These additional connections provide access to Commuter and Intercity rail and bus services throughout the country. The Luas operates from 06:00 – 01:00 with an average peak hour frequency of a tram every 4 minutes.

The Red Line also provides linkage to the heavy rail DART, Commuter and Intercity services operating out of Heuston and Connolly Station as well as linking with the Luas Green Line which operates a similar service between Broombridge and Bride's Glen.

With respect to bus, there are a number of Dublin Bus routes operating in the area with the nearest stop located directly adjacent the northern boundary of the development site on Emmet Road. Additional routes also serve Tyrconnell Road, Bulfin Road and Suir Road. A more detailed summary of these services within a reasonable walking distance is set out in the Mobility Management Plan submitted in support of this application.

The peak trip generation with respect to the construction stage is expected to relate to the removal of material from the site during both the demolition and construction stages when there will be additional HGV movements to and from the site. Utilising typical construction rates and allowing for site logistics and management, during the excavation stage, there could a maximum of 10 no. truckloads per hour on a given site. However, the scale of demolition, site clearance and excavation on this site is limited meaning a lower average rate of 2 no. truck movements per hour is estimated, equating to 4 no. two-way HGV movements per hour. Assuming a 11-hour working day, this equates to 44 no. two-way HGV movements per day on the local road network. All suitable material will be reused for construction and fill activities where possible and appropriate. All spoil material will be removed to a registered landfill site in consultation with the local authority. In addition to the traffic generated by the disposal of surplus subsoil from the site, there will be traffic generated from construction staff and deliveries of construction materials and equipment though these will be spread across the course of the day limiting the potential impact during the peak hours in particular.

The operational phase of the development will lead to increased traffic movements on the local road network. This in turn has the potential to lead to increased congestion, increased potential for conflict between vehicles and vulnerable road users and an increase in the emissions from vehicles

A Construction and Environmental Management Plan (CEMP) accompanies this application and sets out the measures to mitigate the impact on the local environment during the construction phase. A Construction Traffic Management Plan (CTMP) based on the CEMP will be developed by the appointed contractor and submitted to An Bord Pleanála for approval prior to commencement of work. It will implement the relevant Mitigation Measures in this EIAR including the CEMP accompanying this planning application (contained in Appendix B Volume III of this EIAR.

During the construction phase, in line with Section 3.7.3 of the 2022 EPA guidelines, the residual impact of the construction phase in terms of traffic and transport will be negative, not significant, local, likely and short-term. The measures outlined in the CEMP, as set out above, will help alleviate the impact of the additional traffic and limit the impact to outside the busier peak hours. The measures, including dirt and dust mitigation, will also ensure the standard of the public road network is maintained in terms of dust and dirt from construction traffic.

During the operational phase, with the mitigation measures in place, the impact of the proposed development on traffic and transport will be not significant, neutral, local and long-term. The proposed development site is ideally situated to have an extremely low car mode share and with the supporting measures identified in the MMP in place

car traffic may be lower than that assumed in the modelling assessment. However, even with a higher car mode share modelled the impact will be slight. The delays for traffic on the local network are in general minor with no significant delays modelled as result of the additional development.

The development places a particular emphasis on the availability and use of sustainable travel. As noted earlier in this chapter, there are a number of high frequency rail and bus services operating within a short walking distance of the site which will be an attractive option for residents travel needs.

In the context of the aforementioned bus and rail (Luas) service capacity locally, the demand generated by the development equates to approximately 1.8% of the bus capacity and 1.2% of the rail capacity which is considered negligible. Furthermore, on-site observations during both August and September have indicated that there is sufficient peak hour capacity available on these services to cater for this level of demand.

3.9 MATERIAL ASSETS – WASTE MANAGEMENT

The construction and operation of the proposed development will introduce new volumes of waste into the local area in terms of the short-term generation of construction waste and the longer-term generation of domestic waste when the development is occupied.

The construction of the proposed residential development will introduce new volumes of waste into the region in terms of the short-term generation of demolition waste arising from buildings and hard standing areas (under the Part 8 permission), removal of historically dumped waste at the site.

Site investigations conducted at the site have determined that soils to be excavated to facilitate the development range between Inert, Non-Hazardous and Hazardous following waste soil Classification.

The development of the subject site will initially require the stripping of top and subsoils and the excavation of ground to foundation level as well as the demolition of structures and hard-standing areas.

There is a quantity of excavated material (c. 35,289m^3) 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 5 (Land and Soils).

In order to ensure that construction wastes generated during the course of the development are being effectively managed and recorded, a waste management audit shall be conducted on a routine basis by an independent waste management consultant to determine compliance with the Resource Waste Management Plan.

An Operational Waste Management Plan (OWMP) has been prepared as a stand-alone report to accompany the Part 10 application and is contained in Appendix D Volume III of the EIAR. The mitigation measures contained in the OWMP will be implemented in full and form part of the mitigation strategy for the site. The OWMP has been prepared to demonstrate how the required infrastructure will be incorporated into the design and operational management of the development to ensure that domestic wastes will be managed and monitored with the objective of maximizing the quantity of waste segregated at source and maximizing the volume of clean recyclable materials generated by the residents of the development.

3.10 MATERIAL ASSETS - UTILITIES

The site and its surroundings are well served by dedicate/separate storm drainage network. Two main storm drains are identified serving the site. It is proposed to separate the wastewater and surface water drainage networks, which will serve the proposed development, and provide independent connections to the adjacent local wastewater and surface water sewer network infrastructure, respectively.

There are a number of existing watermain services identified on the Irish Water Record drawings as serving the Emmet Road site.

The development will require diversion of existing live underground services crossing the site and removal of redundant services which served previous developments on the subject site. All proposed power cables within the development will be underground or internal within the building. The estimated maximum demand for the proposed development is in the region of *2.7*MVA. A total of 6no. ESB sub-stations will be constructed within the subject site to serve the proposed development.

The site is located in an area with a long history of urban development, with the area served by a dedicated foul sewer network. A confirmation of Feasibility has been received from Irish Water for the proposed development confirming that connection is possible without upgrade works. While any redevelopment in the area resulting in an intensification of land use or increased density of occupation would likely lead to an increase in foul flow contributing to the receiving sewerage network, development would have to meet with the requirements of Irish Water in terms of feasibility of same.

A confirmation of Feasibility has been received from Irish Water for the proposed development confirming that connection is possible with upgrade works along Emmet Road. These works involve the provision of a new 200mm diameter main to replace the existing 6inch main along Emmet Road for a distance of c.180m. This upgrade works will provide additional capacity to the public watermain system which serves some of the permitted developments.

3.11 CULTURAL HERITAGE – ARCHAOLOGY

The proposed development area is located at Emmet Road, Inchicore, Dublin 8. There are no recorded monuments within the proposed development area, which stands on the site of the 19th century Richmond Barracks. The nearest recorded monument is the zone of archaeological potential associated with Dublin City, which is situated c. 200m to the north-northwest (DU018-020). A Scandinavian type burial site (DU018-020272), which is located c. 395m north, is the nearest individual recorded monument. Kilmainham Gaol (DU018-125, Nat. Mon. 675) is recorded c. 430m to the west-northwest of the proposed development area and is a National Monument in State Ownership.

Archaeological monitoring of site investigations within the proposed development area was undertaken by IAC Archaeology in September 2020. Beneath demolition material relating to the former social housing that occupied the site, the remains of elements associated with the 19th century Richmond Barracks were recorded in a number of locations. Archaeological investigations to the immediate east and south also uncovered structural remains of the barracks (Licence 08E0736 Bennett 2008:466, Licence 10E0407 Bennett 2010:278). No features predating the early 19th century have been identified in the development area or its immediate environs.

The cartographic sources depict the proposed development area as undeveloped prior to the establishment of the Richmond Barracks, which are shown for the first time on Taylor's map of 1816, having been established in 1810. The surviving barrack buildings primarily border the proposed development area with a central open space. Following Independence, the barracks were used as social housing with the OS map of 1947 showing both the former barracks buildings and a newly constructed development within what was formerly the open central space (Soldier's Parade Ground) of the barracks, named Keogh Square.

The former barracks site, as a whole, possesses specific cultural heritage significance, due to its connections with the Easter Rising, as over 3000 prisoners were held here following the rising, with many put on trial at the barracks. Fourteen of the condemned rebels were taken from Richmond to their execution at Kilmainham Gaol in May of 1916. The surviving former gymnasium and the stone building to the south (both located to the east of the proposed development area) are currently in use as a visitor centre exhibiting information on the history of Richmond Barracks, including the Easter Rising, along with the later social housing projects on the site formed by Keogh Square and St. Michael's Estate.

The aerial photography and satellite imagery of the proposed development area illustrates the level of development within the overall development area throughout recent years. The most recent imagery (Google Earth 2020) shows the southern two-thirds of the proposed development area cleared of structures while the northern section is still occupied by a number of structures. The condition of the site was confirmed during field inspection.

There are a number of sites listed in the Dublin City Industrial Heritage Record within the vicinity of site; however, none of these are directly relevant to the proposed development area.

The field inspection sought to assess the site, its previous and current land use, the topography, and any additional information relevant to the report. During the course of the field investigation the proposed development site and its surrounding environs were inspected.

Saint Vincent's Street West bounds the site to the west, along with a modern boundary wall. The stone wall associated with Golden Bridge Cemetery is located along the southern boundary. The eastern boundary is formed by a road that extends from Bulfin Road and separates the site from the remaining in-situ barrack buildings, to the immediate east.

There are a number of modern structures located in the northern part of the site, along with a tennis court and car parking. The northern boundary is formed by Emmet Road and the original stone wall associated with the former barracks.

No previously unrecorded specific features or areas of archaeological potential or cultural heritage significance were noted during the inspection.

All ground disturbances associated with the proposed development will be monitored by a suitably qualified archaeologist. If any features of archaeological potential are discovered during the course of the works further archaeological mitigation may be required, such as preservation in-situ or by record. Any further mitigation will require approval from the National Monuments Service of the Department of Housing, Local Government and Heritage (DoHLGH) and the Dublin City Archaeologist.

Should the mitigation measures, recommended above, be carried out fully and successfully there will be no predicted residual negative impacts to the archaeological and cultural heritage resource by the proposed development. Information installations that provide historic and cultural heritage context to the site will have a moderately positive residual impact.

3.12 CULTURAL HERITAGE – ARCHITECTURAL HERITAGE

The proposed development area is located within site of the former 19th century Richmond Barracks complex. The site is located north of the Grand Canal, immediately south of Emmet Road and east of Inchicore Village. The development area, when complete, will occupy approximately half of the original barracks footprint and will be constructed largely on the soldier's parade ground located on the western half of the former barracks site.

The barracks were built in H-configurations with a north and a south gate. The three remaining buildings immediately east of the development area were constructed in the 1860's and 70's. The first of the two outer stone-built buildings (Reading and Recreation) was opened in 1864, followed shortly by the second. The brick-built (Gymnasium) building between the two stone buildings was built during the 1870s. Sections of the boundary wall remain, together with a mortuary chapel and the Garrison Chapel now St. Michael Church.

The majority of the barracks buildings including Keogh Square were largely demolished by the 1970's to be replaced by the St Michael's Estate flats complex. The flat complex was demolished between 2000 and 2013. Only three of the barracks' buildings, together with a section of the perimeter wall, mortuary chapel and the Garrison Chapel (now St. Michael's Church) survive to the present day. The surviving barracks buildings are located to the east of the proposed development and the part of perimeter wall is located at the North West corner of the development site.

The proposed development will occupy the western half of the overall footprint of the former Richmond Barracks site, and when constructed will be bounded by St. Vincent's Street West to the west, Goldenbridge Cemetery to the south, Patriot's Path to the east and Emmet Road to the north. The remaining barracks buildings are located east of Patriots Path in the immediate vicinity of the development but do not form part of the development site. The lands further to the east, behind the barracks buildings has been developed under various housing and community uses in the recent past. The development will largely consist of residential buildings of three to seven storeys separated by external circulation and amenity spaces with a number of community and commercial units to the northern end of the site onto Emmet Road.

Sections of masonry will be removed to ground level at three locations at the North West corner to form openings allowing pedestrian access to pass through from the public footpath into the development site. A section of the southern end of the wall along St. Vincent's Street West will also be removed due to the proximity of the adjacent new building immediately inside the wall. Sections of the wall along Emmet Road are also been lowered in order to provide a better relationship between the public footpath along Emmet Road and the development.

The proposed development also includes the construction of a watermain for c. 200m along the Emmet Road to the junction of Grattan Crescent and Tyrconnell Road, which will traverse the bridge.

The proposal includes the removal/demolition of sections of north-west wall (protected structure no. 8705) to form new openings. The works also entail the lowering of northern section of boundary wall. The removal of the sections of wall is considered to be a direct negative, moderate, and permanent impact.

There will be no direct effects on architectural heritage during the operational phase as a direct effects indicates alterations to the structures and there will be no alterations to structures outside the site boundary.

There will be indirect effects on some structures of architectural heritage significance during the operational phase relating to the setting and regenerated site.

The main residual effect on the architectural heritage is the change of use of the large open site, much of which is occupied by the large green open space that once contained the former Richmond Barracks parade ground, the Keogh Square and later St. Michael's Estate housing scheme. The views southwards towards Goldenbridge Cemetery along St. Vincent's Street West and Patriots Path will be permanently obscured by the new development.

The remaining section of the Boundary Wall be will permanently altered.

Loss of fabric has to be balanced with overall amenity of the wall presentation – ability of the existing masonry, when modified, to contribute at ground and at roof level to overall positive visual and social amenity of the scheme.

Removal of connections to defensive barracks wall allows for more generous connections and visual spatial improvements at junctions. Existing historic buildings will remain a backdrop to new building to the west. Large green space to west of historic buildings will provide breathing space across Patriot's Path.

3.13 RISK MANAGEMENT

The surrounding context consists of a mix of residential cultural, cemetery and commercial lands. It does not include any man-made industrial processes (including SEVESO II Directive sites (96/82/EC & 2003/105/EC) which might result in a risk to human health and safety. From a review of the Dublin City County Council Development Plan Map E there are no SEVESO Site as defined by the Health and Safety Authority, on the subject site of the proposed development, in the immediate vicinity, or in the surrounding Inchicore Village.

A Seveso establishment is an establishment which has an activity linked to handling, manufacturing, using or storing dangerous substances (i.e. refineries, petrochemical sites, oil depots or explosives depots).

Through the implementation of mitigation measures, there are no identified incidents or examples of major accidents and or natural disasters that present a sufficient combination of risk and consequence that would be likely to lead to significant residual impacts or environmental effects.

The cumulative interactions with Population and Human Health, Land, Soils, Geology and Hydrogeology, Surface Water, Noise, Climate and Air, Material Assets, Traffic and Transport, Landscape and Visual, and Cultural Heritage. However, subject to implementation of mitigation measures, good working practices and codes, the interactions between these areas have been sufficiently considered in relation to risk management.

4.0 CUMULATIVE IMPACTS

Where relevant the EIAR also takes account of other developments within the area, which were considered to have a potential cumulative impact with the proposed development. These impacts have been addressed in the relevant chapters of the EIAR. The cumulative development included the 52 no. unit older persons housing development located to the east of the project site and the Build to Rent project located to the south as well as the proposed Bus Connects scheme along Emmet Road.

To determine traffic impacts in Chapter 10 the traffic generated by the proposed development is combined with the baseline traffic generated by the traffic on the road network in the area. The potential traffic impacts from other developments were also considered in the assessment.

For the noise impact assessment in Chapter 8 the potential noise emissions arising from the proposed development during construction and operation are combined (using cumulative AADT figures from Traffic chapter) with background noise levels (predominantly road traffic) were assessed.

Each of the relevant specialists has considered the potential for cumulative impact in preparing their assessments. While there is the potential for negative impacts to occur during the construction stage of the scheme, with the

implementation of the appropriate mitigation outlined in the EIAR, the residual cumulative impact is not considered to be significant.

There will be some short-term impacts during the construction phase as the pipes are laid, particularly in respect of traffic management with regards to sensitive receptors. This may cause local short-term inconvenience and disturbance to residents and business in the vicinity of the works. However the works would normally be undertaken in sections on a phased/rolling programme so that the number of persons experiencing local inconveniences at any one time is kept to a minimum.

5.0 INTERACTIONS BETWEEN ENVIRONMENTAL FACTORS

Chapter 15 of the EIAR (Volume II) provides detail on the interaction and interdependencies in the existing environment. John Spain Associates in preparing and co-ordinating this EIAR ensured that each of the specialist consultants liaised with each other and dealt with the likely interactions between effects predicted as a result of the proposed development during the preparation of the proposals for the subject site and this ensures that mitigation measures are incorporated into the design process. This approach is considered to meet 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). The detail in relation to interactions between environmental factors is covered in each chapter of the EIAR.

Table 5.1 – Matrix of Summary of interactions between the environmental factors

Interaction	Population & Human Health		Biodiversity		Land and Soils		Water		Air Quality/Climate		Noise/Vibration		Landscape and Visual		MA-Traffic		MA-Waste/Utilities		Cultural Heritage		Risk Mgmt	
	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
Population & Human Health			×	×	×	×	×	×	✓	×	✓	×	×	×	✓	×	✓	✓	×	×	×	×
Biodiversity	×	×			✓	×	✓	✓	✓	×	×	×	×	✓	×	×	×	×	×	×	×	×
Land and Soils	×	×	✓	×			✓	×	✓	×	×	×	×	×	×	×	✓	×	✓	×	×	×
Water	×	×	✓	×	✓	×			×	×	×	×	×	×	×	×	✓	✓	×	×	×	×
Air Quality/Climate	✓	✓	×	×	×	×	×	×			×	×	×	×	✓	✓	×	✓	×	×	×	×
Noise/Vibration	✓	✓	×	×	×	×	×	×	×	×			×	×	✓	×	×	×	✓	×	×	×
Landscape and Visual	✓	✓	×	✓	×	×	×	×	×	×	×	×			×	×	×	×	✓	✓	×	×
MA-Traffic	×	×	×	×	×	×	×	×	✓	✓	✓	×	×	×			×	×	×	×	×	×
MA-Waste/Utilities	✓	×	×	×	✓	✓	✓	×	×	✓	×	×	×	×	✓	×			×	×	×	×
Cultural Heritage	×	×	×	×	×	×	×	×	×	×	✓	×	✓	✓	×	×	×	×			×	×
Risk Mgmt	✓	×	×	×	✓	×	✓	×	✓	×	✓	×	×	×	✓	×	×	×	✓	×		

Con. Construction Phase Op. Operational Phase ✓ Potential Significant Interaction × No Significant Interaction

In addition to the individual assessments of impacts on human beings, fauna and flora, soil, water, air, climate factors, the landscape and material assets, including architectural, archaeological and cultural heritage, the inter-relationships between these factors was also taken into account as part of the EIAR scoping and impact assessment. Where the potential exists for interaction between two or more environmental topics, the relevant specialists have taken these potential interactions into account when making their assessment and, where possible, complementary mitigation measures have been proposed. These are set out in Chapter 15 of the EIAR (Volume II).

The relevant consultants liaised with each other and the project architects, engineers and landscape architects where necessary to review the proposed scheme and incorporate suitable mitigation measures where necessary. As demonstrated throughout this EIAR, most inter-relationships are neutral in impact when the mitigation measures proposed are incorporated into the design, construction or operation of the proposed development.

6.0 SUMMARY OF EIA MITIGATION AND MONITORING MEASURES

Chapter 17 of the EIAR (Volume II) provides a summary of all the mitigation and monitoring measures proposed throughout the EIAR document. The appointed contractor will be required to adhere to the mitigation contained in the EIAR for the protection of the environment and to ensure sustainable development.