Development Framework Plan

For Lands at Emmet Road

Prepared for:
Dublin City Council

Prepared by:
DMOD Architects & Urban Designers

Rialtas na hÉireann Government of Ireland | Tionscadal Éireann Project Ireland 2040

An Roinn Tithíochta, Pleanála agus Rialtais Áitiúil Department of Housing, Planning and Local Government

Rebuilding Ireland
Action Plan for Housing and Homelessness

Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

DMOD ARCHITECTS

August 2019

DEVELOPMENT FRAMEWORK PLAN

FOR LANDS AT EMMET ROAD

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Acknowledgments

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Note: If printed, this document is designed to be read at A3 size.

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Introduction

Introduction

Dublin City Council has appointed an urban design team led by DMOD to prepare a Development Framework Plan for the optimum model of redevelopment of lands at Emmet Road, Inchicore, Dublin 8 including the site of the former Saint Michael's Estate. This will include the provision of residential, community and commercial accommodation and a series of new public open spaces to create a vibrant new neighbourhood in Inchicore with a rich diversity of residents supported and sustained by a mix of uses and facilities.

While a substantial proportion of the new residential accommodation proposed will be Social Housing (30%), most of the new residential accommodation proposed will be Cost Rental Housing (70%) as announced by Eoghan Murphy Minister for Housing, Planning and Local Government on July 23rd 2018. While elements of the Cost Rental model criteria and rules are not yet fixed in the absence of policy and government legislation, it generally involves the provision of homes where the rent charged is directly related to (1) the sum of the capital cost of site acquisition and construction and (2) formulated costs for associated financing and ongoing maintenance.

The Cost Rental model must relate to affordability for low to middle income earners by building on public land with low interest financing from Institutions like the European Investment Bank. This model of housing is a first-in-type initiative for Dublin City Council and, as a prototype model, it is essential that the preparation of the Development Framework Plan and any resulting development explores all associated contingencies in order to foster confidence in its application on this site.

The Development Framework Plan will form a basis for briefing for future development proposals for a new neighbourhood of the highest quality, optimising the development potential of the site in a sustainable manner. This will be subject to a planning procedure as set out in Part 10, Section 175 of the Planning and Development Act 2000 (as amended).

This document is set out in three sections with a preface consisting of an Introduction and Executive Summary and a postscript consisting of a Conclusion, Recommendations, Next Steps and References. The first section describes the Emmet Road lands, the site context and the local community. The second section collates the output of extensive engagement with Dublin City Council departments and sets out the parameters for the Dublin City Council briefing for optimum development. The third section is a response to this Dublin City Council briefing formulated as a 'proof of concept' proposal. A series of appendices are included to support and substantiate some of the content as required.

The Subject Site *(Google Earth: 2019 Imagery)*

Executive Summary

Executive Summary

Opportunities for developing on a neighbourhood scale in Dublin are rare, though the opportunity to provide genuinely sustainable community development within an existing urban quarter best exists at this scale. This Development Framework Plan proposes an optimum response to competing requirements for developing approximately 4 hectares of land at Emmet Road in a sustainable manner, informed by extensive briefing by Dublin City Council.

Setting the Scene

The Development Framework Plan is firmly rooted in the wider context of Inchicore and actively responds to the character and form of the immediate context along its periphery. The site amounts to 3.8 hectares (9.4 acres), a large portion of which comprises the lands of the (now demolished) Saint Michael's Estate housing development.

Framework Briefing

The Development Framework Plan is a balanced response to competing considerations of affordability, sustainability, development standards, mobility, safety and placemaking of quality. The Framework briefing is substantially residential in nature, supplemented and supported by community facilities and a neighbourhood centre including a supermarket fronting onto Emmet Road. The residential accommodation proposed is a mix of Social Housing and Cost Rental Housing. This Cost Rental model of housing is a first-in-type initiative for Dublin City Council that typically provides homes that must relate to affordability for low to middle income earners.

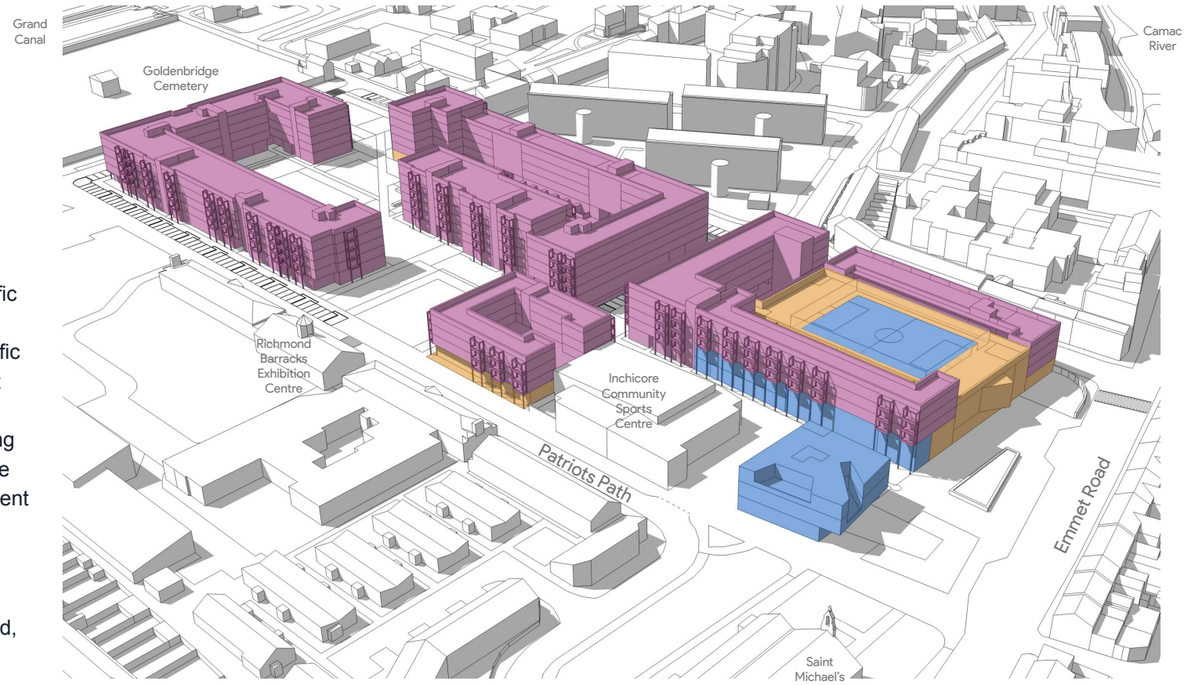
Proof of Concept

The Development Framework Plan provides a 'proof of concept' proposal. The key structuring principles include (1) an arterial avenue free from vehicular traffic that connects Emmet Road with the Goldenbridge Cemetery, (2) a peripheral avenue for all types of traffic that aligns with and connects Patriots Path with Saint Vincent Street West, and (3) a series of public open spaces that converse with key elements of the existing and proposed landmarks and accommodation. These open up the lands to support a quantum of development of approximately 50,000m². This is configured in five tranches that may be delivered simultaneously or in sequence, subject to planning permission.

In addition to creating a self sustaining neighbourhood, a key objective of the indicative proposal involves providing additional amenity for existing facilities in the adjoining neighbourhoods. A great emphasis is placed on the importance of the northern section of the indicative proposal addressing Emmet Road as a frontispiece to attract people from the surrounding area, through the mix of new and existing uses to be utilised both day and night.

Finally, this Development Framework Plan is not definitive and a number of measures to be undertaken as next steps are identified in Section 17.

A summary of the quantum of new residential, community and commercial development proposed is set out here.



Sketch Model of Proof of Concept Indicative Proposal

Community Accommodation

The indicative proposal locates the community facilities together, each accessible off a new community square between Emmet Road and the Inchicore Community Sports Centre.

Community Centre	c.1,450m²
Library	c.1,400m²
Sports Centre Adjustments	c.45m²
Total Floor Area	**c.2,895m²**

Commercial Accommodation

The indicative proposal locates the retail facilities off Emmet Road with a corner shop located near the entrance to the Goldenbridge Cemetery.

Supermarket	c.1,900m²
Other Retail	c.200m²
Café	c.125m²
Corner Shop	c.100m²
Childcare Centre	c.850m²
Total Floor Area	**c.3,175m²**

Residential Accommodation

The indicative proposal provides for 30% of the units to be made available as Social Housing (including the site known as "Phase 1b" to the East) and the remaining 70% as Cost Rental Housing. Dublin City Council's intent is that the mix of these two tenure types would be 'pepper-potted', distributed without prejudice throughout the site. A summary of the residential accommodation and density proposed is as follows:

Studio dwellings:	72no.
One Bedroomed dwellings:	128no.
Two Bedroomed dwellings:	210no.
Three Bedroomed dwellings:	74no.
Total Units:	484no.
Total Floor Area:	**c.42,600m²**

Bedspaces per hectare	**321bph ***
Units per hectare	**126dph**

(* assumes each studio is occupied by one person, each primary bedroom is occupied by two persons and voids are not included)

PART A

Setting the Scene

A1

The Receiving Environment

Inchicore in Dublin
Neighbourhood Context
History
Site Assembly
Census Data Analysis

The Receiving Environment

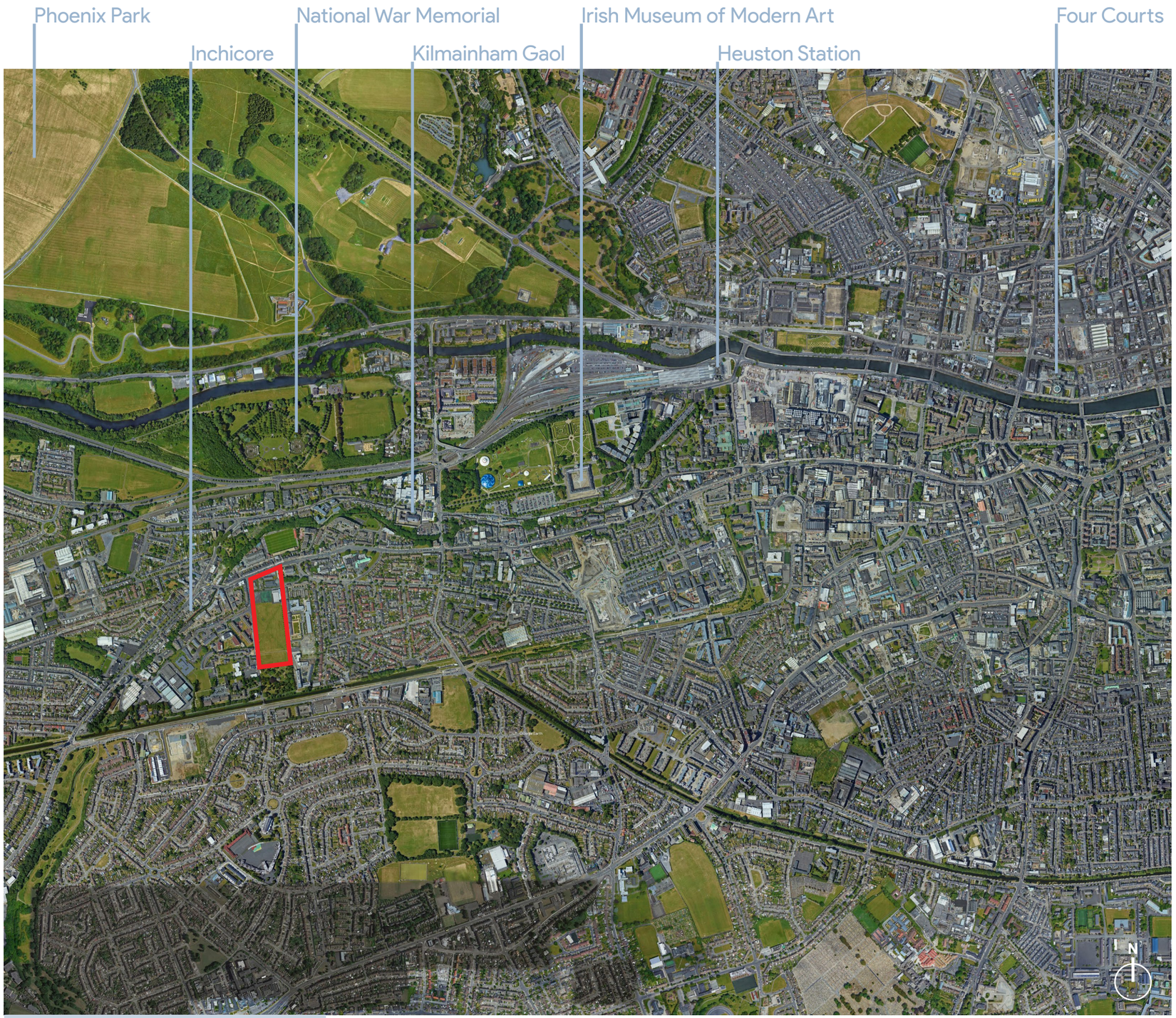
Inchicore in Dublin

The subject site is located in Inchicore, Dublin 8, approximately 5km west of Dublin city centre. The commercial centre of Inchicore is located to the west of the subject site at the junction of Emmet Road and Tyrconnell Road, close to the Golden Bridge, where Emmet Road crosses the River Camac. The area is well served with public transport links including the Luas Red Line, the 13, 40 and 68 bus services and the N4 national primary route.

Inchicore is primarily a residential area, composed of predominantly 2 storey early to mid 20th century housing stock, with some medium rise apartment developments (both social and private) built in more recent decades. The area also has a strong association with the national transportation system: a large tramyard terminus and coachworks was located here, and some of the major engineering works of the country's railway network are located to the west and north of the village centre.

The community has several primary schools and one secondary school, a third level college, several churches and a collection of noteworthy cultural assets, namely the former Richmond Barracks and Goldenbridge Cemetery. Kilmainham Gaol, the Irish Museum of Modern Art and the Irish National War Memorial Gardens are all in close proximity.

The Grand Canal, with its greenway, is situated to the south of Inchicore and the subject site adjacent to the Luas line. The Camac river flows in a northeasterly direction through Inchicore, some sections of which are built over but other sections open onto green spaces.



Wider Context Aerial *(Google Earth: 2019 Imagery)*

Neighbourhood Context

The site for this framework plan is bounded to the north by Emmet Road, to the south by Goldenbridge cemetery, to the east by the former Richmond Barracks and the pedestrian link to the Bulfin estate next to Saint Michael's Church and to the west by Saint Vincent Street West. Vehicular access to the site is currently along Saint Vincent Street West and Patriots Path, both of which are North South in orientation beginning on Emmet Road and both terminating to pedestrian links along the east and west side of the cemetery connecting to the Grand Canal greenway.

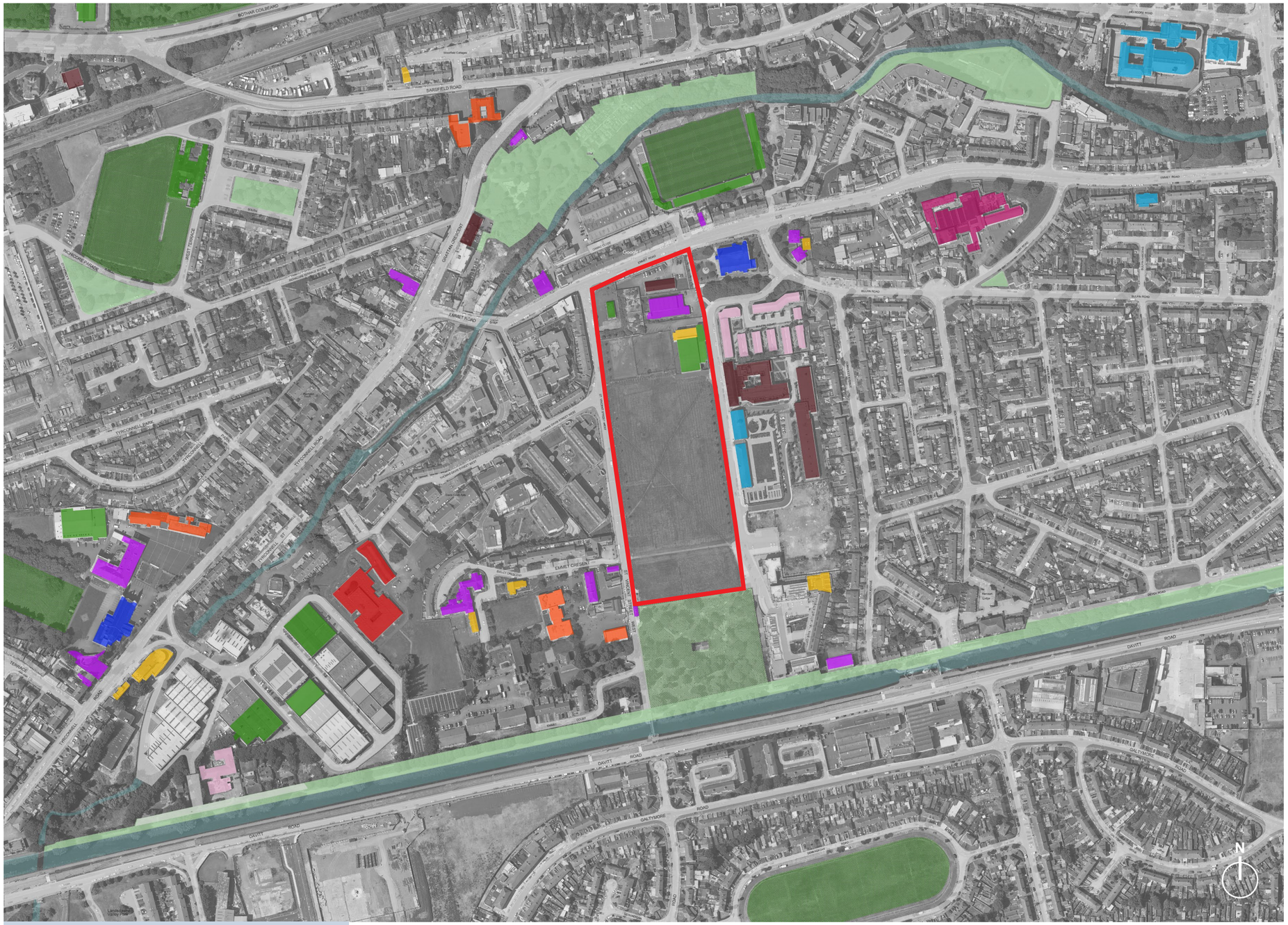
The site amounts to 3.8 hectares (9.4 acres), a large portion of which comprises the lands of the (now demolished) Saint Michael's Estate housing development. Inchicore village has a collection of smaller local retailers, local services and pubs, with an intermittent spine of commercial activity stretching eastward on Emmet Road, passing by the site's northern frontage. Richmond Park, home of Saint Patrick's Athletic Football Club, is accessed from Emmet Road to the northeast of the site, opposite Saint Michael's church. Goldenbridge cemetery, to the south of the site, is currently in active usage. It is surrounded by a high stone wall, sections of which have been taken down to lower level on the southern and western sides to allow views into the cemetery. To the south of the cemetery is the Grand Canal greenway and pedestrian bridge over the canal, allowing access to the Drimnagh stop on the Luas Red Line.

The former Richmond Barracks, located along Patriots Path to the east of the site, is recently renovated and now serves as a museum relating to the 1916 rising. It is a popular destination for coach tours. To the north of the museum is a Primary Care Centre and Dublin City Council senior citizens housing (Bulfin Court). The northeast corner of the site fronts onto Saint Michael's Church, which has a railed green space to the front with a small grotto. South of the former Richmond Barracks is a vacant site, currently proposed for approximately 50 social housing units. South of this site is Thornton Heights, 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.

The site is bounded to the west by Saint Vincent Street West, which features 2 storey terraced housing at its northern end, access to Mercy Secondary School via Thomas Davis Street West, the Tyrone Place estate (5 storey) in the middle and access to Our Lady of Lourdes primary school and Goldenbridge community facilities at its southern end via Emmet Crescent.

Further to the east of the site is the Bulfin estate, consisting of 2 storey terraced and semi-detached early 20th century Council housing. Further to the west are some more recent apartment developments (up to 7 storeys) and the Goldenbridge Industrial Estate which is accessible from Tyrconnell Road.

Neighbourhood Context Aerial *(Google Earth: 2019 Imagery)*



Neighbourhood Use Map *(Google Earth: 2019 Imagery)*

- *Nursing Homes / Senior Citizens*
- *Parks & Open Spaces*
- *Community Facilities*
- *Sporting Facilities*
- *Medical Facilities*
- *Cultural Facilities*
- *Religious Facilities*
- *Childcare Facilities*
- *Primary Schools*
- *Secondary Schools*
- *Third Level Institutions*

History

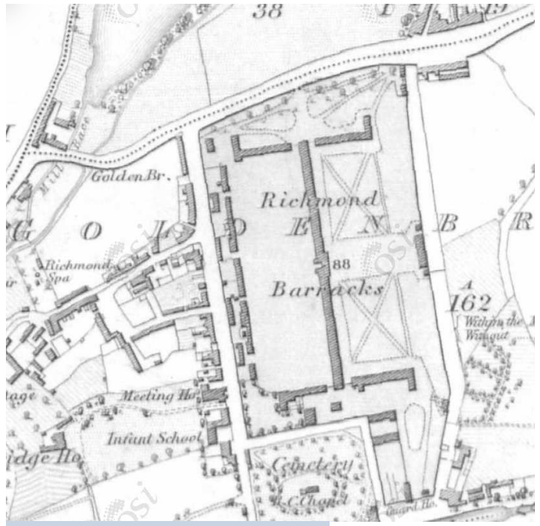
Until the 17th or early 18th Century, the area occupied by the site comprised a semi-rural wooded landscape which formed part of the wider holdings of Kilmainham Priory. With the disestablishment of this institution, the lands of Goldenbridge and Kilmainham passed through a number of hands. From the middle ages, the banks of the Camac River were the location of various mills up to the 19th century. The extension of the Grand Canal eastwards towards James' Street facilitated the passage of people and goods from wider afield. The second lock of the canal, situated to the southeast of the site, was flanked by mill buildings and a mill pool on its southern side. These industrial activities initiated the development of large scale industrial and transport works in the locality with the establishment of the Great Southern and Western railway and the construction of the Tram depot buildings which were situated to the North West of the site.

Goldenbridge Cemetery, to the south of the site, was established in 1828. It was Ireland's first Catholic cemetery founded since the reformation. Built in the style of a garden cemetery, it includes a small mortuary chapel in the form of a Temple and is home of the graves of both W.T. Cosgrave and his son Liam Cosgrave.

Richmond Barracks was built on the site in 1810 and first occupied by the British Army in 1814. The buildings that remain today have specific connections to the Easter Rising and its immediate aftermath. After the surrender, it was designated by the British as the holding centre for over 3,000 suspected rebels, until they were released or sent to prison camps in England, Wales and Northern Ireland. The signatories of the Proclamation (with the exception of James Connolly) and other leaders were also interned, court-martialled and sentenced to death in the barracks before they were sent to Kilmainham Gaol for execution.

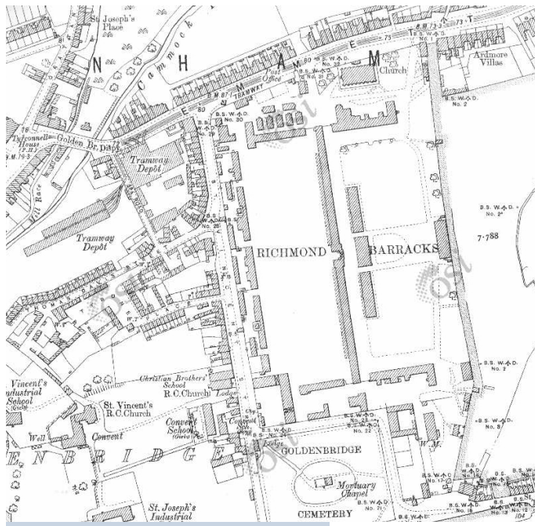
After the Irish Free State was founded in 1922, the Barracks was occupied by the Irish Army, and named Keogh Barracks, after Commander Tom Keogh who fought in the War of Independence. The Irish government subsequently closed Keogh Barracks in 1925 and the building came into possession of Dublin Corporation and was used to house families who were on the housing list. Keogh Square was built first, subsequently demolished in 1970 and replaced by Saint Michael's Estate. At the same time as the transfer of the barracks to the Corporation, the Christian Brothers purchased three of the barracks buildings and turned two of them into class rooms for Saint Michael's Christian Brothers School, a national school which opened in 1929.

The Saint Michael's Estate housing complex was built by Dublin Corporation in the 1970s and comprised 14 blocks ranging in height from 4 to 8 stories. Social issues emerged in the blocks from the 1980's onwards, resulting in the gradual rehousing of the tenants at developments in Bulfin Court, Emmet Crescent and Thornton Heights. The blocks were demolished in phases beginning in 2004, and the last block was demolished in 2013.



Historic 6" Map, 1837-1842

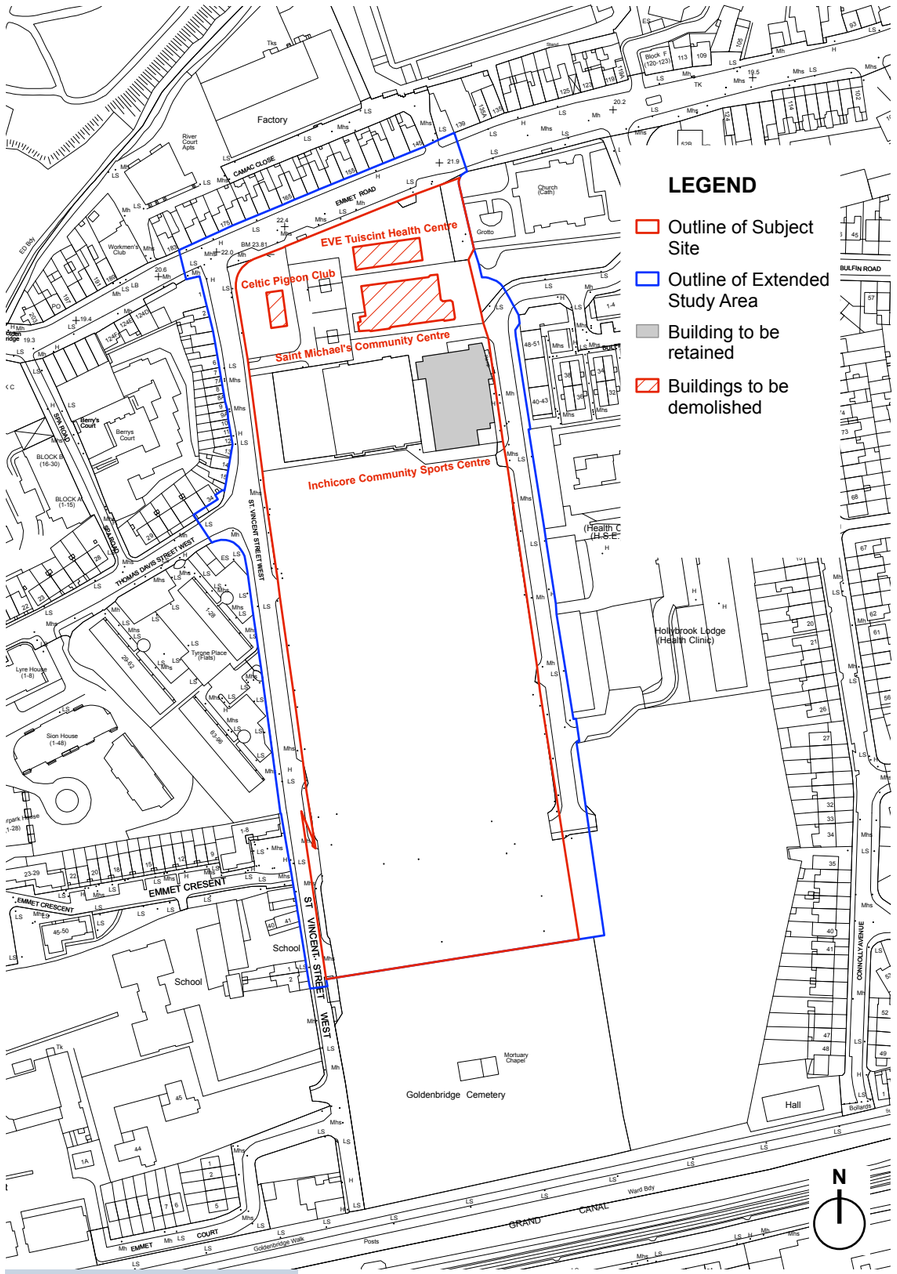
Cassini 6" Map, 1947



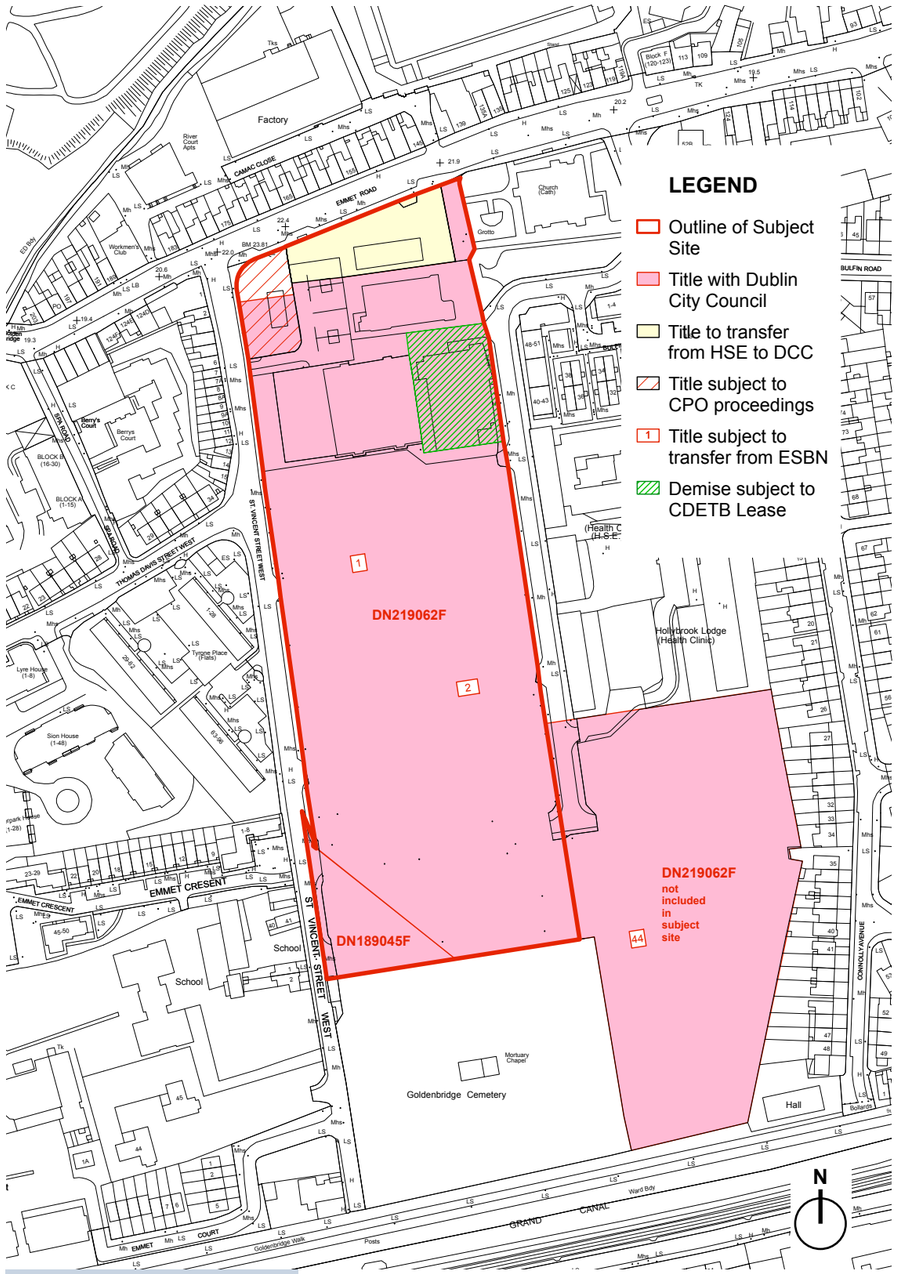
Historic 25" Map, 1897-1913

Aerial Photo, 2000

Site Assembly



Map of Subject Site

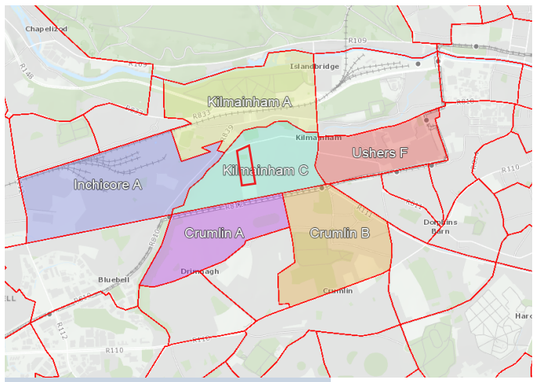


Map of Site Ownerships

Census Data Analysis

The census data for 2006, 2011 and 2016 paints a picture of Inchicore as a diverse and changing area. The Subject Site lies within the Kilmainham C electoral area and selected data for this area and the bordering areas has been analysed with key findings presented here. To confirm, the Study Area comprises the following electoral areas:

- Inchicore A
- Kilmainham A
- Ushers F
- Crumlin B
- Crumlin A
- Kilmainham C



Subject Site and Study Area

Population

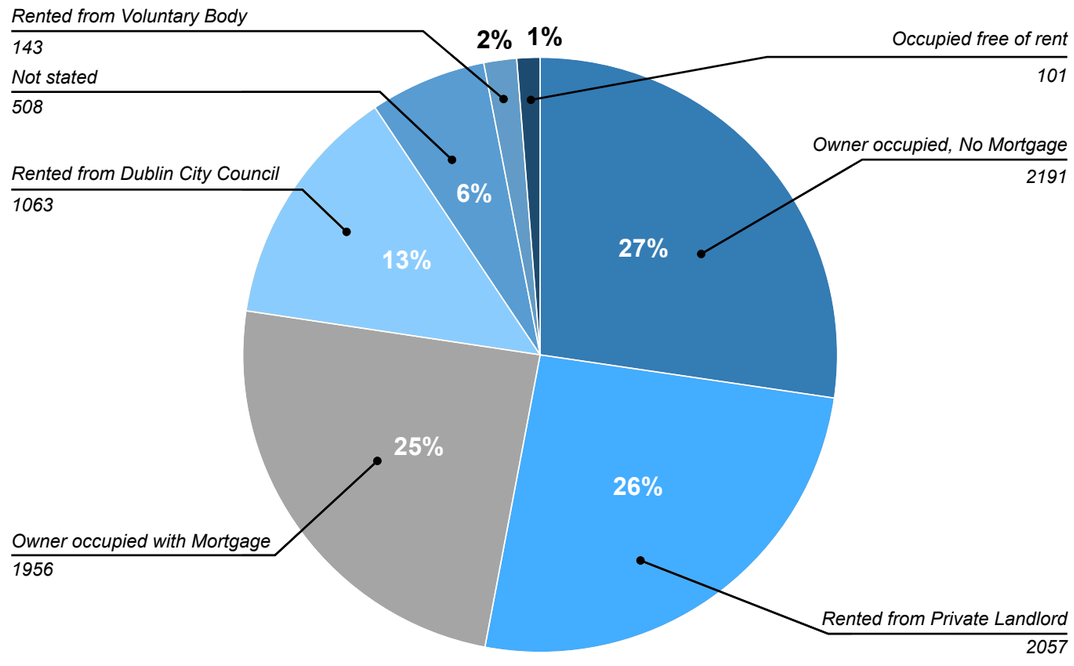
The population of the Study Area has increased by 11% in the timeframe from 2006 (17,838 usually resident recorded) to 2016 (19,872 usually resident recorded), which is high when compared to the Dublin City average population growth of 9% in the same period.

The composition of this population growth is largely attributable to an increase in single person households and households with young children. The number of 1, 2 and 3 person households have seen the strongest growth and now account for 80% of all households in the Study Area.

The last 3 census figures have shown substantive increases in the numbers of children between 0-19 years of age (from 3,447 in 2006 to 3,944 in 2016 - representing a 14% increase) and of adults between 35-44 years of age (from 2,578 in 2006 to 3,463 in 2016 - representing a 34% increase) and a substantive decrease in the numbers of adults over 65 years of age (from 2,809 in 2006 to 2,244 in 2016 - representing a 20% decrease).

Household Type & Tenure

The number of households in the Study Area has increased by 13% since 2006, and 90% of this increase is represented by the increase in the flats/apartments category. Over half of the households are owner occupied, either with or without mortgages This is perhaps unsurprising given the established residential areas in the surrounding localities.



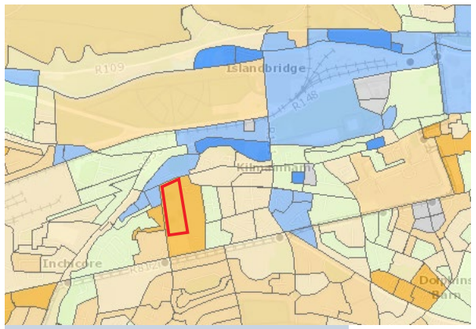
Household Tenure, 2016

Car Ownership

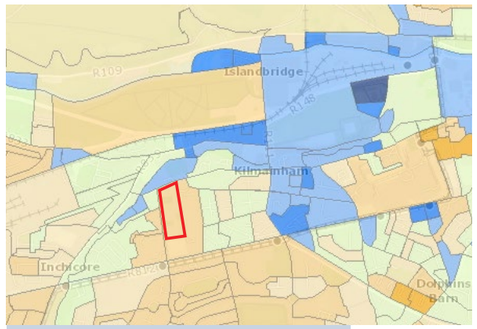
The levels of car ownership in the Study Area has dropped since 2011. In 2016, 48% of households had no car and 36% had just one car. The figures for 2011 were 37% and 46% respectively.

Economic Status and Deprivation Index

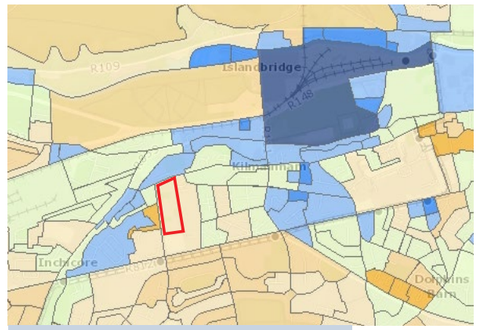
The HP deprivation index, published by Pobal, shows a slight increase in the affluence of the Study Area from 2006 to 2016. In general terms, pockets of relative affluence have increased slightly but there still remains a large proportion of areas in the below average, disadvantaged and very disadvantaged categories Unemployment levels were 6%, 11% and 8% in the years 2006, 2011 and 2016 respectively, compared to the 2016 city average of 13%. The proportion of those unable to work due to illness or disability is similar in quantum to those unemployed.



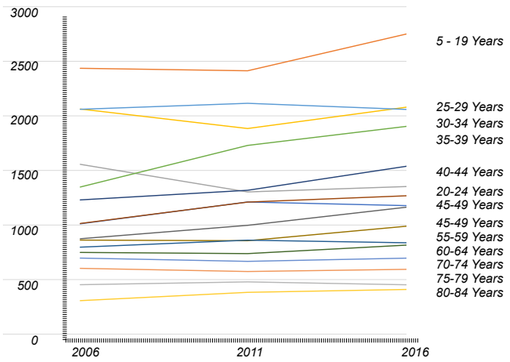
Pobal Deprivation Index Map 2006



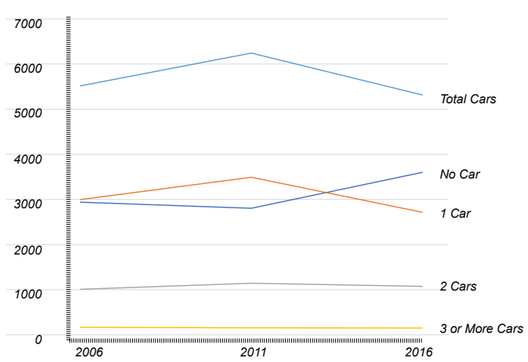
Pobal Deprivation Index Map 2011



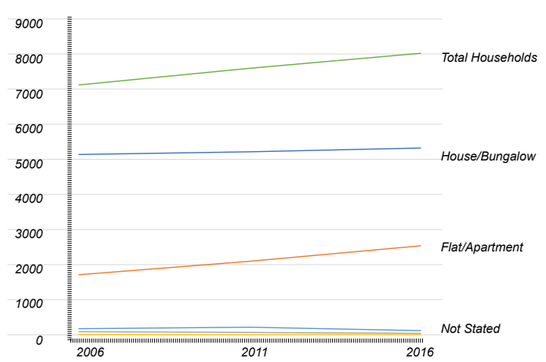
Pobal Deprivation Index Map 2016



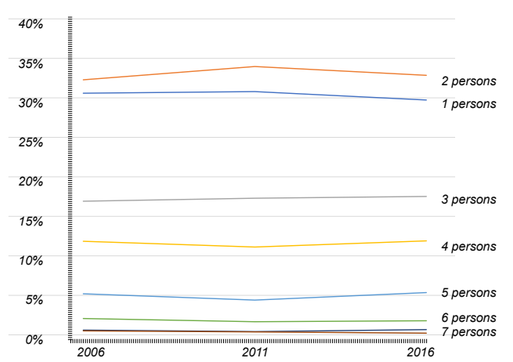
Trend: Age of Residents in Study Area



Trend: Cars for Residents in Study Area



Trend: Household Types in Study Area



Trend: Household Size in Study Area

A2 Transport Overview

Introduction
Location
Roads
Bus
Luas
Walking & Cycling
BusConnects
Summary
Traffic Assessment
Travel Planning
Additional Design Considerations

Transport Overview

Introduction

The subject site is very accessible and is well located in relation to the surrounding public transport network, which comprises regional and local roads, bus routes, the Luas and numerous pedestrian and cycle links. It is a good location for high density mixed use development having regard to its current and future accessibility.

Mobility Strategy

An overall mobility strategy should be prepared for the site. This should clearly set out how the development will meet the mobility requirements of residents, commercial uses and movements associated with emergency and waste management. The following particular considerations should be addressed:

- Clarification of access routes to the site and which routes are vehicular and pedestrian/cycle only.
- Clarification of pedestrian and cycle connections to the city centre, public transport routes, schools, shops and other facilities in the vicinity.
- Identification of walking and cycling times and distances to above.
- Clear car parking and cycle parking strategy.
- Innovative and proactive measures to address reduced car ownership/storage e.g.. car and bike share.
- Servicing requirements of commercial uses.
- Drop-off and Collection for the Childcare Centre.
- Fire and Emergency access across the site.
- Waste management strategy including collection and routes across the site.
- Confirmation that the road and street network can accommodate all of the above activities.
- Where a mix of uses is proposed, clarification of segregation of parking by use is required.

Shared mobility schemes should be identified and the closest Dublinbikes, Bleeperbikes and GoCar Locations should be identified.

Car Parking Strategy

A clear car parking strategy should be prepared for the site. This should comply with the requirements of the Dublin City Council Development Plan 2016-2022 and recent Apartment Guidelines. It should consider the existing receiving environment around the site and should address the car storage requirements of a range of residents including families and people with disabilities.

If reduced or minimal car parking is proposed, a clear management strategy should be elaborated with regard to how assignment of spaces will be continually managed. Also, in this context a mobility management and residential travel plan shall clearly set out measures and initiatives to provide alternatives to car ownership such as access to car clubs and bike share facilities.

Cycle Parking Strategy

A clear cycle parking strategy should be prepared for the site. This should set out the quantum provided across the site, both public and private. The strategy should comply with the requirements of the Dublin City Council Development Plan 2016-2022 and recent Apartment Guidelines. Attention is drawn to the scale of cycle parking required by the Apartment Guidelines (one per bedroom) and the general requirement to provide secure convenient cycle parking for residents, particularly in the context of reduced car parking.

Cycle parking for visitors and to serve commercial uses at the commercial centre and throughout the public open space should also be provided.

In public areas, Sheffield type stands are the preferred standard. In private blocks, where there may be spatial constraints, consideration may be given to alternative styles provided parking is secure and both wheel and frame can be locked.

Roads

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. This enables easy access to the south of the city via the various arterial roads leading from the city centre. 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.

Saint Vincent Street West connects to the R810 via a priority T junction and it provides access to residential areas (Thomas Davis Street West and Emmet Court), Our Lady of Lourdes National School, Mercy Secondary School, Goldenbridge Convent, Goldenbridge Cemetery and to sites along Goldenbridge Walk fronting the Grand Canal. The road is currently around 7m wide with further 3m and 3.5m footways to the east and west respectively. There are five speed tables to calm traffic on what is currently a straight and wide stretch of local road. Bulfin Road connects with the R810 via a priority T junction as does Bulfin Road with Patriots Path. Bulfin Road is also traffic calmed. Patriots Path is of a similar width and formation as Saint Vincent Street West with one speed table.

Bus

Several regular bus services operate along the R810 in the vicinity of the site as follows:

Service: Route 13
Frequency (weekday): Every 15 minutes
Route: Harristown to Grange

Service: Route 40
Frequency (weekday): Every 10-12 minutes
Route: Charlestown SC to Liffey Valley Shopping Centre

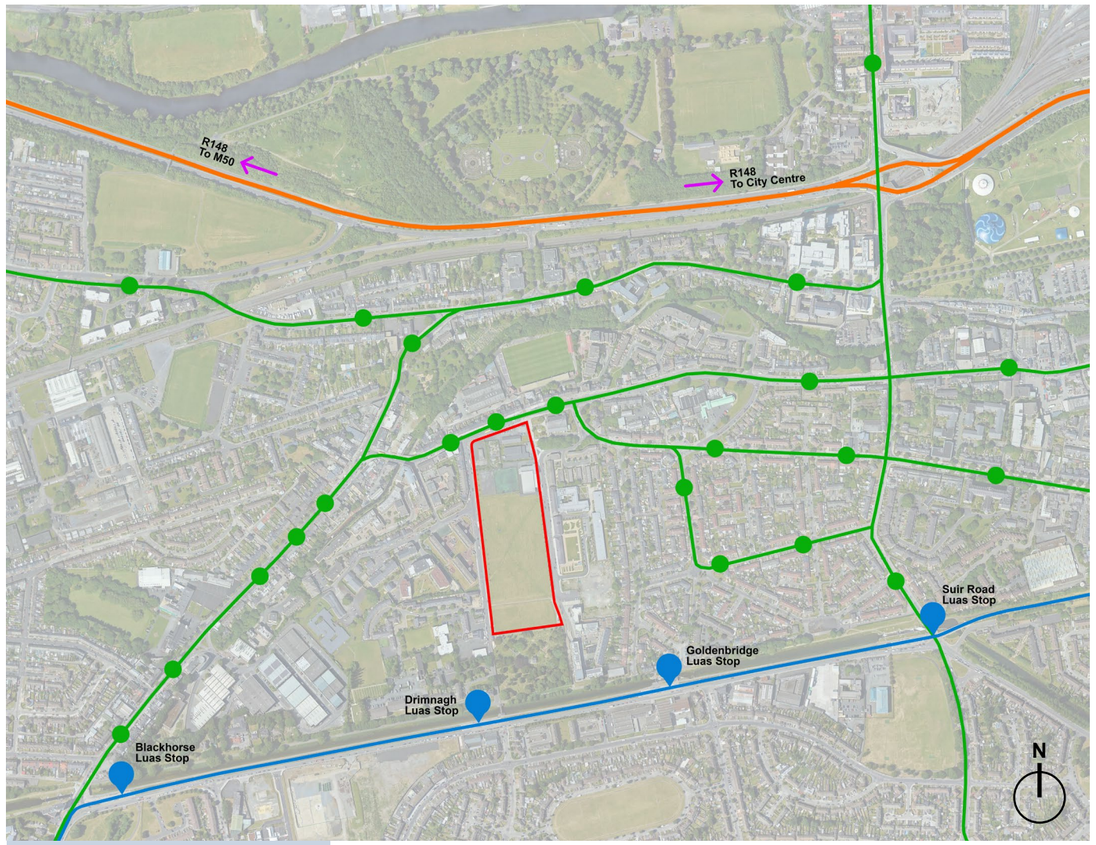
Service: Route 68
Frequency (weekday): Every 60 minutes
Route: Hawkins Street to Newcastle/Greenogue Business Park. The 68a goes directly from Bulfin Road at certain peak times of day, i.e. the route starts there rather than at newcastel. This occasional terminus is a few minutes walk away.

The nearest bus stops are located on Emmet Road (either side of the junction with Saint Vincent Street West) and outside Saint Michael's Church. The southern part of the site is furthest away from these stops but is still within 400m, which is less than a 5 minute walk.

Luas

The Red Luas line runs to the south of the site along the south bank of the Grand Canal. Two stations are located within close proximity of the site. The Drimnagh Luas station is located at the southern end of Saint Vincent Street West within 350m of the centre of the site (just over a 4 minute walk). The Goldenbridge Luas station is located 300m east of the Drimnagh station and can be accessed using the footpath along the northern bank of the Grand Canal (to Saint Helen's Terrace/Millview Cottages) from Patriots Path/Thornton Heights (within 450m or just over a 5 minute walk from the centre of the site).

The Drimnagh Luas station is located within 500m of the northern part of the site (the furthest point) or less than a 6 minute walk. However, it is noted that the bridge over the Grand Canal to the Luas station is not wheelchair accessible and upgrade of this crossing to permit wheelchair accessibility and improved public realm and lighting should be considered.



Map of Intermodal Exchanges

LEGEND

- *Bus Routes & Stops*
- *Luas Line & Stops*
- *National Primary Route*

Walking/Cycling

The site has access to numerous pedestrian links that provide safe and convenient access to local facilities including shops, schools, community uses and public transport services. It is 35/40 minutes walking distance from Christchurch in the historic centre of the city. Currently almost 40% of people crossing the canals for work in the morning are doing so on foot and this mode of transport should be promoted.

The Canal Way Cycle Route includes a route along the Grand Canal that is proposed to link the city centre to Naas Road. The route will be segregated and is to cater for cyclists only. The proposed 4.4km extension from Portobello to Naas Road will route along the Grand Canal to the south of the site.

The proposed pedestrian and cycle facilities, as part of the Bus Connects scheme, will also improve the accessibility of the site by walking and cycling.

BusConnects

In June 2018 the National Transport Authority (NTA) published the Core Bus Corridors Project Report (BusConnects). The report was a discussion document outlining proposals for the delivery of a core bus corridor network across Dublin. It set out the vision for the provision of 230kms of dedicated bus lanes and 200km of cycle lanes/tracks on sixteen key bus corridors.

The core bus corridor project is not just about the provision of bus lanes as it will also deliver 200km of segregated cycling infrastructure to make cycling safer and more attractive than ever before. This initiative is the foundation of the overall cycle network for the Greater Dublin Area.

Accessibility is about people's ability to reach destinations and services. Both mobility modes and mobility costs are assessed when determining accessibility. There are many tens of thousands of people across Dublin who cannot drive or do not have a car and are completely reliant on the bus service. The proposed bus lane improvements will help enhance accessibility for the elderly and mobility impaired because all buses are accessible. Bus stops, bus shelters and footpaths will support easy boarding and disembarking of the buses.

The proposed Liffey Valley Core Bus Corridor (CBC) runs along Emmet Road to the north of the site and will provide priority for buses consisting primarily of dedicated bus lanes in both directions with alternative measures proposed at particularly constrained locations.

At the junction of Emmet Road and Tyrconnell Road it is proposed to introduce a right turn ban for general traffic from Emmet Road to Grattan Crescent. Buses, bicycles and taxis will still be permitted to make this turn. To accommodate this revised arrangement at the junction, entry to Spa Road from Emmet Road is not permitted. Spa Road can be accessed from Saint Vincent Street West and Thomas Davis Street West under this proposed arrangement.

Between Saint Vincent Street West and South Circular Road, Emmet Road is proposed to be reconfigured to provide a bus lane and general traffic lane in both directions. This arrangement has necessitated a 'No Entry' sign on Luby Road. Luby Road will remain fully accessible from Bulfin Road. To facilitate this wider road configuration some local on-street parking will need to be removed. It is proposed to provide some alternative off-street parking near the junction with South Circular Road.

The BusConnects proposals include the signalisation of the junction of Emmet Road and Saint Vincent Street West. This will assist bus and pedestrian movements in this location to/from the site. In summary the site is well located for the existing and future bus network, which will enable future residents and visitors to travel sustainably by bus.

Summary

The site is well located to enable future residents and visitors to travel by alternative modes of travel other than the private car. This will reduce the traffic impact of any proposed development and maximise the sustainability of the site in transport terms.

BusConnects: Core Bus Corridors

Traffic Assessment

A detailed Traffic and Transport Assessment (TTA) will be required for any detailed proposal to provide an integrated approach that ensures that the development makes efficient use of existing/proposed transport infrastructure, reduces travel demand and promotes road safety. This will provide a comprehensive review of all the potential transport impacts of the development with an agreed plan to mitigate any adverse consequences.

Travel Planning

In line with the Dublin City Development Plan 2016-2022 and national policy, Smarter Travel initiatives should be explored and delivered as part of the development of the subject site. Before developing the site a Mobility Management Plan (MMP) will be required to promote travel by sustainable modes of transport. This will seek to increase the modal share of public transport, walking and cycling for residents and visitors to the site (and surrounding area). This will also assist in supporting reduced proposed parking levels. This could include car clubs, car sharing and the distribution of travel information identifying the alternatives to travelling by private car.

Additional Design Considerations

- Vehicular access to the subject site off existing access points is preferred.
- No vehicular access should be proposed along the Emmet Road frontage.
- Parking will be a significant constraint. The subject site is currently subject to car parking overspill encroachments from adjacent neighbourhoods and is threatened with potential parking problems arising from the construction and operation of the National Children's Hospital and other developments. It is also subject to occasional parking surges associated with liturgical services at Saint Michael's Church, drop off and collection at Mercy Secondary College and Our Lady of Lourdes National School and home fixtures for Saint Patrick's Athletic at Richmond Park. While recent national guidelines make it acceptable, subject to justification, to provide reduced numbers of car parking spaces (less than the 1 space per dwelling standard set out in the Dublin City Council Development Plan (2016-2022)), new developments must both accommodate sufficient parking for the new uses proposed and address these anticipated overspill encroachments.
- It is noted that the provision of a car parking space may impact positively on the marketability of residential accommodation.
- Detailed car parking proposals should consider the requirements of Go Car, electric cars and disabled car parking. It is preferred if these are provided on a public road.
- Car parking provision for community and commercial uses should meet the Dublin City Council Development Plan (2016-2022) standards.
- It is noted that some supermarket car parking spaces are included for public village parking on a qualified basis as a 'planning gain' measure.
- Parking provision for coach tours (Richmond Barracks Exhibition Centre, Goldenbridge Cemetery, etc.) should be considered.
- Nearby bicycle infrastructure includes the Grand Canal Cycleway (currently compromised by an impediment at the Harold's Cross Bridge) and the 2010 Camac Valley Greenway proposal.
- There is a shift in trend for bicycle infrastructure. Increasingly 'dockless' bicycle initiatives (Bleeperbike, etc.) are favoured over docking types (Dublinbikes, etc.) due to the capital cost for infrastructure, the growing obsolescence of technical apps and the requirement for 'doubling up' when providing new stations. There are no plans currently to provide Dublinbikes stations in the vicinity of the site though this should be considered in design development.
- The use of stacking systems for bicycle parking should only be considered on constrained sites and the subject site is not considered constrained. Sheffield stands are preferred for external parking although sheltered compound storage should be considered in residential areas. These should be suitably located adjacent to circulation cores at ground floor level.
- Provision for a taxi rank along Emmet Road is not considered a priority at this time.
- General access and passage requirements for emergency vehicles should be considered throughout the site.
- General access and passage requirements for maintenance and repair vehicles should be considered throughout the site.
- Consideration should be given to making provision for deliveries in the residential areas. This will include making space for the regular delivery and offload of groceries and take out food and the occasional delivery of large items of furniture.
- General access and passage requirements for waste removal should be considered throughout the site. Compounds for bin storage should not double as bicycle storage.

A3 Infrastructure

General Assumptions
Space Heating
Natural Gas
Electricity
Security
Information and Communication
Public Lighting
Potable Water Supply
Drainage

Infrastructure

General Assumptions

Connection to all utility infrastructure mains is available at points along the Emmet Road frontage of the subject site. Engagement with the utility providers will be a next steps requirement to confirm that the capacity of existing networks is sufficient for the proposed development and to confirm contingencies for incoming routes and duct/ pipework arrangements.

This section explores the main design considerations associated with each of the following elements of utilities infrastructure:

- Space Heating
- Natural Gas
- Medium Voltage Electricity
- Low Voltage Electricity
- Security
- Information and Communication
- Public Lighting
- Potable Water Supply
- Drainage

Space Heating

Design Considerations

Three options for the provision of supplementary heating within the subject site to the residential, community and commercial accommodation have been considered:

1. Option for district heating by means of a centralised Energy Centre with gas or biomass boilers or Combined Heat and Power equipment generating medium pressure hot water at 120°C for distribution through a subterranean pipe network to local metered heat exchangers located in each premise or at the base of vertical circulation cores in residential structures with further metered heat exchangers located within each dwelling.
2. Option for unit heating by means of gas fired central heating appliances and underfloor pipework with manifold controls. This will require the provision of both a gas and an electricity infrastructure to each premise and to each dwelling.
3. Option for unit heating by means of electrical central heating appliances and underfloor pipework with manifold controls. This will require the provision of an electricity infrastructure to each premise and to each dwelling.

In conclusion, because of the very high standards of fabric insulation and the consequential limited requirement for heat input in residential accommodation option 3 is the preferred option.

Natural Gas

Design Considerations

A single Gas Networks Ireland natural gas supply will be provided for the proposed development.

- Natural gas will be distributed to each of the Commercial units and Community units only for catering, etc. and as an option for space heating.
- Connections to each of the Commercial units and Community units will be via metered supplies located within each demise. The capacity of the existing natural gas mains to supply the proposed development should be confirmed.
- The supply arrangements and requirements of Gas Networks Ireland, to include connection details, pipework materials, venting requirements, leak detection and pipework support provision should be confirmed.

Electricity

Design Considerations (Medium Voltage (MV))

A single ESBN electricity mains supply will be provided for the proposed development. In addition, the use of solar photovoltaic technology to achieve the on site renewables development requirement should be considered.

- The electricity mains supply will terminate at a single location on the periphery of the subject site for distribution at medium voltage (20kV) to substations locally.
- A schematic should be devised that takes into account the possible phasing of the construction of tranches.
- The metering configuration requirements within the proposed development should be confirmed.
- The supply arrangements and requirements of ESBN, to include incoming routes, duct/ pipework arrangements, voltage level, substation specifications, termination and connection details etc. should be confirmed.
- Provision should be made for electric cars at car parking spaces.

Design Considerations (Low Voltage (LV))

- A low voltage distribution network shall be installed to supply services such as lighting and security.
- A strategy for public lighting and security equipment shall be devised as a next steps measure and an LV infrastructure to support each devised.
- Power to equipment shall be distributed via strategically distributed pillars to minimise cable lengths where possible. Physically diverse cable routes shall not be provided
- Cabling routes to mini pillars, lighting columns etc. shall be via trenched service routes.

Security

Design Considerations

A strategy for enhanced security should be devised as a next steps measure, to include the consideration of the following:

- The specific security requirements of the stakeholders including CCTV, building access control, crime prevention and site access systems.
- Options for CCTV coverage on primary and secondary pedestrian and vehicular routes within the public realm of the proposed development involving fixed and Pan-Tilt-Zoom (PTZ) cameras with facial recognition capabilities. Camera locations should take elements such as trees or other landscaping or furniture into account.
- Options for the provision of emergency call points.
- Monitoring and storage of footage specifications; location, duration, access, etc…
- Developed design proposals should be subject to a 'Secured by Design' review.

Information and Communication

Design Considerations

Infrastructure to facilitate ICT providers in providing fibre to each of the Residential, Commercial and Community units is to be installed.

- The capacity of the existing ICT mains to supply the proposed development should be confirmed.
- The supply arrangements and requirements of ICT providers, to include proposed fibre cable type, core count, duct and chamber frames and covers should be confirmed.

Public Lighting

Design Considerations

- Reference to the Dublin City Council Draft Climate Change Action Plan 2019-2024 is required.
- Dublin City Council has developed a Light Vision Statement for the City which should inform the Strategy for lighting design in any proposal.
- Options for low wattage installations as set out in the CODEMA Dublin City Council Energy Review 2017 should be considered.
- Before developing the site the updated version of the Dublin City Council Public Lighting Specification should inform public lighting considerations. It should be noted that this requires all new lighting installations use LED sources.
- 99% of public lighting in Dublin is provided by pole fittings, most of these 8m in height. In special circumstances only alternative lighting categories may be accepted – catenary, mounted, etc. Bollard lighting is not permitted.
- Dublin City Council works with 2no. principal categories of pole style - Heritage and Modern Contemporary. The use of the Modern Contemporary style is preferred here.
- Primary road lighting is usually required to comply with the provisions of BS 5489 Class P1 or Class P2. Secondary road lighting, applicable in residential areas, is usually required to comply with the provisions of BS 5489 Class P4 except where there is a risk of crime or anti-social behaviour where the provisions of BS 5489 Class P3 are applied.
- All electrical supply infrastructure for public lighting is required to be separated from other utilities infrastructure.
- CCTV specifications, locations and infrastructure should be sought from Dublin City Council Housing and Community services. CCTV installations on public lighting poles is no longer permitted.
- Public lighting poles may not be shared by third parties.
- Dublin City Council is working on developing a comprehensive, remotely operable public lighting system for the city, a CMS, based on a network of fittings, local nodes and a central hub. Public Lighting in compliance with this CMS is preferred.
- Trees and Lights don't mix. Public Lighting often encounters problems that involve trees undermining pole foundations, interfering with illuminance, etc. Adequate separation between trees and poles to be considered from the outset.
- Any congestion of subterranean services should be avoided as this may impact on the optimum distribution of lighting poles.
- Public Lighting tends to favour rooted base pole foundations rather than flanged base pole foundations.
- Maintenance of light fittings is a key consideration. Access to light fittings for servicing luminaires is ordinarily achieved by means of a hoist on a truck requiring a 3m wide pathway and turning circles. Ladder access is not acceptable. Occasionally, demountable hinged columns that can be lowered and raised are acceptable in areas of restricted access.

Potable Water Supply

Design Considerations

- The capacity of the existing potable water mains to supply the proposed development should be confirmed.
- The supply arrangements and requirements of Irish Water, to include proposed connection details, pipework materials, leak detection and metering provision should be confirmed.
- For residential accommodation, in line with Home Performance Index (HPI) standards each unit should achieve a calculated water efficiency of under 100 or 110 litres per person per day as measured through http://www.europeanwaterlabel.eu/.
- Measures to reduce this target through appliance specifications and other efficiencies to 80 or 90 litres per person per day should be considered.
- The site potential for rainwater harvesting for toilet flushing and laundry functions which can reduce the calculated water efficiency to as low as 30 or 40 litres per person per day should be objectively measured and evaluated.

The Home Performance Index provides a label for quality sustainable residential development, complementing existing schemes used in the commercial sector such as BREEAM and LEED*. HPI is to be employed in the design and at construction stage to obtain certification as a minimum standard while aiming for the highest standard practicable.

* Further HPI information is provided in Section B6

Drainage

Design Considerations

An integrated landscaping, drainage and roads strategy is required. Surface water design shall meet the standard requirements outlined in the Greater Dublin Regional Code of practice for Drainage Works Version 6.0 and shall include the following:

- A Surface Water Management Plan (SWMP).
- A surface water drainage layout.
- A Site Specific Flood Risk Assessment (in particular, reference should be made to the requirements for Site Specific Flood Risk Assessments).

While the subject site is currently drained by means of a combined sewer, the minimisation of the storm water proportion of this to increase capacity elsewhere is preferred. The objective must be to manage rainwater in a sustainable way through the use of SuDS before leaving the site, involving a minimum two stage treatment process. Measures adopted should ensure that the maximum permissible discharge from the subject site of 2 litres per second per hectare should not be threatened. Simple solutions that require little maintenance are preferred. Examples of treatment processes which should be considered include: green/brown/blue roof, rain garden, tree pits, filter strips, water features, french drains, oversized pipes (but the use of attenuation tanks is to be avoided), green roof (involves temporary retention of rainwater through use of sedum grasses), brown roof (involves temporary retention of rainwater through use of various types of planting) and blue roof (involves long term retention of rainwater through use of ponding).

Photo: Sustainable drainage

A4 Development Context

Cost Rental Accommodation
SDRA 9
Universal Accessibility
Archaeology
Conservation
Water Framework Directive
Constraints and Opportunities
Sustainability
Public Art Strategy
Health and Safety
Capital Works Management Framework

Development Context

This Development Framework Plan concerns redevelopment on the subject site at Emmet Road, Inchicore, Dublin 8. The redevelopment is subject to all relevant development standards and guidelines including;

- Project Ireland 2040 National Planning Framework (2019)
- DHPLG Urban Development and Building Heights Guidelines for Planning Authorities (2018)
- DHPLG Design Standards for New Apartments (2018)
- Dublin City Council Development Plan (2016-2022) and specifically SDRA 9 (2016)
- Design Manual for Urban Roads and Streets (2013) Sustainable Residential Development in Urban Areas (2009)
- Best Practice Urban Design Manual 1 and 2 (2009)
- Quality Housing for Sustainable Communities (2007)
- Building Control Act 1990 and as amended.

The redevelopment is also a response to the Rebuilding Ireland Action Plan for Housing and Homelessness, which comprises five pillars of planned actions to:

1. Address homelessness
2. Accelerate Public Housing
3. Build more homes
4. Improve the rental sector
5. Utilise existing homes

Specifically, the redevelopment concerns the second, third and fourth pillars.
The subject site is also included in the Government's Major Urban Housing Development Sites (MUHDS) initiative to secure the early delivery of new homes.

Cost Rental Accommodation

The development proposed is predominantly residential in nature, supplemented and supported by community facilities and a neighbourhood centre fronting Emmet Road including a supermarket. While 30% of the new residential accommodation proposed will be Social Housing, 70% of the new residential accommodation proposed will be Cost Rental Housing as announced by Eoghan Murphy Minister for Housing, Planning and Local Government on July 23rd 2018. While elements of the Cost Rental model criteria and rules are not yet fixed it generally involves the provision of homes where the rent charged is directly related to the sum of the capital cost of site acquisition and construction and formulated costs for associated financing and ongoing maintenance.

The Cost Rental model must relate to affordability. This can be achieved for low to middle income earners by building on public land with low interest financing from Institutions like the European Investment Bank. This model of housing is a first-in-type initiative for Dublin City Council.

Dublin City Development Plan 2016-2022

The subject site is zoned Z14 – Strategic Development & Regeneration Area in the Dublin City Development Plan 2016-2022 (SDRA 9), with a stated objective "To seek the social, economic and physical development and/or rejuvenation of an area with mixed use of which residential and Z6 (employment) would be predominant uses".

Strategic Development Regeneration Area (SDRA)

There are eighteen areas of the city that have been identified as being capable of significant mixed-use developments to regenerate their respective areas. The Development Plan priorities the renewal and regeneration of these areas by setting out the guiding principles for their development. In this regard, the principles for the subject site (SDRA no. 9, Section 15.1.1.12) is set out on the following page.

SDRA 9

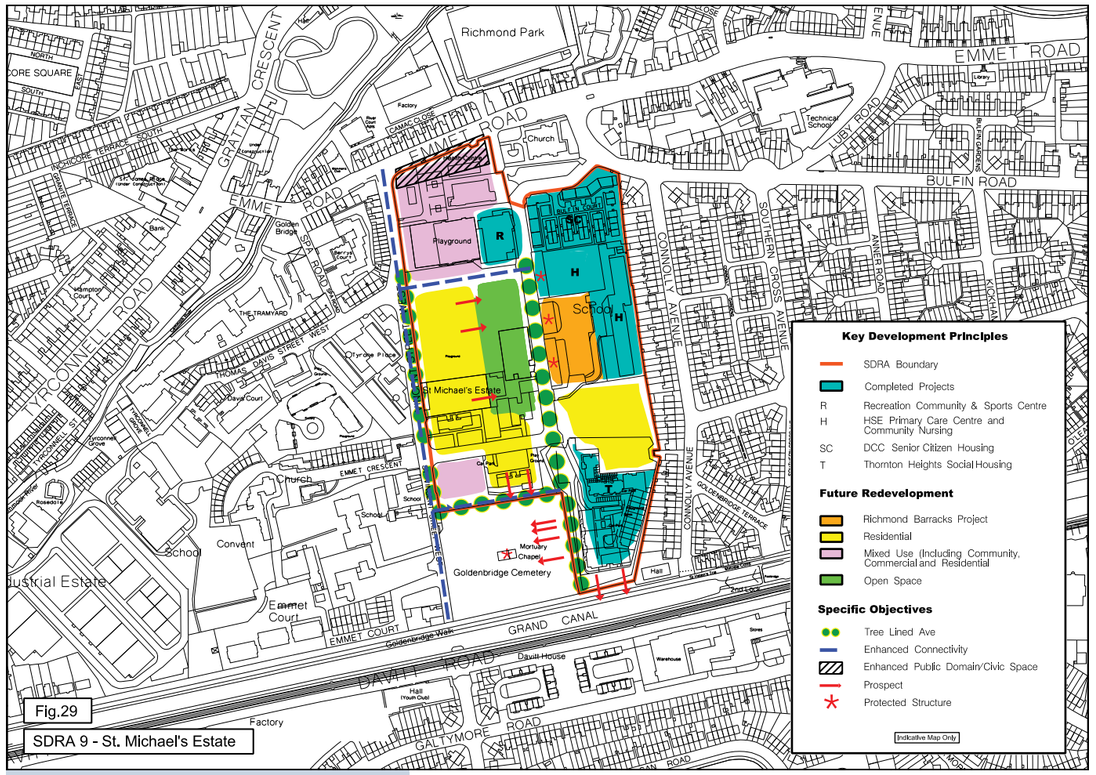
(Edited extract from the Dublin City Council Strategic Development and Regeneration Area 9):

“The former Richmond Barracks dates from 1814, built as a recruiting centre by the British Army, and later used for housing by Dublin City Council when it was known as Keogh Square. Most of the barracks was demolished in 1969 and replaced by the St Michael’s Estate local authority housing complex, comprising four and eight storey flat blocks. These blocks are now also demolished with an aim to regenerate the estate into a thriving sustainable city neighbourhood.

Regeneration progress has included the completion of 75 new social housing units, together with crèche and playground at Thornton Heights. The City Council has completed the conservation of two of the surviving three buildings of the former Richmond Barracks for use as one of the State’s national commemorative projects for 2016. The buildings house an exhibition centre and archive for national/local history, a visitor centre including a tearoom and garden and is used as an educational/ community resource. Other improvements to the area have included new local authority senior citizen housing, a new HSE primary care centre and community nursing home and the Inchicore Community and Sports Centre.

The guiding principles for the remaining SDRA lands are set out below:

- The development of a high-quality, vibrant, mixed-use urban quarter will be promoted; new facilities will be located in accessible locations and will maximise the opportunities to connect with the wider neighbourhood.
- The development will complement the regeneration of Inchicore by encouraging a natural extension of the village centre eastwards along Emmet Road; the development will provide strong connections between the site and the functions of the village centre, for which a local environmental improvements plan is proposed.
- The development of high-quality streetscape onto Emmet Road with accessible civic spaces, active frontages and an appropriate transition in scale, height and character between the village centre and the site will be promoted.
- Strong permeability will be sought through the site, including pedestrian and cyclist connections, to achieve strong north-to-south connections between Emmet Road and the Luas/Grand Canal corridor and east-to-west connections between Saint Vincent Street West and Bulfin Road; active streetscapes along these routes will be promoted.
- Variety in housing tenures and unit types will be sought in order to achieve a balanced and sustainable community.
- The important heritage features on, and adjoining, the site, shall be respected and highlighted by urban design with particular regard to the tourism, heritage, community and amenity value of assets such as St Michael’s Church, Richmond Barracks, Goldenbridge Cemetery and the Grand Canal.
- Innovative proposals that create a landmark destination within the city for combined facilities of a community, recreational, leisure and sports nature will be promoted; such facilities shall integrate positively with the existing sports facilities on site.
- The development of high-quality senior citizen housing. This will be located on the site between Thornton Heights and Richmond Barracks.”



SDRA 9 - Indicative Land Use Map

Universal Accessibility

While all residential accommodation proposed should be visitable to persons with disability, a minimum 10% of the 30% Social Housing residential accommodation proposed should be sized to accommodate at least one person using a wheelchair.

Archaeology

It is noted the subject site is located approximately 200m west of the Zone of Archaeological Potential for the city of Dublin (DU018-020) and there are no recorded archaeological sites within its boundary. However, as the subject site was once occupied by the parade grounds, accommodation ranges, and ancillary buildings of Richmond Barracks, which was established in the first decade of the 19th century, it is an area of archaeological potential.

All groundworks associated with the proposed development should be monitored by a qualified archaeologist. The appointed archaeological consultant should be experienced in researching and excavating military archaeology. Excavation on an adjacent site discovered that numerous barracks structures (many of which retained their original floor surfaces) were identified and recorded. The excavation identified boundary walls, yards, military stables, general stores, offices and a three-chambered underground sand-filter water treatment system. No artefacts were recovered and no evidence of earlier (pre-19th century) remains were noted on that site.

Due consideration should be given to retaining the historic perimeter wall as part of the proposed development, as it is contemporary with the barracks complex, which was built it the first decade of the 19th century, and is an important visual reminder of the

previous use of the subject site.

Conservation

The subject site has provided the location for three significant developments historically:

- Richmond Barracks
- Keogh Square and environs
- Saint Michael's Estate

There are three specific conservation considerations to be addressed by any proposed development on the subject site:

1. The setting for the remaining structures of the former Richmond Barracks on Patriots Path.
2. The setting for the northern boundary wall of the Goldenbridge Cemetery and the entrance gate and lodge.
3. The remnant section of historic wall on the perimeter of the subject site at the junction of Emmet Road and Saint Vincent Street West may be associated with the grounds of the former Richmond Barracks, though it is not registered as a protected structure and it is not listed on the NIAH. It is a significant structure and given the complete removal of most of the other sections of the former Richmond Barracks perimeter wall, Dublin City Council Conservation Officers have concerns about its complete removal. However, sensitive intervention as part of a coherent design proposal could be supported subject to detail. A detailed recording of the wall should be carried out prior to any removal or alterations taking place and should be subject to a full condition survey. A significant amount of clearing of the surrounding areas and removal of vegetation from the walls will be necessary in order for this to take place. This should be carried out under supervision of a Conservation Architect, Engineer and Ecologist as appropriate. All temporary works and protections to be in place before commencement of dismantling or removal of masonry. All necessary temporary works to be provided to ensure the integrity of the structures and the protection of existing fabric in the carrying out of the works.

Water Framework Directive

The considerations of the Water Framework Directive to ensure water quality will include the management of water on the subject site, the treatment of water through SuDS and the promotion of biodiversity. The following considerations apply:

- The Lidar Contours and Flooding Projections for the Camac Catchment Area available from Dublin City Council indicate that there are no flooding concerns indicated in the vicinity of the subject site. In addition, there appear to be no flooding issues for the subject site from the Grand Canal due to the overflow to the Camac River near the Tyrconnell Road bridge.
- It is noted that Goldenbridge Cemetery has a significant biodiversity value that should not be diminished. The Development Framework Plan should promote maintaining and improving biodiversity through SuDS.

The Water Framework Directive status of the Camac Lower Catchment Area is 'poor' and opportunities for large scale SuDS in an historic urban core, like Inchicore, should be maximised. SuDS are important for managing environmental pressures and ensuring water quality.

Coultry Park, Ballymun, Dublin

Constraints and Opportunities

Though not exhaustive, the following constraints and opportunities have been identified for development at the subject site:

- The proposed design should carefully consider the existing heights and massing of the surrounding area in order to provide scale and identity, and to connect the proposed development to the existing context.
- The subject site is located within an existing residential area. Construction will be carried out immediately adjacent to an inhabited estate and school with site access via a road which will be in continuous use. This will require careful management during construction. Appropriate site enclosures, management of construction and pedestrian traffic must be designed and implemented for the duration of the contract.
- There is an existing 1350mm concrete storm water pipe running through the site along the northern boundary with no plan to relocate. The proposals should have regard to the appropriate distances and other requirements of The Greater Dublin Regional Code of Practice for Drainage Works V6.0, and The Greater Dublin Strategic Drainage Study Technical Document.
- The existing pedestrian links must be retained insofar as possible to allow permeability through the site.
- There is an earlier geotechnical survey report available that covers some areas on the subject site. The ground conditions for foundations across the site appear to be poor generally.

Sustainability

The nature and extent of the proposed development offers the possibility of an exemplar sustainable urban neighbourhood, and opportunities for a multidisciplinary design team to achieve a high level grade of certification. The adjoining Goldenbridge Cemetery offers abundant biodiversity and the potential to benefit from natural assets such as the Grand Canal and the Camac River should be fully realized by exploring linkages for these ecologies.

The Dublin City Development Plan 2016-2022 notes the overlap between the requirements of Parks, Drainage and Roads requirements and that good design has a key role to play in both reducing waste and emissions which contribute to climate change and ensuring future occupants will be able to adapt to the impacts of changing climate. These issues must be considered from the outset of the design process, as issues such as density, building orientation, height, form and materials will influence aesthetics, functionality and resource sustainability.

Buildings should be designed to minimise resource consumption, reducing waste, water and energy use. The re-use of existing buildings and/or building materials should be considered in appropriate cases. Design should optimise natural or heat recovery ventilation, minimize overshadowing and minimise glare and excessive solar gain, avoiding large areas of glazing and providing an appropriate balance between solid and void elements. New materials should be selected which are sustainably sourced with durability to minimise replacement/repair over time and existing materials re-used and recycled wherever possible. Measures which will allow occupants to adapt to the impacts of climate change include natural ventilation, summer shading, openable windows, the incorporation of living roofs and walls, planting and trees, as well as the inclusion of sustainable urban drainage systems and permeable surfaces in adjoining spaces.

Measures to mitigate and adapt to the impacts of climate change must also be appropriate to the special historic and architectural character of the city. Other specific policies will provide detail on issues such as green infrastructure and retrofitting sustainability measures.

Sustainable Open Space

The development must provide for accessible open space and landscaping which enhances the ecological value of a site and increases biodiversity. Planting should be chosen to foster biodiversity and should reflect the objectives of he Dublin City Council Tree Strategy 2016-2022.

Sustainable Urban Drainage Schemes

Sustainable Urban Drainage Schemes (SUDS) should be developed to reduce peak run-off, improve biodiversity and improve the quality of run-off. The following systems should be considered:

- Green roofs and raised courtyards
- Attenuation ponds, swales, wetlands and detention basins (in larger schemes)
- Permeable paving
- Infiltration planters
- Measures to conserve water.
- Waste segregation facilities for general recycling, composting, etc...

Health and Safety

The preparation of the Development Framework Plan and any future design development must have regard to Safety, Health and Welfare at Work (Construction) legislation. A Project Supervisor for the Design Process (PSDP) is to be appointed whose role is primarily to coordinate the designers on the project from the outset in order to identify the hazards and mitigate the risks to the health and safety of the construction workers who will ultimately build what is designed. This requires engaging with the following information:

- General Principles of Prevention
- Duties of the Designer
- Particular Risks
- Risk assessment formats
- EU and Irish health and safety legislation
- The following information will be required as next steps initiatives:
- Topographical and Existing Utilities Surveys
- Geotechnical Survey

Capital Works Management Framework

The proposed development of the subject site should be undertaken in compliance with the Department of Finance Capital Works Management Framework. This involves the consideration and preparation of the following Items;

- Project Execution Plan
- Roles & Responsibilities (Responsibility Assignment Matrix)
- Program and Program Management Services
- Project Management Services
- Stakeholder Management Strategy
- Red & Amber Reviews
- Risk Management
- Value Management
- Project Evaluation and Reporting on Completion

Public Art Strategy

The Dublin City Development Plan 2016-2022 notes that public spaces should be capable of accommodating civic activities such as markets, festivals and events which allow for an animated urban landscape, by day and by night, on a year-round basis. The addition of public art into the urban landscape further enhances its attractiveness and can add greatly to the creative city. Dublin City Council recognises the value and relevance of public art and will continue to promote a wide range of artistic expressions including the commissioning of permanent work as well as temporary work such as performance art forms (music, drama, dance) and other art forms such as film, literature, etc. The Dublin City Council Development Plan objective CHC45 states:

> "To continue to animate the public domain by encouraging the provision of public art, temporary and permanent, across all art forms and artistic disciplines in the city centre and in neighbourhoods through such mechanisms as the government supported Percent for Art scheme and the development management process."

PART B

Framework Briefing

B1

Commercial Briefing

Retail Strategy
Optimum Provision Objectives
Design Considerations

Commercial Briefing

The Dublin City Council Development Plan 2016-2022 references the Retail Strategy for the Greater Dublin Area 2008-2016 which identifies Inchicore in the Retail Hierarchy for Dublin City as a Level 4 Category, Neighbourhood Centres and Local Centres. Appendix 3 of the Dublin City Council Development Plan 2016-2022 states that Level 4 Category centres 'generally provide a local focus for the population and normally consist of one supermarket-sized development up to 2,500m2 net retail floorspace with a limited range of supporting shops such as a grocer or chemist and retail services like a hairdressers and possibly other services such as post offices or health clinics grouped together.' Additionally, Appendix 3 sets out the Dublin City Retail Strategy, together with guidance on the scale, location of retail development, criteria for the assessment of retail applications, specific improvement policies for the premier retail streets in the retail core and design guidance.

Retail Strategy

Category Level 4 Centres (Neighbourhood Centres)

The Inchicore quarter currently lacks this supermarket sized development up to 2,500m2 net and adjacent ancillary uses as set out in the Category Level 4 designation and the proposed Development Framework Plan seeks to address this without adversely affecting the retailers across and along Emmet Road while anticipating that they will benefit from the increased footfall and commercial offer. Adjacent ancillary uses could include a Café (c.150m2), a Pharmacy and other appropriate uses not exceeding c.300m2 additional space. These numbers relate to the overall size of retail which property advisors have recommended on a new development of this size at this location. Ideally, this commercial accommodation will front onto the public realm along Emmet Road. In addition, as potential supermarket retailers have increasingly demonstrated a willingness to accept a model providing first floor sales area over undercroft parking in urban locations, the use of such a model will allow for an enhanced public realm without a proliferation of vehicles externally. While it is noted that supermarkets tend to propose a minimum requirement of 120no. car parking spaces, it is argued here that the urban location of the subject site, the density of the existing and proposed residential development and the proximity to arterial bus transport justifies a lower requirement – a minimum requirement of 60no. car parking spaces should apply.

There is a potential opportunity to include a Fitness Centre. While the requirements of operators are diverse, it is suggested that this might be explored further in the next steps.

In order to service the wider needs of the significant numbers of new residents anticipated (in excess of 75no. residential units) there is a requirement for the provision of a Childcare Centre, serving approximately 80 children. This should have frontage that facilitates drop off and pick up arrangements and easy access to public open space.

Category Level 5 Centres (Corner Shops)

The scale and extent of the proposed development justify the provision of a Category Level 5 Centre at a distance from the Neighbourhood Centre. This would meet the basic day to day needs of the surrounding new residents, existing adjacent residents and passing footfall travelling to and from the Drimnagh Luas station. The Dublin City Council Development Plan 2016-2022 states that typically these outlets comprise one or two small convenience stores or a newsagents, butcher, greengrocer or a public house and the retail element in total ranges from 50m2 to 150m2 of lettable space. In this instance, a small newsagents not exceeding 150m2 facilitating take out coffee should apply.

Childcare Centre with Residential Accommodation Overhead

Aspirational Accommodation Objectives

The figures in this table indicate optimum gross internal floor areas. Other considerations will also apply.

Supermarket 2,000m²
with minimum 60no. car parking spaces

Other Retail 200m²
Pharmacy, Laundrette, etc.

Café 125m²
with outdoor seating area

Corner Shop 100m²
with sandwich bar

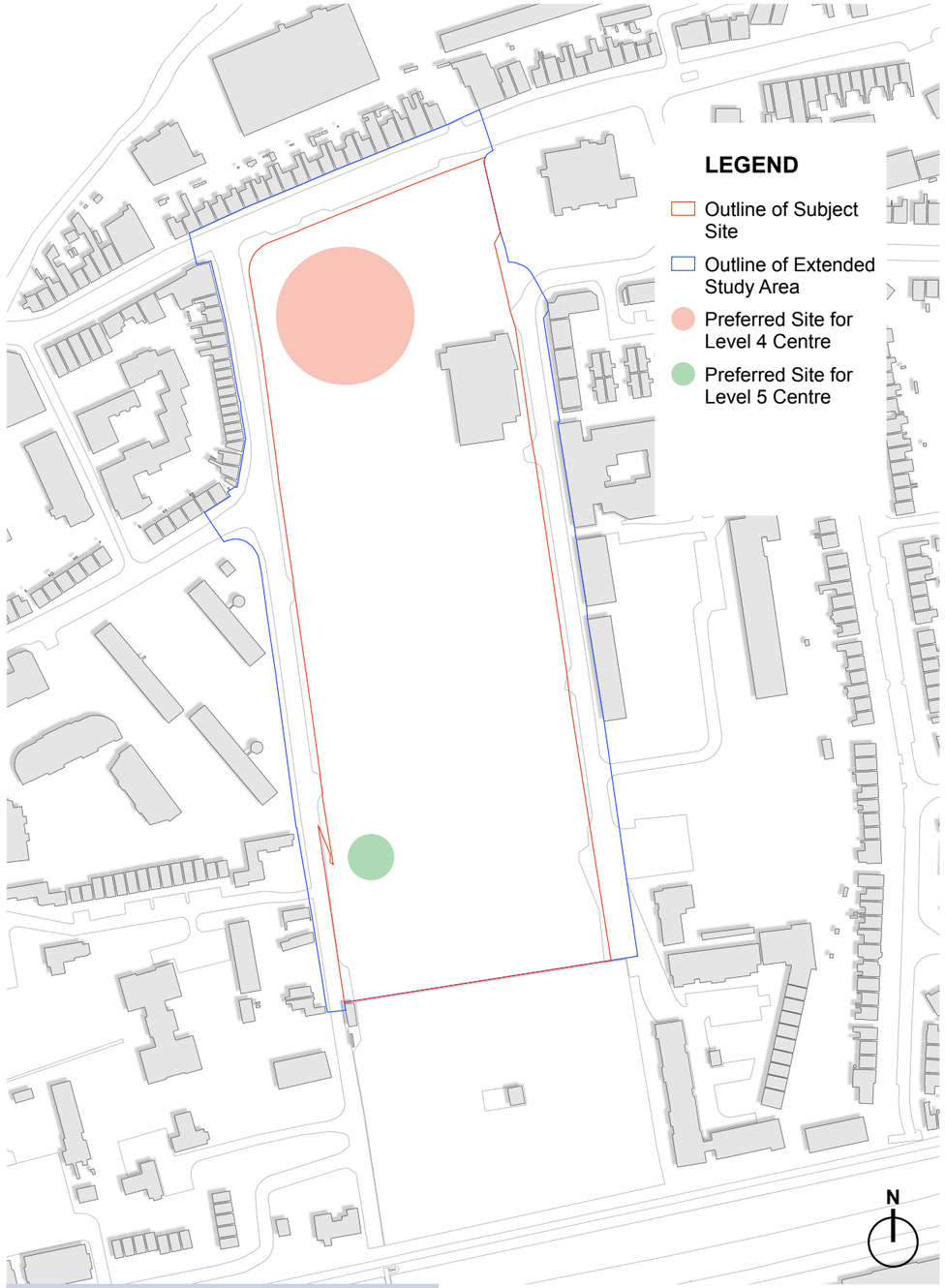
Childcare Centre 800m²
to accommodate 80 children approximately with outdoor well orientated sheltered play areas

Design Considerations

The portion of the subject site fronting Emmet Road should be assigned for commercial use and public space. Viable commercial uses include Supermarket, Café, Pharmacy, Bookmakers, etc..

- The commercial offer should complement but not adversely compete with the existing commercial uses in the Inchicore village.
- A supermarket operator will require visibility and street presence.
- A supermarket operator will require car parking but must accept duration restrictions.
- Shared structures are usually acceptable in principle subject to detail – ground floor access, services transfer measures, transfer structures, etc…
- Shared structures containing residential accommodation will be required to meet a Part V requirement.

Neighbourhood Café



Preferred Areas for Commercial Premises

B2

Community Briefing

Strategy
Optimum Provision Objectives
Design Considerations

Community Briefing

Strategy

Saint Michael's Community Centre currently operates from premises within the subject site. It is envisaged that the current premises will be demolished to facilitate the proposed redevelopment which will include new community facilities. In addition, it is proposed that the existing Five-a-Side pitch will be relocated to facilitate a new, efficient layout where the pitch is designed-in as opposed to being a constraint to be designed-around.

The existing Library at Emmet Road is considered too small, has limited accessibility without easy remedy and no customer toilet facility. The profile of customers is largely parents with children and older people. In addition to addressing the current shortcomings, it is hoped that a new library building would at least double the current use and diversify the current customer profile.

The existing Inchicore Community Sports Centre, owned by the CDETB and managed by Dublin City Council, is considered under utiltised. Though not directly affected by the proposed redevelopment on the subject site it would benefit from an adjustment to promote increased access within the proposed new configuration of the public realm.

It should be a design objective to create an environment in which each of these community facilities benefits from being close to the others for mutual support and shared servicing. This could be achieved by arranging them around a shared courtyard space.

Aspirational Accommodation Objectives

The figures in this table indicate optimum gross internal floor areas. Other considerations will also apply.

Library 1,400m²
fronting new Civic Space and new Community Square

Saint Michael's Community Centre (New) 1,400m²
fronting new Civic Space and new Community Square

Adjustments to Sports Centre 45m²
making it accessible from new Community Square

Design Considerations

Library

An indicative briefing document has been provided by the Libraries and Archive Service and is appended. Key provisions include:

- Repository of reading and viewing materials (30,000-35,000 items typical).
- Central supervisory staff control station
- Staff Facilities including Welfare Areas and Workroom/Office
- Distinct Meeting Room and Event Space, with flexible walls to accommodate groups of different sizes, independently accessible if possible but not essential. There may be potential for sharing this with other facilities.
- Study spaces are essential, with servicing to saturate the building with power and data outlets, requiring premium broadband offer, as in Ballyfermot, Central Library, et
- Maker Spaces – 3D printing, laser cutting, etc… to promote STEM and STEAM initiatives, to be considered.
- Customer Toilet of a 'Changing Place' standard (IKEA model reference)
- Storage – not so much for reading materials but for staff requirements (laptops and tablets to lend, meeting room chairs, event space boards, etc…) and customer requirements (raingear, buggies, etc..)
- Libraries may operate over several levels but consideration must be given to supervision and use of spaces for particular functions. Core library services operate best on a single level for control and supervision purposes with meeting and event spaces, staff accommodation and offices possible on other levels.
- Contemporary library design provides ground floor accommodation with direct visual connectivity between the street and the interior involving extensive glazing with mechanisms for dealing with solar gain.
- Universal access to and through the building is an essential requirement.
- Provision for archive storage is not required at this location.
- Provision for the mobile library service is not required at this location.
- Provision for Audio Booths is no longer necessary because of the prevalence of personal headphones. However, provision for Gaming Booths should be considered.
- Option for the provision of beverage refreshment (water, tea, coffee, etc.) may be considered.
- A physical connection in a library to an outdoor garden reading area should be considered (garden to be maintained by Parks Department) – refer to examples at Raheny, Drumcondra, Ballyfermot, etc…
- Deliveries to the library will ordinarily be means of a van. It is not anticipated that large vehicle infrastructure – loading bay, etc… will be necessary.

Photo: Peckham Library, London.
Architect: Alsop and Stormer Architects

Saint Michael's Community Centre

Saint Michael's Community Centre currently consists of a management office, a hall for sports and performance activities, a group room for occasional childcare activities, meeting rooms, a kitchen dining area, toilets, changing rooms and a store. Externally there is a planting area for demonstration gardening and a small recycling depot accessible from the street. The current centre management team is keen to provide a better means of storing seating for performances and they emphasise the importance of ground floor level access to their facilities because a significant proportion of their clients are elderly persons and young children.

An audit of community facilities and services in Inchicore commissioned by Dublin City Council in 2017 (appended) recommended that the following should be included in a new Community Centre:

- A Hall (a full sized basketball hall was suggested as the hall in the Inchicore Sports Complex is block booked during the academic year).
- A Multipurpose Room to cater for community groups requiring space to do activities such as yoga, dance and aerobic exercises.
- A large Meeting Room.
- A roof-top garden which would enhance biodiversity in the area and should serve as an environmental resource for all age groups living locally.

It should be noted that this Audit was undertaken prior to the preparation of this Development Framework Plan which will provide alternative options for some of the facilities envisaged. Some of the recommendations can therefore be adjusted in light of this. For instance, the recommended community café could be omitted to avoid duplicating the service offered by the proposed Café fronting Emmet Road.

The recommended size of the Hall could be reduced by providing for basketball and associated sports indoors in the Inchicore Community Sports Centre by means of renegotiated management arrangements.

Opportunities to locate a replacement Five-a-Side playing area and demonstration planting area at roof level should be considered given the premium on ground floor level accommodation for other activities.

Adjustments to Inchicore Community Sports Centre

Minor adjustments to the Sports Centre, involving alterations to the lower secondary stairs area, would make this building accessible from the new arterial passage and could provide direct access from the building across the new arterial passage to the lift/stairs core to the proposed rooftop Five-a-Side playing area. Renegotiated management arrangements could see extending the access privileges for the existing changing areas in the Inchicore Community Sports Centre and the proposed rooftop Five-a-Side playing area being developed for the Community Centre.

Photo: Kevin Street Library
Architects: Dublin City Council Architects

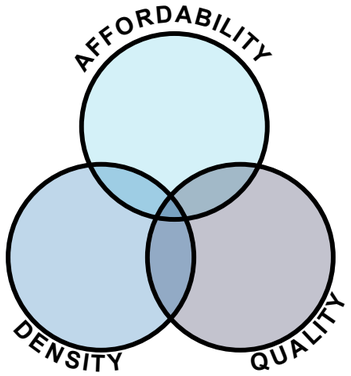
B3 Residential Briefing

Briefing for Unit Mix
Statutory Planning Policy:
    Design Standards for New Apartments 2018
Typical Block Layouts
Design Considerations

Residential Briefing

Dublin City Council's intention for the site is to provide a high quality, urban regeneration that serves as a model for cost rental accommodation. The Housing Land Initiative (HLI) scheme was adopted in full by Dublin City Council in January 2017. This scheme sets the broad principles for the development of the site which included a concept plan (opposite) and an estimate of approximately 470 units in a mix of private, public and affordable rental accommodation, which includes 52 units in Phase 1b, outside the subject site.

In 2018 the decision was made to change the intended housing provision on site to 70% cost rental and 30% social housing, which is the focus of this Development Framework Plan. Cost Rental is a not-for-profit housing tenure, very common in some housing systems around Europe, such as in Vienna. The provision of housing is not based on securing market returns, instead rents are based on the cost of providing finance, construction, management and maintenance. The rent paid covers the construction costs of building the property, together with on-going management and maintenance charges and a sinking fund but with a minimal profit margin included. It allows for the provision of rental accommodation that is much less affected by market fluctuations, with rent increases managed by not for profit bodies.

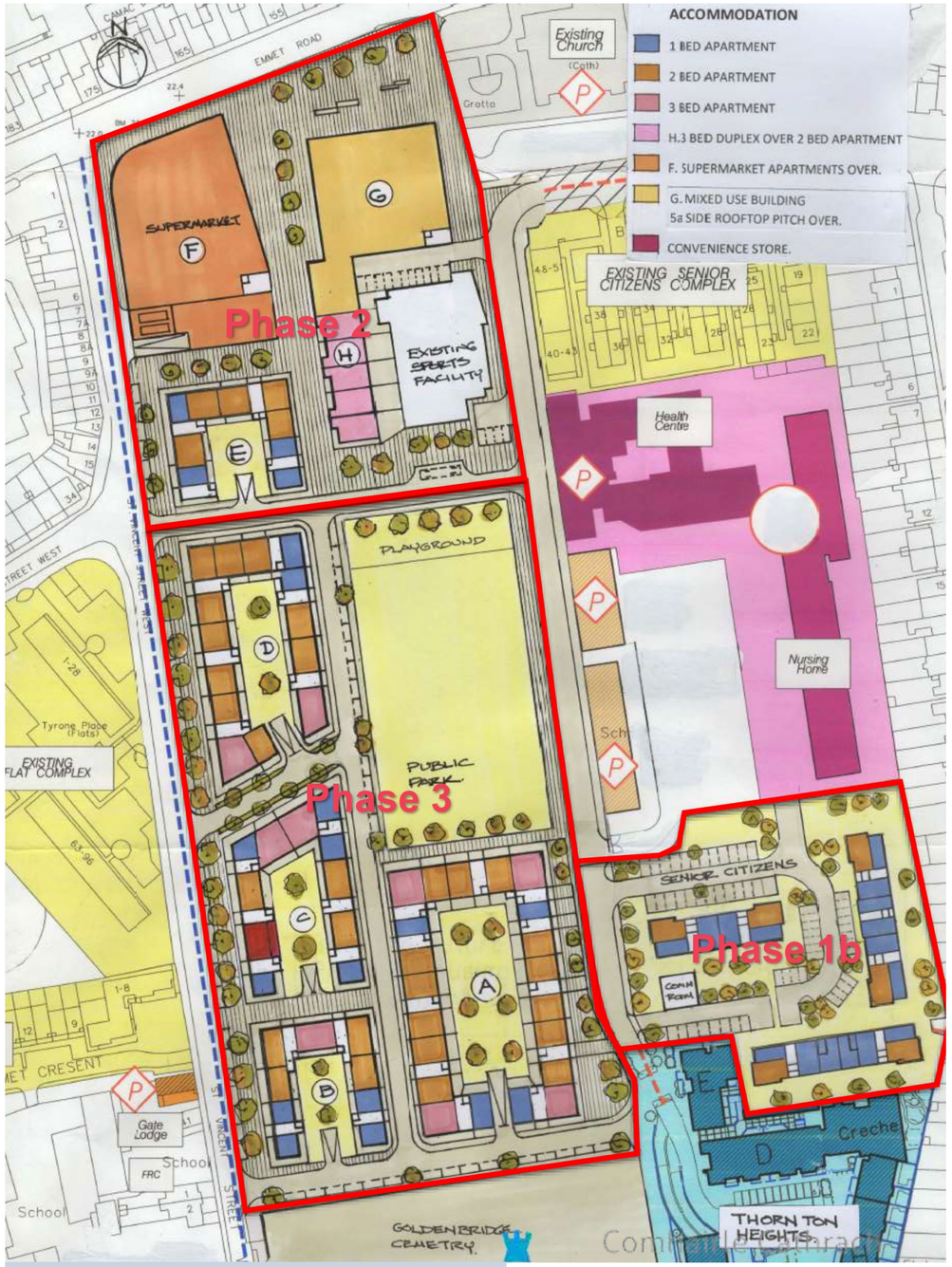


Briefing for Unit Mix

	Social		Cost Rental		Total	
	Count	% Mix	Count	% Mix	Count	% Mix
Studio	0	*0%*	68	*20%*	**68**	*16%*
1 Bed	5	*5%*	110	*33%*	**115**	*27%*
2 Bed	25	*27%*	156	*47%*	**181**	*42%*
3 Bed	62	*67%*	0	*0%*	**62**	*15%*
Totals	**92**	*21%**	**334**	*78%*	**426**	*100%*

Note: figures above do not include the development to the east of the site, identified as "Phase 1b" in the feasibility study opposite, which proposes 52 social housing units.

**When taking Phase 1b into account, the overall percentage of social housing units on both sites combined is 30%.*



Housing Land Initiative Masterplan

Statutory Planning Policy: Design Standards for New Apartments (2018)

Residential development on the subject site should comply with the requirements of "Sustainable Urban Housing: Design Standards for New Apartments", updated in 2018 and published by the Department of Housing, Planning and Local Government. Site specific guidance on aspects of these regulations is set out below.

Dual Aspect Requirements

Section 3.17 of the 2018 Guidelines requires that: *Where there is a greater freedom in design terms, such as in larger apartment developments on greenfield or standalone brownfield regeneration sites where requirements like street frontage are less onerous, it is an objective that there shall be a minimum of 50% dual aspect apartments.*

Given that this is an SDRA site within the Dublin City Council Development Plan (2016-2022), the intent is to deliver a minimum of half of the residential units as dual aspect.

Unit Areas

Section 3.4 of the 2018 Guidelines sets the minimum areas for apartments to be 37m² for a studio unit, 45m² for a 1 bedroom apartment, 73m² for a 2 bedroom apartment and 90m² for a 3 bedroom apartment. It also gives the opportunity for 10% of the units to be 3 person 2 bedroom units, having a minimum floor area requirement of 63m², but these are not envisaged as part of the mix on this development.

The Guidelines also require that at least half of the units exceed the minimum floor space requirements by at least 10%. In practice, when applying the minimum room areas and current guidance on fire safety (with units that are not served by a sprinkler system) it is arguably not possible to design all units with a floor area as small as the minimum standards. Thus, typical floor plate layouts commonly achieve the "extra 10% rule" by default, particularly when the building shape necessitates some units to adapt to corner positions or other site constraints.

It has been agreed that the buildings can be served by a domestic sprinkler system, allowing an alternative unit layout that avoids the use of internal protected lobbies within each apartment. A desktop study on the area requirements for sprinklered layouts versus non sprinklered layouts for the same scheme identified a saving in gross building areas of approximately 8%, and this saving can be incorporated into the cost rental model to reduce the monthly rent figures.

Number of Units per Core

The 2018 Apartment Guidelines lists a maximum number of apartments served by each stair and lift core to 12 units. In practice, a figure as high as 12 is difficult to achieve without compromising the site's dual aspect requirement of 50%.

Fire safety considerations limit travel distance from the door of an apartment unit to the door of a stair core to 7.5m, typically, if served by an internal circulation lobby. This imposes a limitation of typically 6 units per lift and stair core. However, if the building is served by a sprinkler system, this travel distance can be increased to 15m, according to BS 9991:2015. This can then typically allow for up to 12 units to be served by one core, as per the 2018 Apartment Guidelines.

Access typologies

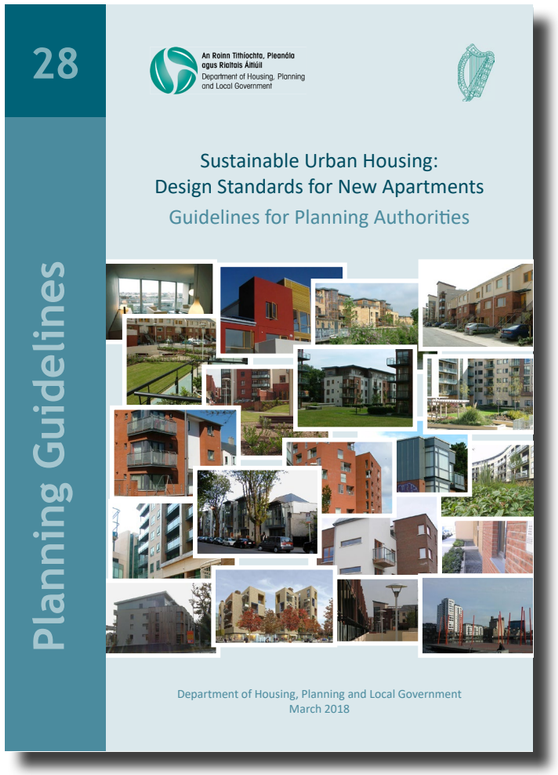
A key consideration in the design of apartment developments is the access arrangements for units, particularly on upper levels. The merits of internal, double loaded corridor arrangements versus external gallery-type access decks have been explored and both can offer economic, functional and effective use if treated with care by the building designers. Internal double loaded corridors are seen to be the more efficient in economic terms as they decrease the overall external wall area requirement per number of units served. In contrast, gallery type arrangements allow for greater dual aspect ratios (albeit somewhat compromised) but have been stigmatised due to anti-social behaviour in historic developments. In both typologies, limiting residents access into smaller portions of the circulation system, by means of core placement and/or access keycards, will provide the best opportunity to limit any disruption caused by anti social behaviour. In addition, allowing for a generous circulation width and providing setbacks to unit front doors within the circulation spaces will enhance the appearance and quality for residents.

Build to Rent Vs Build to Sell Models

The 2018 Apartment Guidelines offer the opportunity to designate a scheme as "Build-to-Rent" (BTR), whereby certain guidelines are relaxed, namely:

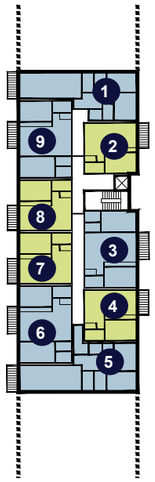
- An increase in the maximum number of units that may be served by a stair & lift core from 12 to unlimited, and
- No requirement that over half of the units exceed the minimum space standards by 10%, in return for compensatory measures in the form of communal support and amenity facilities such as laundry, shared lounges, sports facilities, work/ study spaces etc.

While the housing provision on the lands in question would indeed be a rental and social scheme, preliminary design studies have found that in order to achieve the site's dual aspect requirement of 50%, and given that the extra 10% rule is achieved almost by default, there is little advantage in designating the scheme as a build to rent. The benefits of the BTR designation are not required whereas the compensatory measures could affect the economics of the scheme.



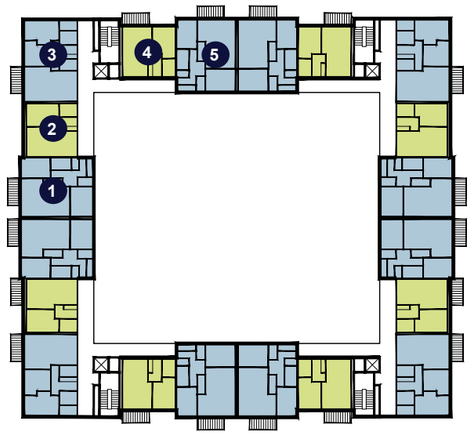
Typical Block Layouts

Housing typologies explored during the design process can be loosely arranged into 3 categories:



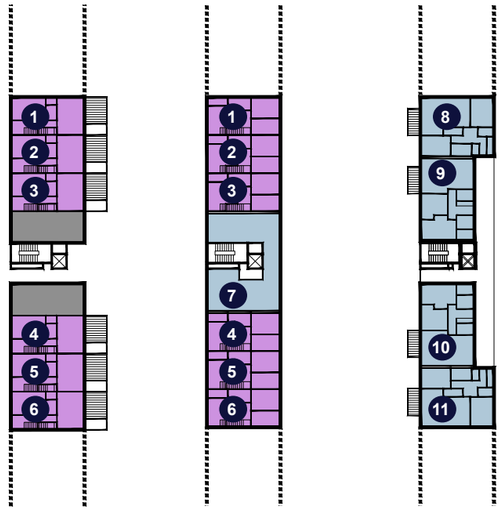
Typical Floor

Apartment block served by an internal core, using double-loaded corridors to maximise the number of units served by each stair and lift core. If the building is to have a sprinkler system for fire protection, 10-12 units per core can be achieved by increasing the maximum travel distance to the vertical escape to 15m. (Higher ratios of units per core are possible, but may conflict with the sites requirement to achieve 50% dual aspect units.)



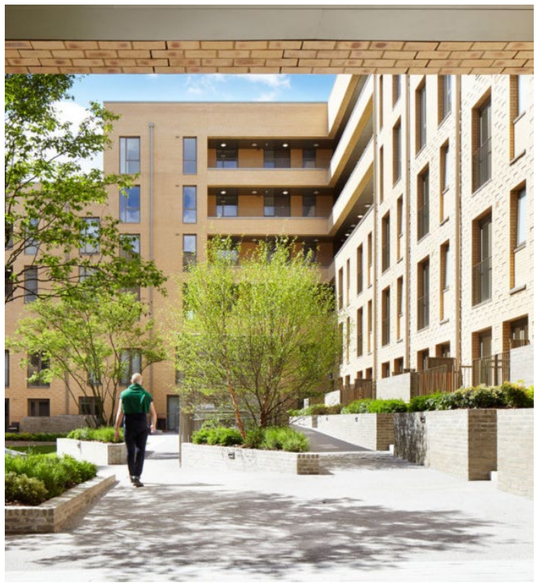
Typical Floor

Apartment block with gallery accessed units, whereby the gallery has been arranged to limit the occurrence of other tenants passing by habitable rooms. The main advantage of this type of layout is the opportunity to provide a greater proportion of dual aspect units (albeit somewhat compromised), particularly dual aspect 1 bedroom units, due to the narrower block width. Galleries may be internal, external or sheltered external. Example: Burridge Gardens, Battersea, London, shown opposite.



Ground Floor *First Floor* *Second, etc*

Ground floor access duplex units (3 bed units on 2 floors) in a terraced arrangement, with gallery access on upper levels to 1 and/or 2 bedroom apartments. This typology allows for provision of dual aspect, ground floor accessed 3 bedroom units with a large private patio that can appeal to families, whilst providing a diversity of units types through the provision of apartments on the upper floors. Gallery access can be arranged to limit the occurrence of other tenants passing by habitable rooms. Galleries may be internal, external or sheltered external. Example: Vaudeville Court, Islington, London, shown opposite.



Burridge Gardens, Battersea, London
Architects: Hawkins Brown

Dolphin House, Rialto, Dublin
Architects: Dublin City Council Architects

Design Considerations

This project will need to balance a successful level of density (making use of the subject site's location in relation to public transport and proximity to the city centre) with high quality public realm and public open spaces (serving both the development and its socio-economic neighbourhood).

The stipulation in cost rental housing is that the level of rent charged is directly related to the cost of financing, constructing, managing and maintaining the development. With this in mind, preliminary costing studies have shown that an economically minded development will be necessary to ensure that rent levels are kept within acceptable limits.

Similarly, there is a need to balance the cost of the scheme whilst still maintaining high standards of residential accommodation that takes sustainability goals into account.

Determining the right balance between cost, density and quality is the intended outcome of this Framework Development Plan.

Silchester House, Ladbrook Grove, London
Architects: Haworth Tompkins Architects

Silchester House, Ladbrook Grove, London
Architects: Haworth Tompkins Architects

Vaudeville Court, Islington, London
Architects: Levitt Bernstein

B4 Public Open Space

Design Considerations

Public Open Space

The provisions of the Dublin City Council Development Plan 2016-2022 require that 10% of the site is reserved as Public Open Space. Preferences for the form and character of such space are set out in Section 16.3.4 Development Standards for Public Open Space and Section 16.10.3

Kilmainham Civic Space
Architects: Dublin City Council Architects

Design Considerations

Public Open Space should be an asset to the wider community and should involve universal design principles to ensure it is age friendly and accessible to everyone. The following design considerations should be noted:

- Unenclosed public open spaces (ie. without railings and gates) and enclosed communal (shared or semi private) open spaces are preferred. Notwithstanding, Dublin City Council require barriers to preclude vehicular (car, motorbike, etc..) access to public open spaces.
- Examples of recent successful unenclosed public open spaces in Dublin include Father Collins Park and Weaver Square.
- Examples of recent successful enclosed communal open spaces in Dublin include the Dolphin House redevelopment and the Clancy Quay development.

All public open space proposed should be inviting and accessible to everyone, not only the residents of the proposed development.

Principal Public Open Spaces set out in SDRA 9

B5 Landscape Briefing

Design Considerations

Landscape Briefing

This Development Framework Plan provides an opportunity for biodiversity led urban regeneration in addition to being a platform for the cost rental model.

Design Considerations:

The following should be considered when developing a Landscape Strategy for the future development:

- Planting should be chosen to foster biodiversity and should reflect the objectives of the Dublin City Council Tree Strategy 2016-2022. Improving natural habitats where possible to promote biodiversity is encouraged.
- Roof Greening proposals are generally welcomed, both green roof type and brown roof type, subject to detail.
- 'Ground-up' wall greening rather than 'Wall-out' wall greening must be considered.
- Dublin City Council are not averse in principle to Trim Trail proposals but linking these with walking or running routes is preferred.
- Parkland paving that is distinct from Street paving in character and material is preferred.
- Paving materials should be 'robust' and 'durable'.
- The use of unbound grit or crushed stone should be avoided in favour of water or resin bound grit or crushed stone.
- Street furniture should be 'robust' and should include the provision of arm rails on benches.
- The provision of water features (ponds, fountains, etc.) in parks may be acceptable subject to detail but these features need to suit the location chosen.
- Dublin City Council is keen to promote public art in public parks, subject to detail and favouring local artists where possible.
- Proposed SuDS should be agreed in advance with the relevant Dublin City Council Departments.
- The height and span of tree crowns when fully matured should be considered when defining adequate spacing between trees and lighting column to prevent the distribution of light being impeded. It should be noted that the Dublin City Council Public Lighting Specification states that columns should be sited mid-way between new trees and there shall be a distance of at least 10m from an existing tree trunk.
- Opportunities to engage with the Military Trail Cycle Route should be explored further.
- The selection of planted species should be carefully considered to maximise the habitat for indigenous fauna (bees, insects, birds, etc.)

An integrated landscaping, roads and drainage strategy is preferred, and the concerns of the Water Framework Directive should be addressed, to include the management of water on the subject site, the treatment of water through SuDS and the promotion of biodiversity.

The provision of balcony/facade planting is to be encouraged and the developed design should provide for this in so far as practicable.

DCC conservation section suggest that retention of parts of the historic boundary wall may provide a positive contribution to the definition of the new public place and suggest that where selected parts of the wall are removed, its footprint should be incorporated into the proposed landscaping plan as part of the 'story' of the place. It is acknowledged that any proposed interventions to this wall will be discussed/agreed with the DCC Conservation Section.

Spatial 'subdivisions' created by planting/hedges should be kept to a minimum so that the new public place on Emmet Road will be as open as possible, presenting an appropriate civic space addressing St. Michael's Church and the new development.

Integrated landscaping and drainage in communal areas

B6 Energy and Sustainability

Sustainable Design Objectives
Design Performance Objectives
Validation of Design Objectives

Energy and Sustainability

Sustainable Design Objectives

The proposed development of Dublin City Council lands at Emmet Road in Inchicore represents a significant opportunity to create an exemplar sustainable urban development.

Located on a brownfield site and on the edge of Inchicore village, the lands have the potential to provide in excess of 450 affordable Cost Rental and Social homes which are highly connected to both the city centre and peripheral industrial and commercial zones via a highly integrated and extensive public transport network.

The following guidance seeks to build on the potential of the site location to ensure that the benefits of existing natural assets such as the Grand Canal and Camac River are fully realised and also to establish a set of principles which any future development on the site will adhere to. In prescribing these sustainable development principles, Dublin City Council seeks to enhance not only occupant comfort and health but also to significantly reduce energy requirements in the construction and occupation of the buildings which will have a positive impact on future tenants financial as well as personal wellbeing.

Site Context & Opportunities

Before the development commences it will be necessary to consider the ecological quality of the site before and after construction. Enhancement measures on site are to include the development of a Biodiversity Corridor/link between the Grand Canal and the Camac River nature corridors which will form a coherent green link through the site. The developer must employ a qualified Ecologist to carry out a full ecological survey of the existing site and adjacent areas (between the Grand Canal and the Camac River) prior to development in order to establish baseline data regarding biodiversity. The proposed development will commit to protect, restore and enhance biodiversity using agreed international metrics. Plant selection and continuity of green spaces to enhance biodiversity on site and in surrounding areas is to be considered in the development of the site masterplan. The developed design should make allowance for the future development of allotments, community gardens and actively managed community spaces.

Resilience

The Developer should ensure that the site layout, access and internal apartment layouts allow for future development including the lifetime adaptability potential of individual units. The option of providing increased floor to ceiling heights to ensure adaptability of the structure to future non domestic uses should be objectively assessed and measured by the Design Team and the Developer at the initial design stages.

Design Performance Objectives

Standards

Standards: The Design Team should assess their proposed scheme via the Home Performance Index (HPI) - download technical manual at www.homeperformanceindex.ie. The development will be required to achieve HPI Silver Certification for residential accommodation and complementary standards shall be applied to the community and commercial accommodation eg. BREEAM, LEED, etc. The Developer should appoint a ‘Sustainability Champion’ at the design and construction stages to ensure that all quality and sustainability targets set within the specification are met and certified.

Water

In line with HPI standards, the developer will ensure that each unit achieves a calculated water efficiency for all apartments of under 110 or 100l/person/day as measured through http://www.europeanwaterlabel.eu/. The developer should aim to exceed this target through fixed appliance specifications (eg. toilets, showers, taps etc) and other efficiency measures to reduce water usage to 80l-90l / person / day.

The site potential for rainwater harvesting for toilet flushing and laundry functions which can reduce the calculated water efficiency to as low as 30 - 40 l/person/day, should be objectively measured and evaluated as part of tender submissions. On site water harvesting may also form part of the designers strategy to reduce surface water run off through attenuation. As part of the SuDS strategy for the site the provision of green roofs should be maximised.

Air Leakage

Air leakage in buildings can have a significant effect on their energy use and comfort. Air infiltration standards of 1m3/hr/msq/50pa or less will be required for the majority of the apartments. While it is understood that at particular junctions / arrangements of units on site the above air leakage rate may be challenging to achieve, the contractor should ensure that in these instances no apartment allows more than 3m3 / hr / m^2 / 50pa in line with the minimum requirements of building regulations. A schedule of proposed air leakage targets should be submitted at the outset of the project. All air tightness tests must be carried out under both positive and negative pressure.

Ventilation

Due to the reduced air infiltration rates, reliance on “natural”/“passive” ventilation strategies will not be permitted. There will be a minimum requirement for Demand Controlled Ventilation (DCV) in each apartment unit. The developer should evaluate the options available to realise the ventilation strategy such as larger centralised plant serving multiple units (requires ducts, risers & attendant fire stopping) or local extract at each unit. Designers should consider how bulkheads for running extract ductwork within apartments will impact on internal layouts and also consider the visual impact and potential clashes with other services as well as the effect on the elevations at the point of exhaust. The use of decentralised MVHR may be considered. Advantages of this approach include filtered air supply, increased energy efficiency and no ducting requirement within each unit (with the exception of localised extract eg. in bathrooms or between units/ floors).

Thermal Performance/ Energy Efficiency

Design performance objectives to be a minimum 10% - 15% above minimum NZEB requirements for both primary energy use and provision of on-site renewables. In combination with the air-tightness and ventilation proposals above the units should have a minimum heating requirement which affords the opportunity to explore the use of alternative fuel sources and systems to provide space heating. As the de-carbonisation of the national grid progresses and the production of indigenous renewable electricity increases, the use of electricity becomes viable to meet space heating requirements and should be assessed and evaluated at tender submission stage. The use of solar PV to achieve the on site renewables should be thoroughly investigated by the designers given its ideal orientation and unimpeded solar access to the south, protected by both the Goldenbridge Cemetery and the Grand Canal. On-site storage from renewables should be considered to increase efficiencies even further. Energy can be stored for example in centralised or distributed batteries or stored centrally as hot water and distributed to apartments with metering at each unit. Developers should also consider some solar thermal as part of their on-site renewable energy mix.

Embodied Carbon & Life Cycle Assessment

The Developer should use only products that have an Environmental Product Declaration to EN 15804 and ISO 14025 where available, or commitment from the manufacturer to provide one before the completion of the project where the value of the incorporated material exceeds EU 50,000. The appointed Design Team and Developer should carry out a Life Cycle Assessment at design stage to EN15978 for modules A1-A5 measuring the embodied impacts of the project and demonstrate how this has been optimised to achieve a significant improvement over a baseline, by avoided material use, optimised structural design, product substitution and reuse of recycled products/materials, optimised transport delivery and on-site construction processes. This should be revised post construction to take account of any material substitution/quantities modification taking place during construction and this should be presented in a clear format showing:

1. The baseline condition
2. The optimised design condition
3. The as-built condition

This will indicate the total embodied impact for at least five environmental indicators; Global Warming Potential, Ozone Depletion Potential, Acidification Potential, Eutrophication potential, Photochemical Ozone Creation Potential.

Functionality

The design of the unit layouts and systems should minimise the requirement for complex controls ie. they should be user friendly. Maintenance requirements which can be carried out without requiring access to individual units should be incorporated in the design stages eg. accessibility of common services from corridors.

A strategy for waste management at micro and macro level within the site should be considered at the early stages of design. In apartment buildings, transitional waste storage facilities should be located close to the vertical circulation core at ground floor level. The Design Team will be required to produce and distribute to all tenants a simplified user manual, detailing operation and maintenance requirements of built elements and systems.

Validation of Design Objectives

As this is an exemplar project, post occupancy evaluation methods and agreements for collection of data and formats eg. remote meter reading, should be agreed before commencement of the development. This will be particularly relevant for centralised systems which are then distributed and metered on site eg. hot water systems & metering. It should also be a requirement to consider the GDPR implications of this localised data collection and devise a compliant strategy

The Design Team should devise a strategy for establishing baselines and measuring the impact of the proposed development on the local environment, community, townscape, transport etc., describing a methodology for same as part of their tender submissions. As part of this study, a post-completion protocol for measuring user satisfaction regarding usability and manageability should be adopted and the data collated into a report at 6 and 12 month intervals post-handover or at a timeframe as agreed, and in line with the contract defects liability period. After this period the systems for data collection and analysis will be handed over to Dublin City Council and training and documentation provided for its use.

Photo: Dolphin House
Architects: Dublin City Council Architects
completed to exceed NZEB standard

PART C

Proof of Concept

C1

Design Strategy

Key Structuring Principles
Urban Form
Quantum of Development
Mobility
Conservation
Privacy and Public Realm
Addressing Adjacencies
Principal View Corridors
Landscaping Strategy
Ground Floor Uses
Massing Studies by Photomontage
Shadow Studies

Design Strategy

This Development Framework Plan is conceived in response to an invitation to create a urban environment of great complexity and richness involving mixed use and residential development in Inchicore, Dublin 8. It has evolved in collaboration with Dublin City Council, building upon an extensive investment in consultation, research and initiatives over many years and recollated here as part of this Development Framework Plan.

The Development Framework Plan seeks to transform the Emmet Road Lands while respecting the site's heritage to create a vibrant and diverse neighbourhood, to integrate with the immediate context and history and to connect to the wider Inchicore quarter beyond. A number of significant organising features, such as connections, pathways and open spaces, have been identified and these have informed the overall layout of the Development Framework Plan. These are identified here as Key Structuring Principles.

Key Structuring Principles

The Lands at Emmet Road extend over 3.8 hectares. Three key structuring principles are employed to open up this site to new development (Fig 1):

1. An arterial avenue free from vehicular traffic that connects Emmet Road with the Goldenbridge Cemetery,
2. A peripheral avenue for all types of traffic that aligns with and connects Patriots Path with Saint Vincent Street West.
3. A series of open spaces that converse with key elements of the existing and proposed landmarks and accommodation.

Layered onto the arterial Avenue is a biodiversity corridor that offers a connection from the Camac Valley aquatic habitat to the Grand Canal aquatic habitat and links to a series of proposed public open spaces.

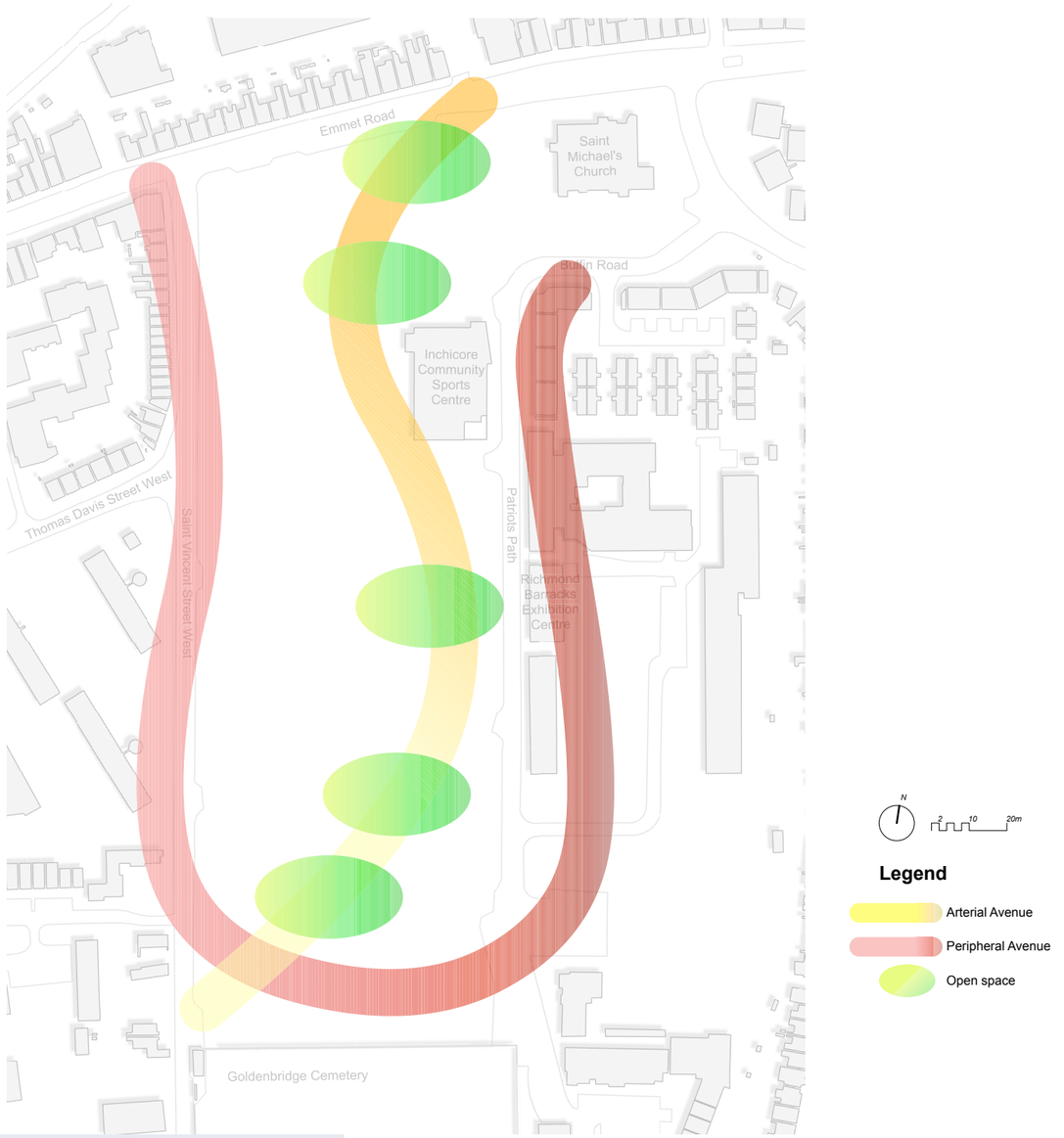


Fig 1 Key Structuring Principles

Urban Form

The Urban Form (Fig 2) is proposed to control the extent of the proposed development on the subject site and to protect the fixed elements and public realm including the public open spaces. The Urban Form derives from the key structuring principles and is designed to respect those elements while providing for the required quantum of development at an appropriate density and height, having regard to national planning policy. The Urban Form proposed here is not intended to offer a final design solution. The primary function is to define the public spaces outside indicative building lines - to define building edges and the thresholds of the public realm.

The urban form defines and encloses a series of proposed public open spaces:

1. A civic space for Inchicore (titled Emmet Green for ease of reference here) that is market in character and that acts as an occasional place of assembly for Saint Michael's Church and Richmond Park Football Ground.
2. A community square that serves as a shared forecourt connecting the Library, the Community Centre and the adapted Inchicore Community Sports Centre.
3. A formal public open space addressing the Richmond Barracks Exhibition Centre (titled Richmond Green for ease of reference here)
4. A pocket park providing seating areas to the north and a kickabout space to the south.
5. A public open space addressing the gate lodge and entrance to the Goldenbridge cemetery, providing an outdoor seating area and playground for older children (titled Goldenbridge Green for ease of reference here)

The conservation section of DCC recommend that in the next design stages, careful consideration should be given to the articulation of the blocks facing the former Richmond barracks. This response should include a consideration of a symmetrical layout addressing Richmond Green and a careful choice of height, massing and materials in relation to the former barracks structures.

Similarly, the new library building facing onto Emmet Square has the opportunity to act as a signature building for the new development. Its massing and articulation should respond to the existing St. Michael's Church.

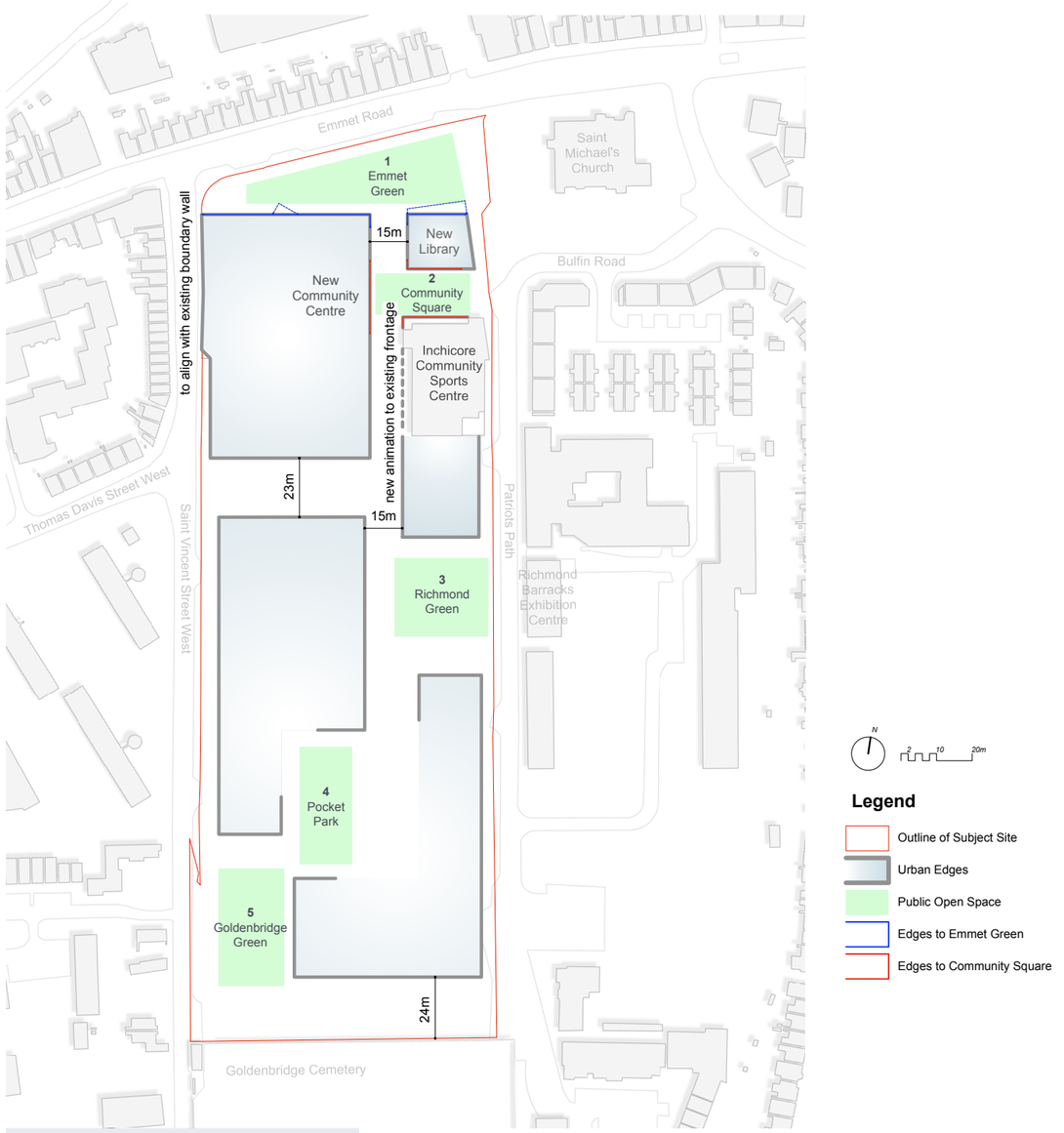


Fig 2 Urban Form

Zones and Plots

The Key Structuring Principles (Fig 1) and the Urban Form (Fig 2) are the guiding considerations for distributing the residential, community and commercial accommodation proposed having due regard to access, mobility and open space requirements. The Subject Site is arranged (Fig 3) to consist of 5no. zones and these are subdivided into 19no. plots to facilitate the distribution of accommodation in a manner that can support many options for the delivery of the development over time.

Building Heights

In order to achieve the optimum quantum of development and in order to respond appropriately to the scale, density and height of the urban context adjacent to the Subject Site, a building height strategy is proposed (Fig 4) having regard to national planning policy.

Fig 3 Zones and Plots

Fig 4 Building Heights

Quantum of Development

There are three categories of accommodation proposed, the nature and extent of which is set out as follows:

Community Accommodation

The indicative proposal distributes a series of community facilities across Zones 1 and 5, clustered around a Community Square. The new facilities also address the proposed civic space on Emmet Road.

01 **Library** 1,400m²
Plot 01, three storeys

02 **Saint Michael's Community Centre** (New) 1,450m²
Plot 19, two storeys

03 **Adjustments to Sports Centre** 45m²
making it accessible from the new Community Square

Commercial Accommodation

The indicative proposal distributes a series of commercial facilities across Zones 2, 4 and 5, each with street frontage.

04 **Supermarket** (at first floor level) 1,900m²
Plot 18, sales area over undercroft car parking

05 **Other Retail** (at ground floor level) 200m²
Plot 17, with street frontage

06 **Café** (at ground floor level) 125m²
Plot 17, with street frontage and outdoor seating area

07 **Corner Shop** (at ground floor level) 100m²
Plot 10, with sandwich bar

08 **Childcare Centre** (at ground floor level) 850m²
Plot 02, to accommodate 80 children

Residential Accommodation

The indicative proposal distributes residential accommodation across Zones 2, 3, 4 and 5. The residential accommodation in Zones 3 and 4 is distinct in character from the residential accommodation in Zones 2 and 5. In Zones 3 and 4, the residences extend from a slightly elevated ground floor level up and are arranged around parkland courtyards with diverse shared amenities. In Zones 2 and 5 most of the residences extend from first floor level up, over commercial and community facilities, and are typically denser and more urban in character.

A tabulated account of the provision of residential dwelling types is provided as follows:

	Social		Cost Rental		Total	
	Count	% Mix	Count	% Mix	Count	% Mix
Studio	0	*0%*	72	*21%*	**72**	*15%*
1 Bed	20	*19%*	108	*30%*	**128**	*26%*
2 Bed	33	*30%*	177	*49%*	**210**	*43%*
3 Bed	56	*51%*	18	*0%*	**74**	*15%*
Totals	**109**	*23%**	**375**	*77%*	**484**	*100%*

Note: figures above do not include the development to the east of the site, identified as "Phase 1b" which proposes 52 social housing units.

**Social housing percentage rises to 30% when Phase 1b is included in overall figures.*

	% of Dual Aspect Units
Studio	100%*
1 Bed	21%*
2 Bed	66%
3 Bed	100%
Average	**64%**

* Note that gallery access units, considered a form of dual aspect, are included in these counts.

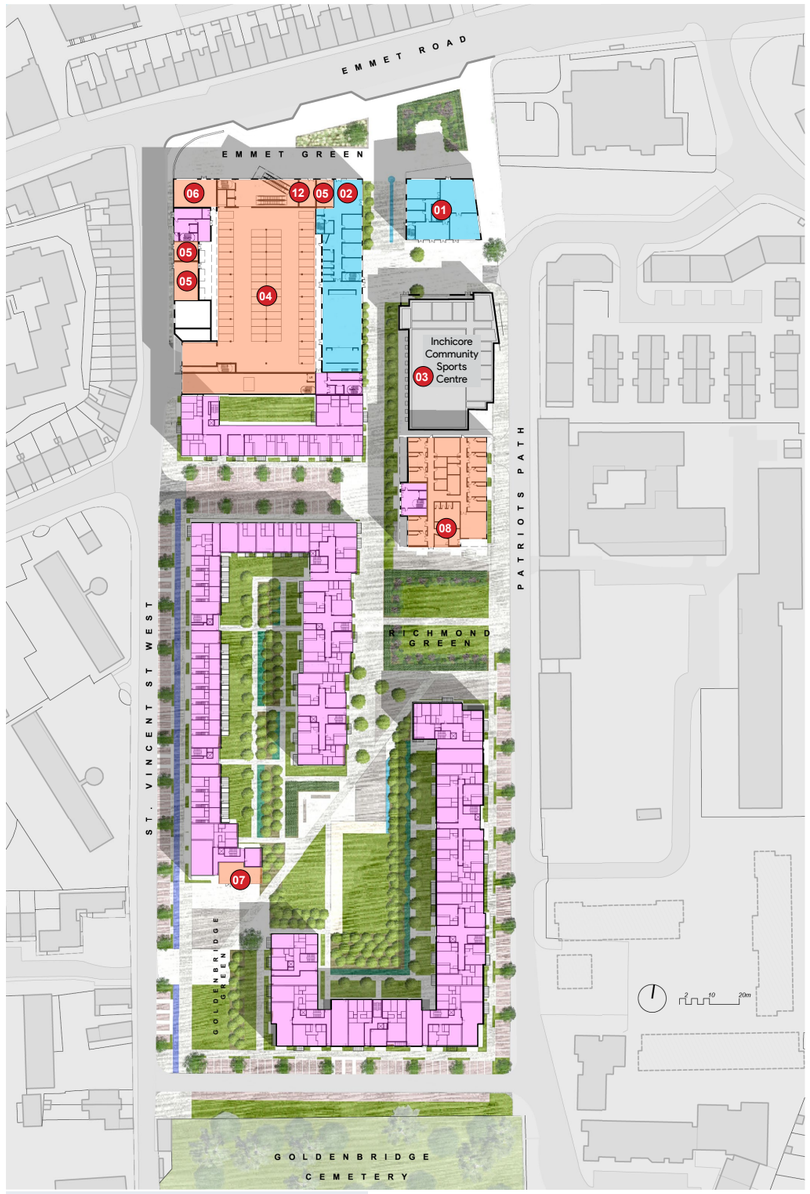


Fig 5 Quantum of Development

Mobility

Vehicular Access

Vehicular Access to the Zones proposed is as follows:

1. Zone 5: from Saint Vincent Street West.
2. Zone 1: from Patriots Path
3. Zones 2, 3 and 4: from the peripheral Avenue.

The access proposals will need to accord with current design standards (visibility etc). Traffic calming measures should be considered on Saint Vincent Street West and Patriots Path in order to control vehicle speeds. This will need to be explored at the planning stage and will need to be agreed with Dublin City Council (DCC) and accord with the Traffic Management Guidelines (2003) and Design Manual for Roads and Streets (DMURS).

Vehicle Parking

The site is in an ideal location to permit the reduction of parking numbers from the maximum levels identified in the Dublin City Development Plan 2016-2022 due to its location close to local facilities and high quality public transport services. The current provision (including the on-street spaces) equates to 51% of the maximum levels as stated in the Development Plan. To support such a provision, the Developer would be expected to prepare a Mobility Management Plan (MMP) to reduce the role of the private car and increase the number of trips made by sustainable modes of transport (such as walking, cycling and public transport). The parking also provides spaces for visitors to the museum (off Patriots Path) and the Goldenbridge Cemetery (northern side of new east-west road). Coach parking for visitors to the museum is also proposed along the Cemetery Link Road.

The allocation of the on-street parking spaces to specific users will need to be determined through the planning process. The Development Framework Plan anticipates the following parking provision:

1. Zone 5: 65no. undercroft spaces off Saint Vincent Street West for the Supermarket only.
2. Community and Commercial staff parking: 30no. spaces on the Thomas Davis Street West Spur, 2no. of which are disabled spaces; these spaces are not available to residents.
3. Residential: 128no. spaces on the peripheral Avenue, 12no. of which are disabled spaces.
4. Richmond Barracks Exhibition Centre: 2no. disabled spaces.
5. Goldenbridge Cemetery: 5no. spaces, 1no. of which is a disabled space.

This amounts to a total 230no. car parking spaces on street and in designated parking areas within the subject site. Provision should include for car clubs, Go Car and other such schemes and there should be charging points for electric cars.

Cycle Parking

Secure cycle parking should comply with the requirements of the Dublin City Development Plan 2016-2022. This involves a minimum 1no. space for each residential unit, which equates to 478no. spaces in total. For Zones 3 and 4 this is provided by means of covered bicycle stands in a pavillion like arrangement in the shared open spaces. In Zone 2 and in Zone 5, bicycle parking is provided in ground floor secure bicycle stores accessible externally and from the foyer. The Library and Community Centre elements should provide 1 space per 150sq.m of gross internal floor area. Provision should also be made for the retail and commercial uses.

Servicing

The layout aims to ensure that all blocks can be served satisfactorily and that refuse can be collected from a suitable location that is convenient for both residents, businesses and waste collection vehicles. General access and passage requirements for emergency and maintenance vehicles are considered throughout the site with streets and hard standings within the landscaped areas.

Connectivity

The proposed site layout will enable residents and visitors to safely and conveniently access local facilities and public transport services on foot and by bicycle. Footways are provided on all frontages of the site to maximise accessibility and permeability in all directions. A pedestrian link is provided within the site that enables direct access to both Saint Vincents Street West and Patriots Path. Additional pedestrian crossings (controlled or uncontrolled) should be provided on the roads surrounding the site, if required.

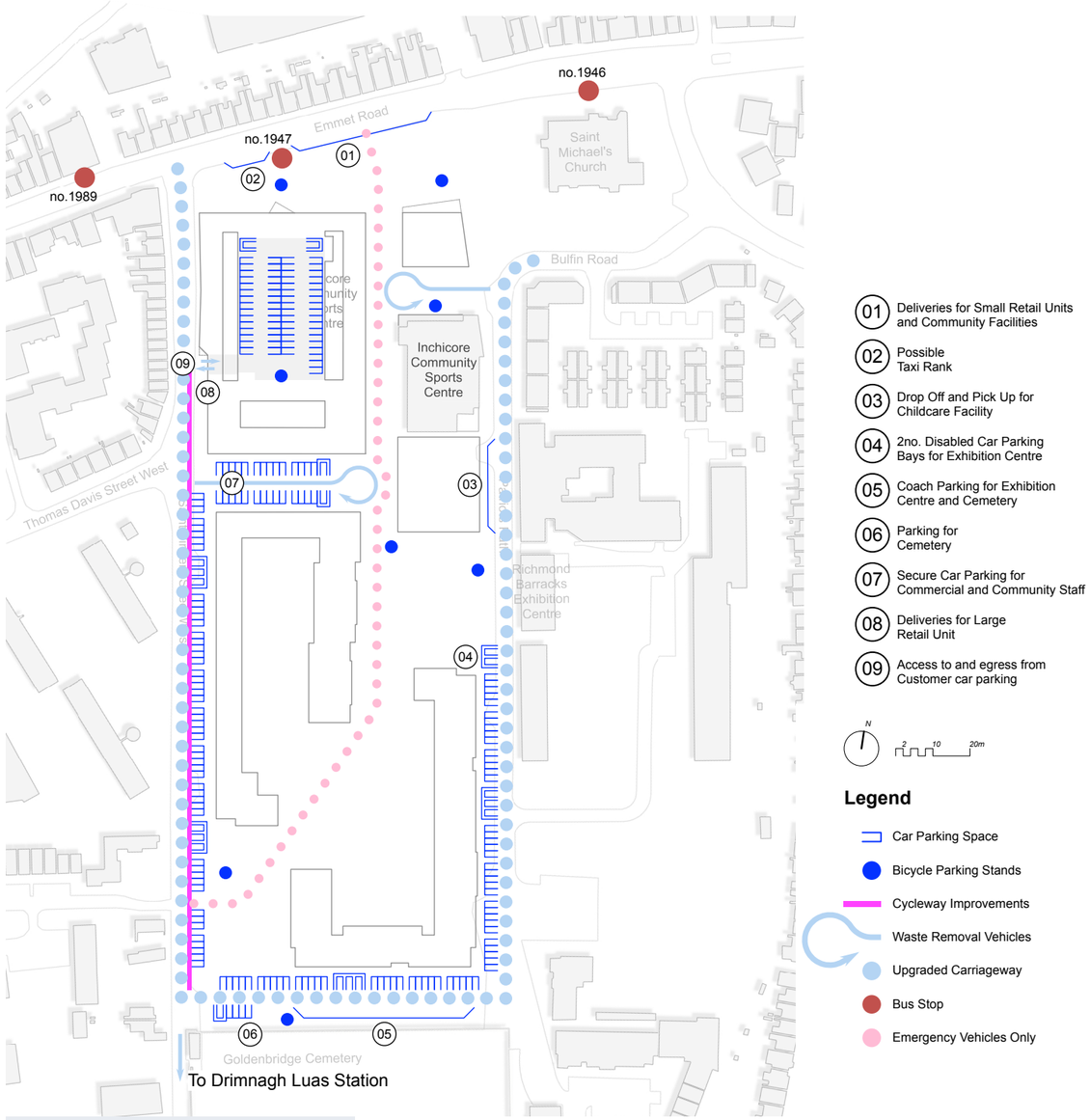


Fig 6 Mobility

Conservation

The three specific conservation considerations set out in Section A4 are addressed by the indicative proposal as follows:

1. The setting for the remaining structures of the former Richmond Barracks on Patriots Path is enhanced by providing a public open space comprising a formal lawn aligned on the barracks 'lantern' building, defined by pleached lime trees and with an axial sculptural piece (optional).
2. The setting for the northern boundary wall of the Goldenbridge Cemetery and the entrance gate and lodge is enhanced by providing an adjacent meadow edge strip with sporadic tree planting balancing the cemetery trees.
3. The remnant section of historic wall on the perimeter of the subject site at the junction of Emmet Road and Saint Vincent Street West is the subject of sensitive intervention involving dismantling sections of the wall to the higher level of adjacent ground (the wall appears to act as part retaining structure). Alternative interventions may be considered but all should be agreed in advance with Dublin City Council Conservation Officers.

Privacy and Public Realm

The indicative proposal provides a "privacy (railing) line" consisting of a plinth wall and railing enclosing all residential accommodation. This will provide a privacy strip of a minimum 1.5m which can be widened in certain areas that might be considered more vulnerable (Fig 7)

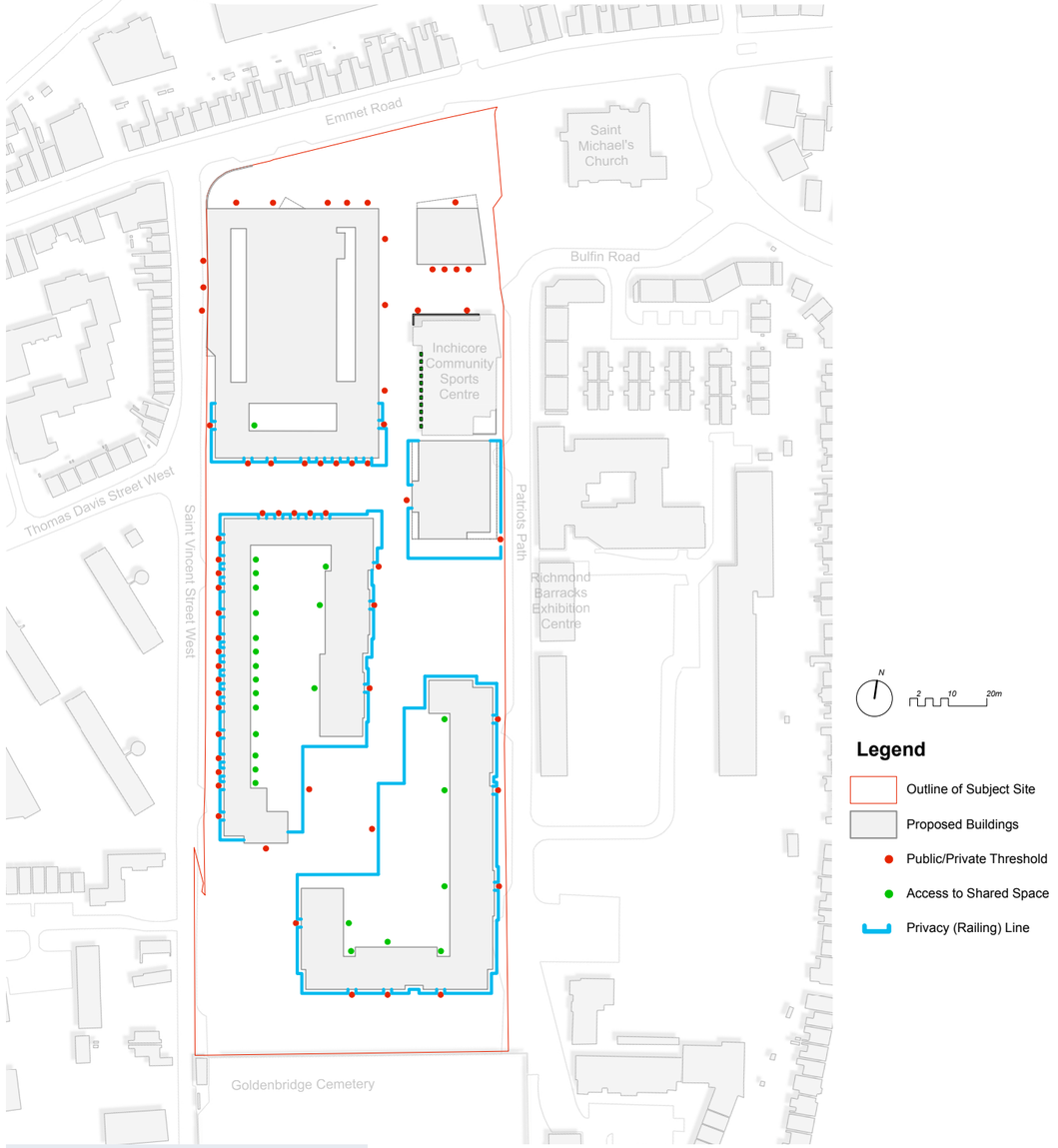


Fig 7 Privacy and Public Realm

Addressing Adjacencies

The Development Framework Plan seeks to address the existing hierarchy of adjacent public amenities, leveraging fertile adjacencies and transforming sterile adjacencies for the public realm.

Leveraging Fertile Adjacencies

Specific interventions to leverage fertile adjacencies include addressing the following (refer to illustration):

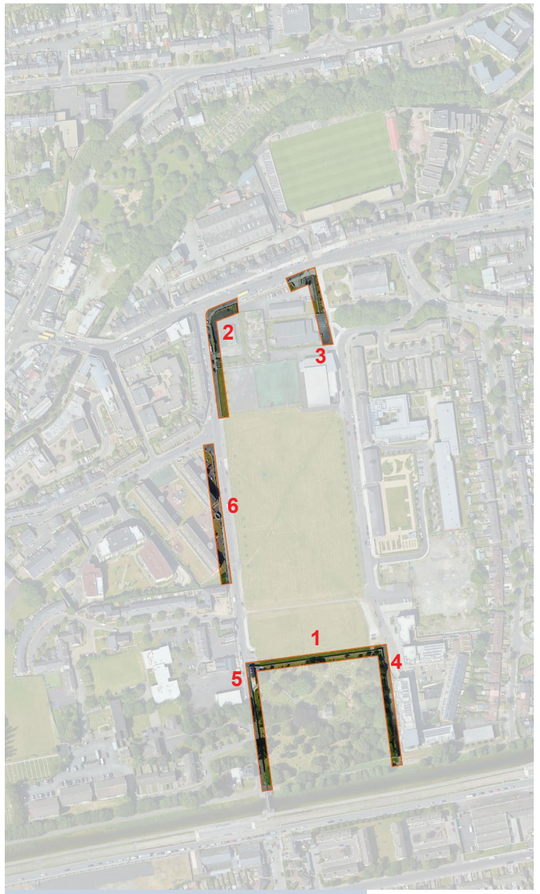
1. The grove of trees south of Saint Michael's Church.
2. The entrance to Richmond Barracks Exhibition Centre.
3. The entrance to the proposed sheltered housing off Patriots Path and the passage past Thornton Heights to the Grand Canal.
4. The entrance to Goldenbridge Cemetery.
5. The passage to the Grand Canal Bridge and Drimnagh Luas Station.
6. The entrance to Emmet Crescent and the axial gable of the convent chapel.
7. The entrance to Thomas Davis Street West.
8. The frontage of retail stores along Emmet Road.
9. The entrance to Richmond Park and Saint Patrick's Athletic Football Club and the main entrance to Saint Michael's Church.

Leveraging Fertile Adjacencies

Transforming Sterile Adjacencies

Specific interventions to transform sterile adjacencies include addressing the following (refer to illustration):

1. The northern boundary wall of Goldenbridge Cemetery.
2. The remnant wall of Richmond Barracks at the junction of Emmet Road and Saint Vincent Street West around the former Celtic Pigeon Club premises.
3. The unarticulated wall to the rear of the Inchicore Community Sports Centre
4. The lack of safe vehicle turning facilities on Patriots Path.
5. The lack of safe vehicle turning facilities at the end of Saint Vincent Street West.
6. The unarticulated wall of Tyrone House along Saint Vincent Street West.



Transforming Sterile Adjacencies

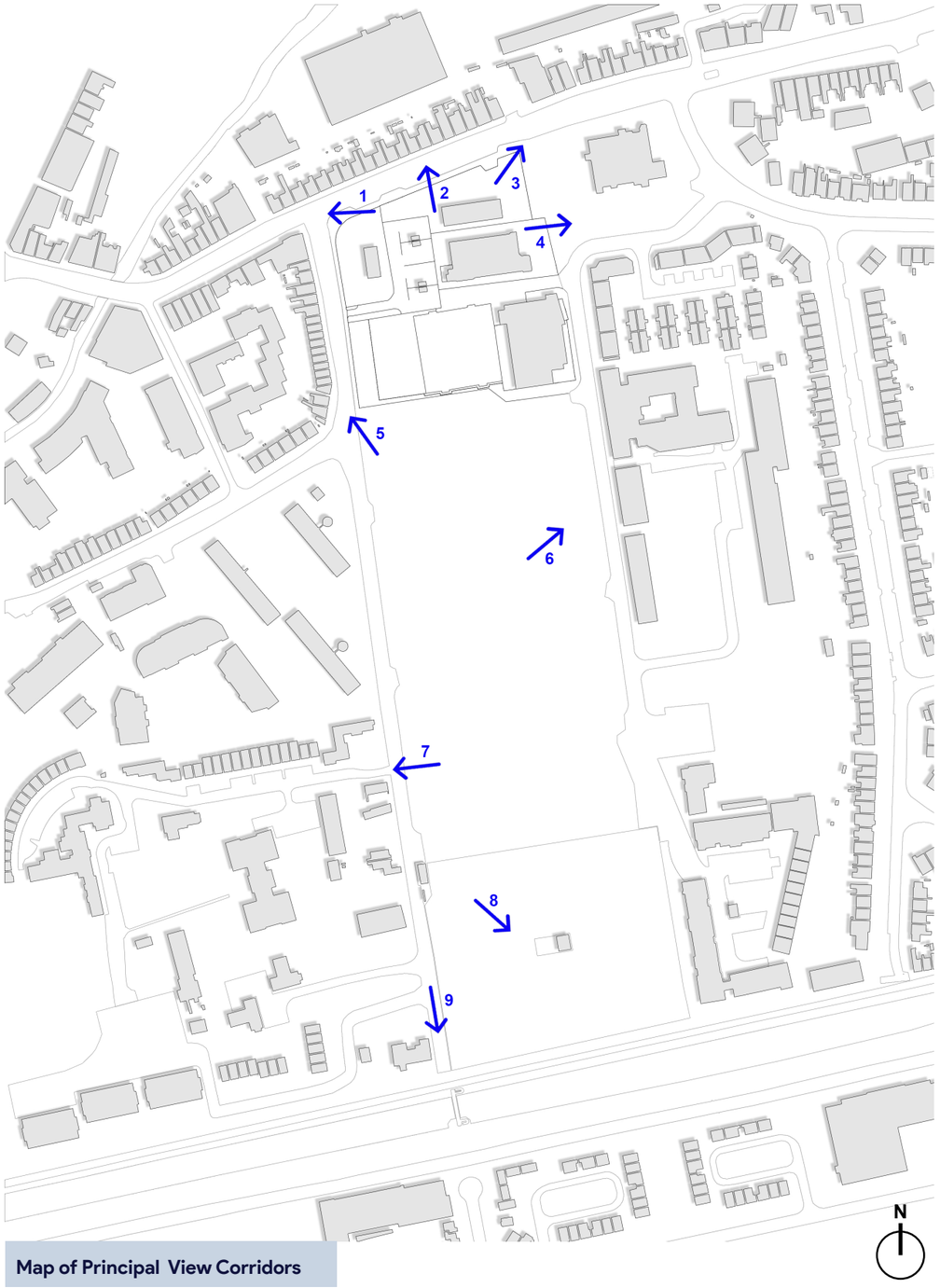
Principal View Corridors

Photo Google Street View accessed May 2019

Photo Google accessed May 2019

Photo Google accessed May 2019 (note Wellington Monument)

Photo DMOD



Map of Principal View Corridors

Photo Google Street View accessed May 2019

Photo DMOD

Photo DMOD

Photo DMOD

Photo DMOD

Landscaping Strategy

1. Sanctuary garden for library
Space defined by low retaining wall and pleached lime trees
Colourful shrub, herbaceous and bulb planting
Bench seating (with backrest and armrests)
Paving panel linking to front of library

2. Open plaza space, accommodating:
Significant semi-mature tree
Sculptural feature bench seating
Bus stop/shelter facilities
Simple paving pattern (wall to kerb)

3. Café outdoor space, with:
Contrasting paving
Retained historic wall (reduced in height)
Integrated low level lighting

4. Central access spine, with (throughout):
Pedestrian/emergency vehicle shared route (min 3.8m wide)
Core planted biodiversity strip (min. 4m wide)
Drainage rill/swale (culverted where required) leading to bioretention area at south courtyard, ref. 8)

5. Vehicle turning zone (at parking areas), with:
Contrasting modular paving
Stainless steel stud inserts (non-slip)

6. Dedicated Childcare Centre outdoor play zone(s)

7. Richmond Green
Formal grass space aligned on the barracks 'lantern' building
Defined by pleached lime trees (clear stems to 2m)
Axial sculptural piece (optional)
Defined road crossing to the barracks building

8. South courtyard, featuring:
Bioretention area with terraced access at north end and defining shallow banks to east and south, planted with biodiversity strip and shallow meadow bank to west - depending on maintenance/management available, this could revert to summertime grass kick-about zone.
Covered bike parking (integrated designed units)
Communal gardens with ornamental tree planting

9. Sitting area, defined by:
Pleached lime trees
Contrasting paving
Bench seating (with backrest and armrests)

10. Open grass play space

11. West courtyard, featuring:
Biodiverse planting and covered bike parking in staggered strip, incorporating swale drainage subject to detail (leading to bioretention area at south courtyard, ref. 8)
Communal garden spaces with ornamental tree planting

12. Café outdoor space,
Defined by contrasting paving

13a. Play area (pre-teens), defined by:
Enclosure on north, west and south sides
Play/safety surfacing
Play equipment

13b. Play area (toddlers):
Enclosed and gated
Play/safety surfacing
Play equipment

14. Sitting space, axially aligned to church (to west), with defined road crossing point

15. Green open space and biodiverse planting strip,
Defining front garden space to residential units and
Opening/framing views to Goldenbridge cemetery entrance

16. Defined road crossing to Cemetery entrance

17. Coach parking zone, with
Adjacent meadow edge strip
Sporadic tree planting (balancing cemetery trees)

18. Sitting area,
Contiguous with Richmond Green
Bound gravel/grit finish paving
Bench seats (with backrest and armrests)
Incidental play/exercise

19. Community Square
Defined by contrasting paving

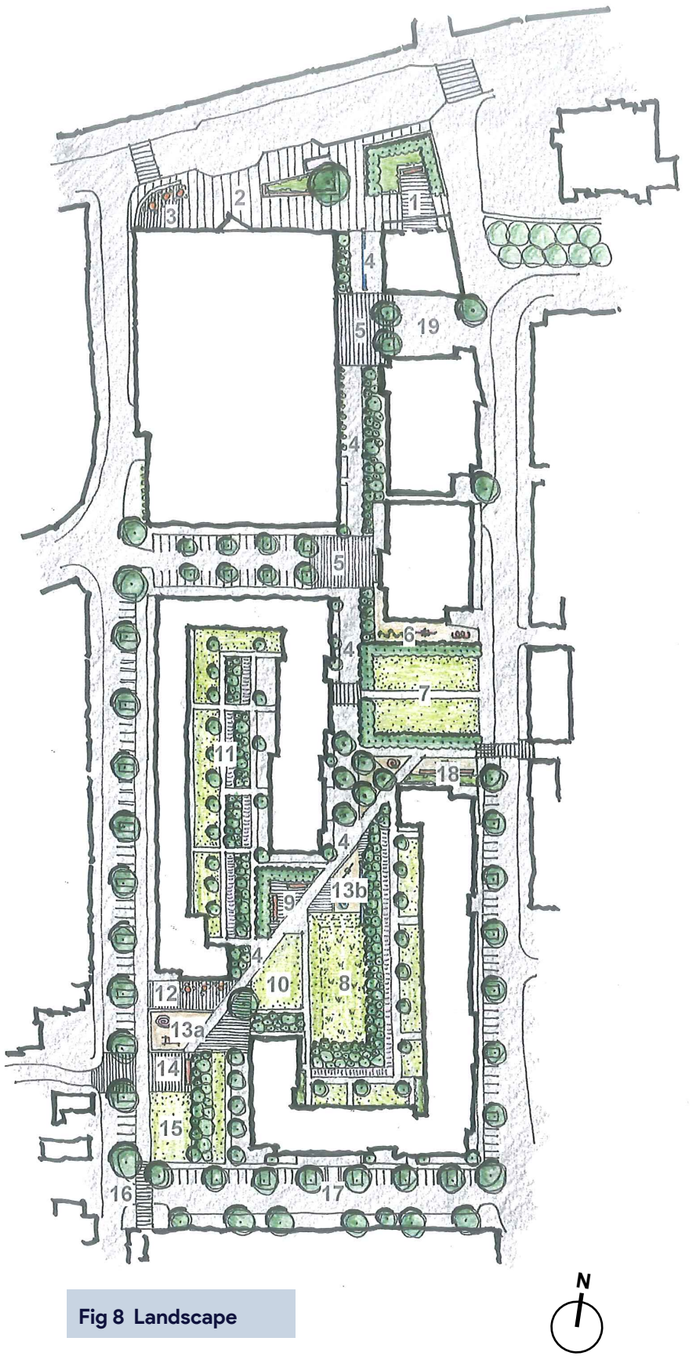


Fig 8 Landscape

Ground Floor Uses

01 Neighbourhood Cafe

02 Undercroft Car Parking

03 Access core to Residences above

04 Community Centre

05 Loading Bay for Supermarket

06 Community Library

07 Existing Sports Centre

08 Childcare Centre

09 Corner Shop

10 Access to Rooftop Pitch

11 Community Centre Hall

12 Other Retail Units

Residential Accommodation

First Floor Uses

01 Supermarket

02 Community Centre

03 Community Library

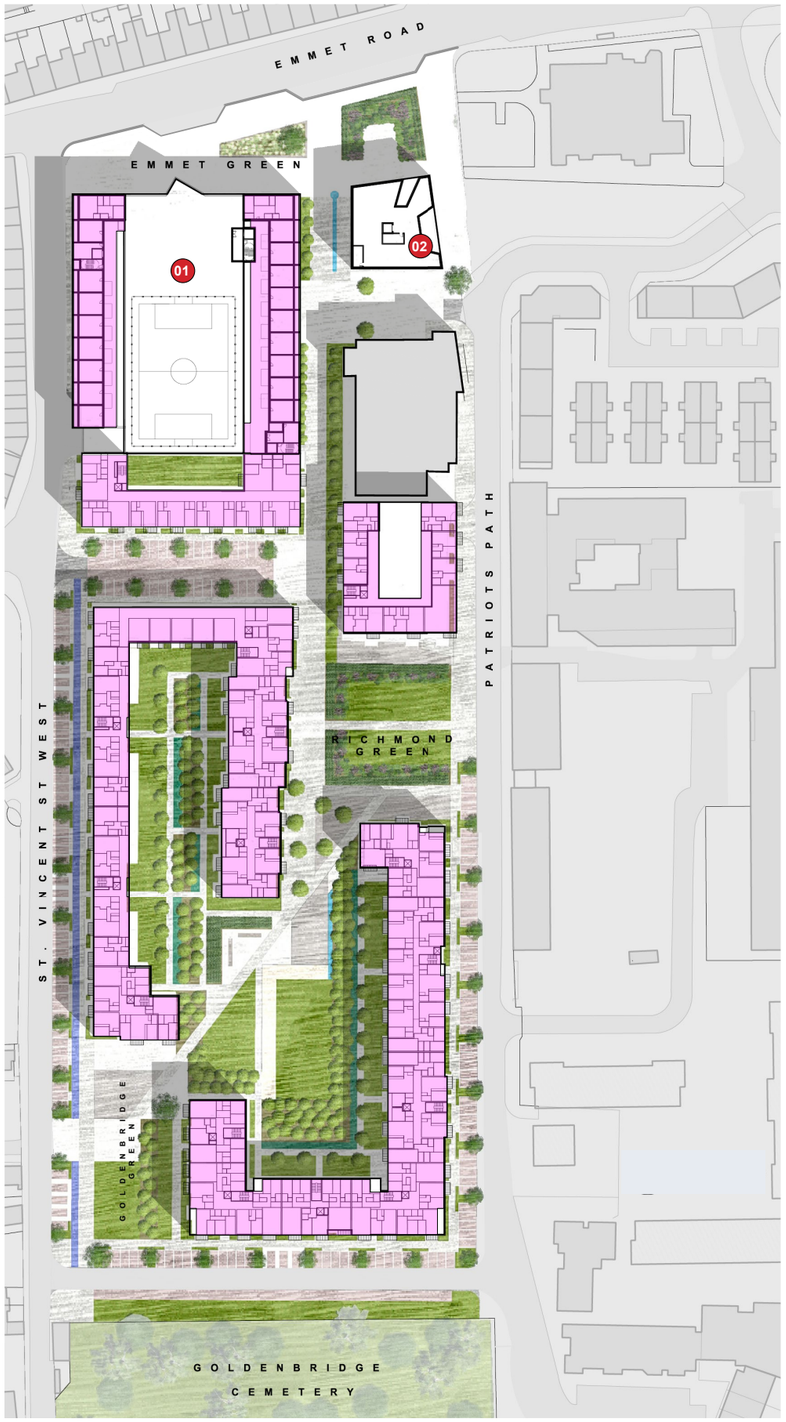
Residential Accommodation

Second Floor Uses

01 Rooftop Sports Courts

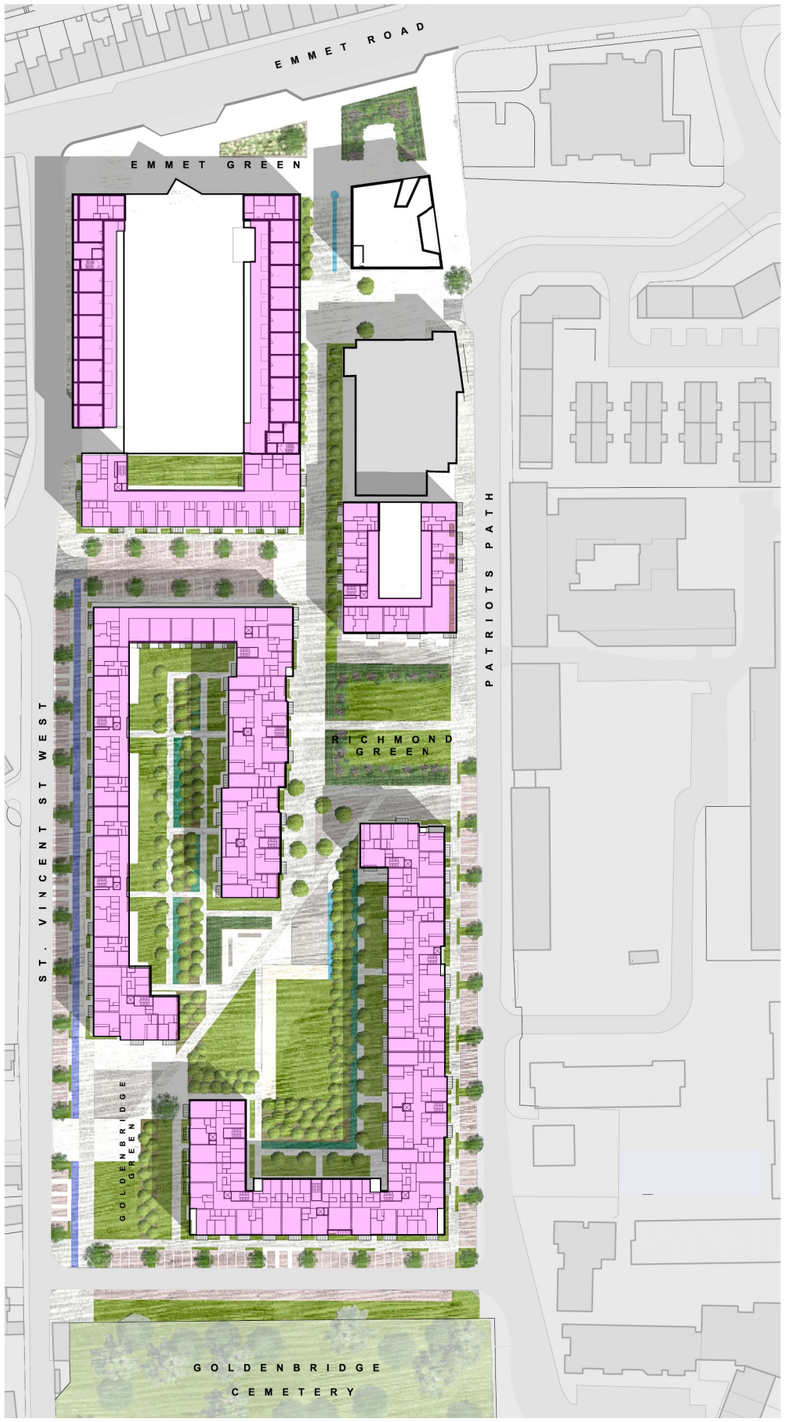
02 Community Library

Residential Accommodation



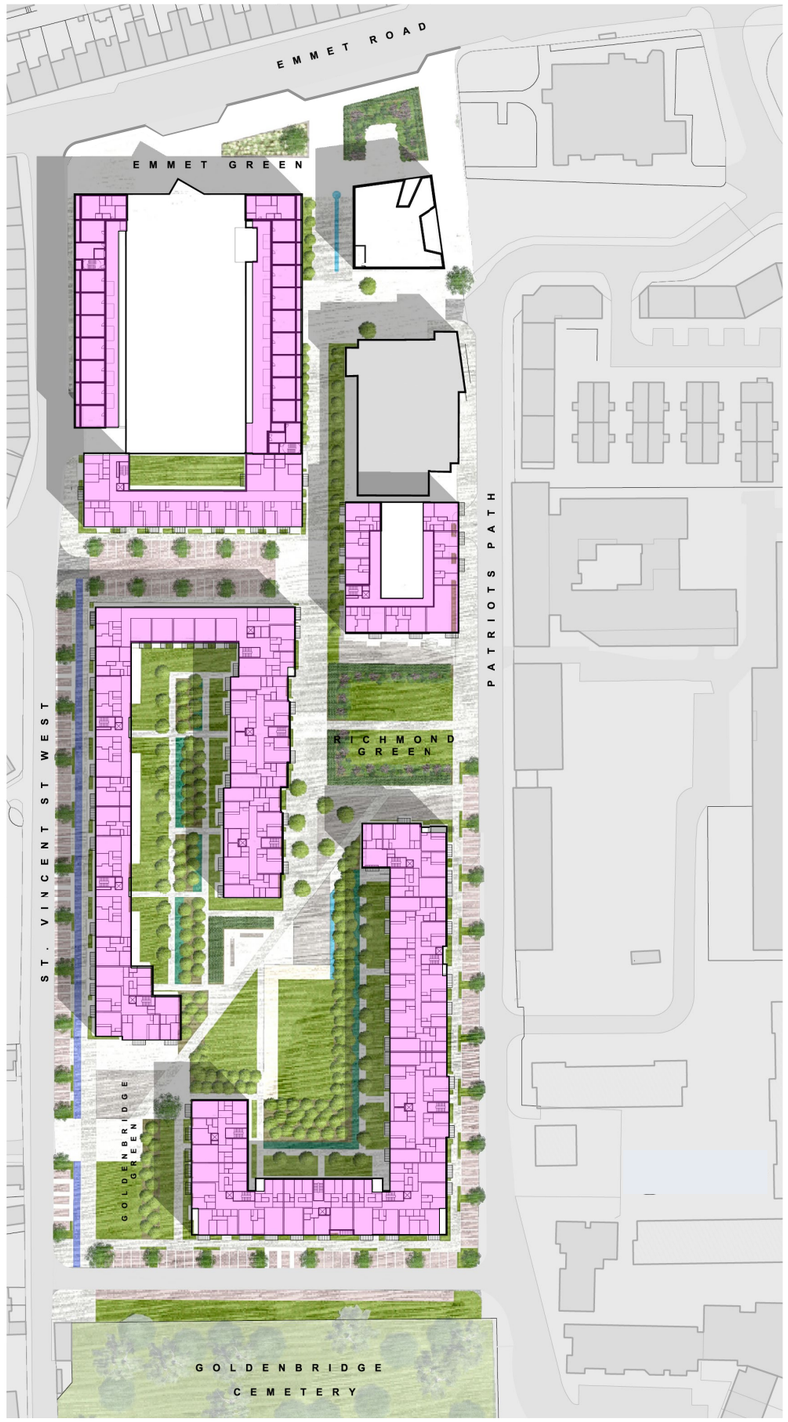
Third Floor Uses

Residential Accommodation



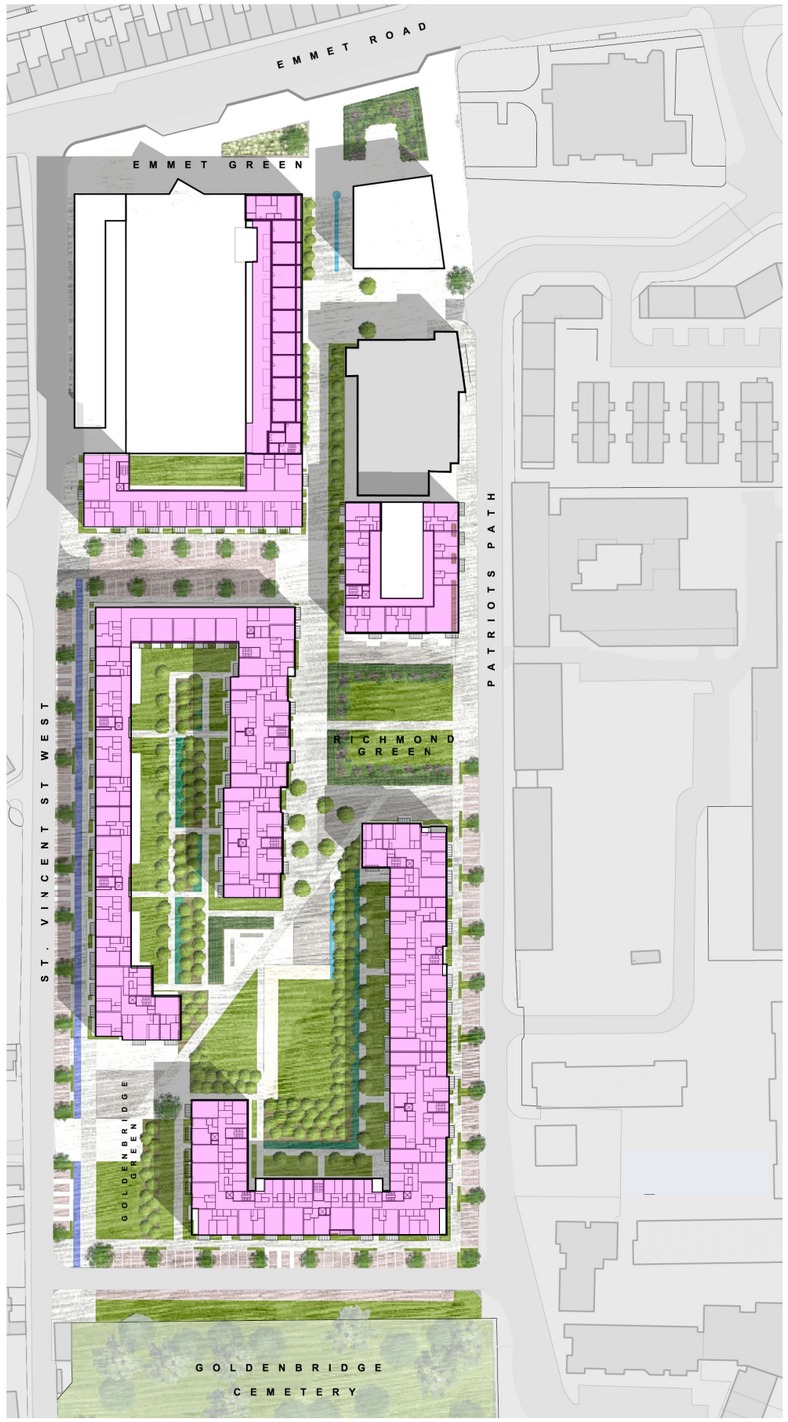
Fourth Floor Uses

Residential Accommodation



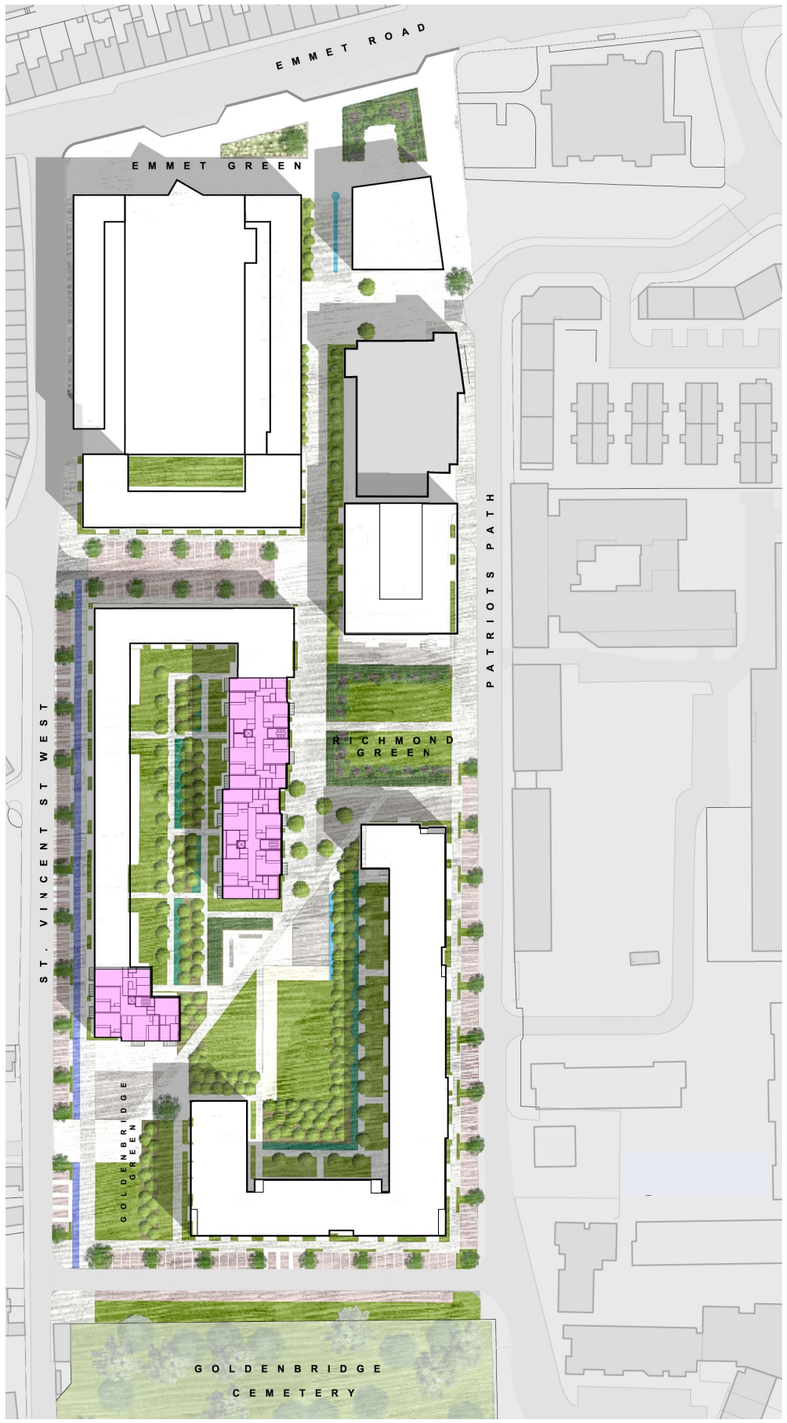
Fifth Floor Uses

Residential Accommodation



Sixth Floor Uses

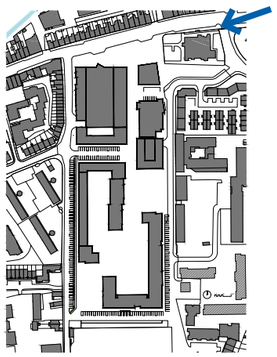
Residential Accommodation



Roof Level Uses

Massing Studies by Photomontage View 1

Existing Condition

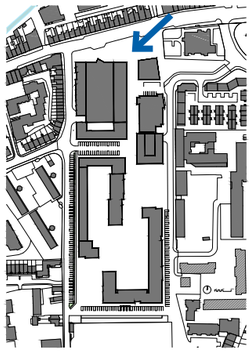


Massing Study View 1

NOTE: View to Illustrate Indicative Massing Only. Scheme subject to detailed design.

Massing Studies by Photomontage View 2

Existing Condition

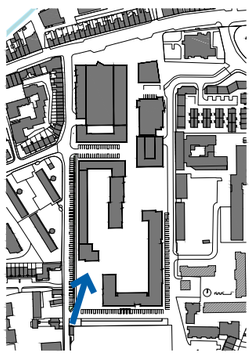


Massing Study View 2

NOTE: View to Illustrate Indicative Massing Only. Scheme subject to detailed design.

Massing Studies by Photomontage View 3

Existing Condition

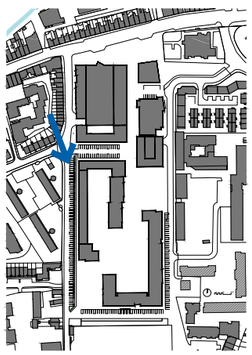


Massing Study View 3

NOTE: View to Illustrate Indicative Massing Only. Scheme subject to detailed design.

Massing Studies by Photomontage View 4

Existing Condition

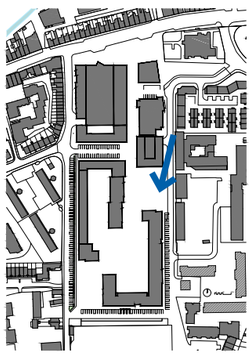


Massing Study View 4

NOTE: View to Illustrate Indicative Massing Only. Scheme subject to detailed design.

Massing Studies by Photomontage View 5

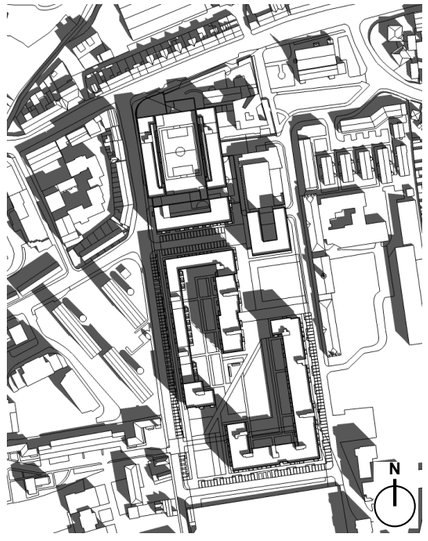
Existing Condition



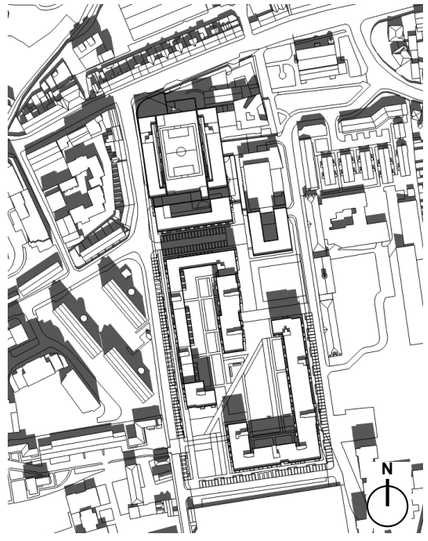
Massing Study View 5

NOTE: View to Illustrate Indicative Massing Only. Scheme subject to detailed design.

Shadow Studies



Mar/Sept 21st, 10am



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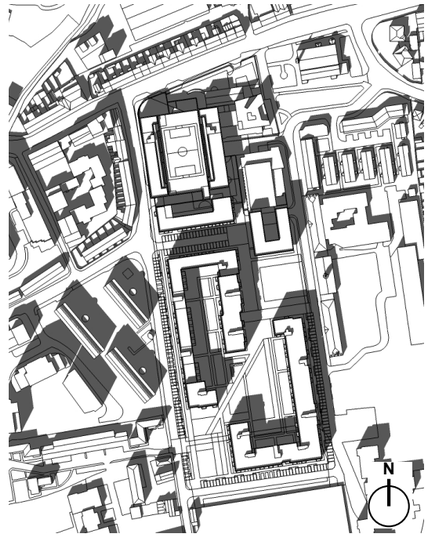

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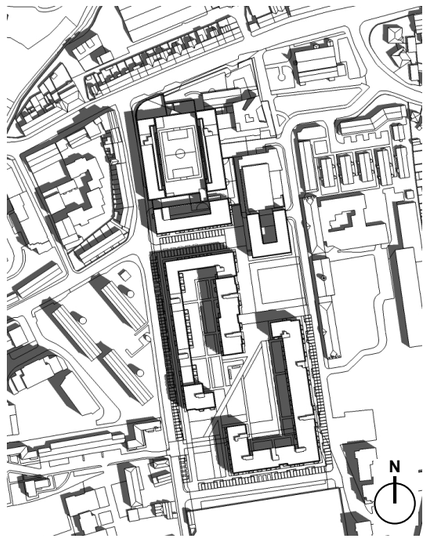

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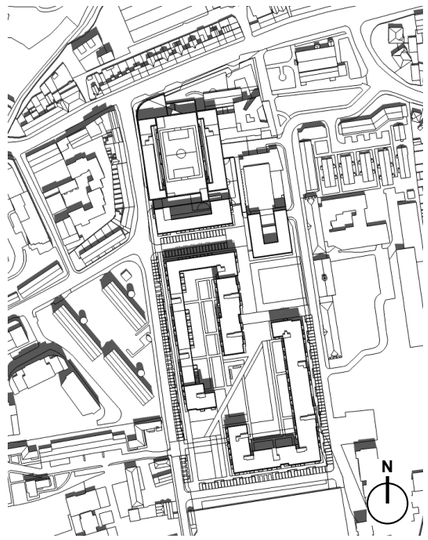

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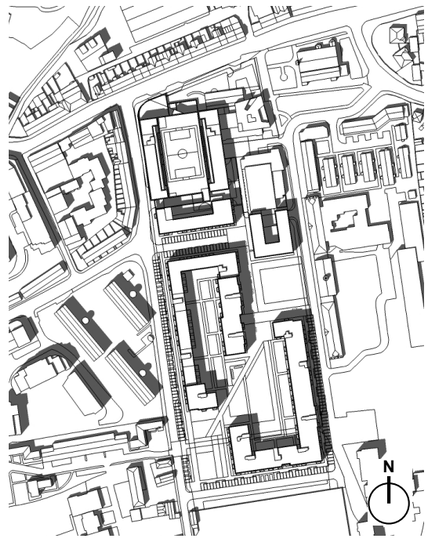

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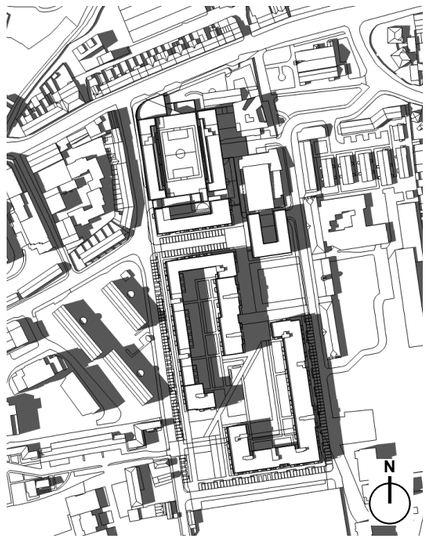

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C2 Implementation Options

Implementation Options

It is considered that the proposed development may comprise 5no. tranches (Fig 1). These tranches may be delivered simultaneously or in sequence by one or more contractors. If phased, the following sequence of delivery is preferred:

1. **Tranche 5**, comprising mixed use development of commercial/community/ residential accommodation and the Emmet Green public open space.
2. **Tranche 3**, comprising development of residential accommodation and the Richmond Green public open space.
3. **Tranche 1**, comprising a public library and adjustment to Inchicore Community Sports Centre and the Community Square.
4. **Tranche 2**, comprising mixed use development of a crèche and residential accommodation and the Goldenbridge Green public open space.
5. **Tranche 4,** comprising mixed use development of a corner shop, residential accommodation and the Pocket Park.

Tranche Diagram

C3 Costs

Costs

Achieving the optimum balance between density, quality and affordability is the aim of this Development Framework Plan.

Cost rental accommodation generally involves the provision of homes where the rent charged is directly related to the sum of the capital cost of site acquisition and construction and formulised costs for associated financing and ongoing maintenance.

With the absence of government policy or legislation in place, the cost rental model and criteria are not yet fixed. However, in order to provide a gauge on cost rental affordability, this development framework plan seeks to provide accommodation at rents equivalent to 35% Net Disposable Income.

In order to assess the potential costs of the residential portions of the site, proof of concept preliminary schemes and block layouts were assessed by Mitchell McDermott Cost Consultants. Current construction costs on apartment developments range from €1,950 per square metre to €2,750 per square metre, the lower range relating to very efficiently designed buildings using brick, render and punched glazing over 4 to 6 stories with reasonable allowances for fixtures and fittings and the higher range relating to high specification schemes in urban centres which command top market rents.

Construction Cost Drivers

Advice was provided on benchmark construction costs and the key apartment design cost drivers were identified. These include:

- The shape of the building, in how it affects the wall-floor area ratio. For example, slender floor plans have a greater cost per floor area, due to a higher proportion of external facade. However, they have better daylight penetration as a result.
- The net to gross calculation, which is both a cost driver but also a revenue driver from a rental perspective.
- Number of apartments per core. The cost of a core (lift, stairs and associated space) can range between €75,000 to €100,000 for each floor level. Higher numbers of units per core will allow the cost for the core to be split across a greater number of units.
- Dual Aspect ratio - while this is not a cost driver in itself, it is affected by the number of units per core and the net to gross ratios.
- Minimum Floor areas. Ultimately all floor space provided will affect the monthly rent levels. The merits of providing additional floor space over and above the Department's Apartment Guidelines was noted. For example, the recent apartment guidelines require that over half of the units exceed the minimum areas by a minimum of 10%, unless the scheme is designated as a "build to rent" scheme in planning terms and compensatory measures such as communal amenity rooms are provided. This additional floor area inflates the construction costs, leading to higher rents.

Preliminary design studies have found that in order to achieve the site's dual aspect requirement of 50%, and given that the extra 10% rule is achieved almost by default in the building geometry, there is little advantage in designating the scheme as a build to rent The benefits of the BTR designation are not required whereas the compensatory measures could adversely affect the economics of the scheme.

Additional Cost Drivers

A high level estimate of the construction costs were key to establishing the potential rent levels for the cost rental scheme. However, there are a number of additional other cost drivers and these also have a significant bearing on the expected cost-rental levels. These include:

- What statutory fees and contributions are applicable
- Confirmation on the site cost (assumed zero in this instance)
- Estimates for professional, finance, legal fees, etc.
- Estimates for maintenance, management and life cycle costs.
- Estimates for financing costs, including term of loan and interest rate
- Estimates on the allowance for Rental Voids (units left vacant between tenant change-overs).
- An estimate of the project timescale. Inflation in the construction industry is a significant factor and delays in the scheme have the potential to add c. €300,000 per month to the costs.
- An estimate of the project phasing.

Assumptions on the above factors were built into the cost analysis. Calculating a high level estimate for the expected rent levels for the cost rental units was then undertaken.

Important disclaimers on the costing exercise should be noted as follows:

1. The proof of concept scheme presented in this Development Framework Plan features a number of zones, each of which feature an assortment of uses including social and cost rental accommodation. Deciding on the funding and split of (1) development costs to the cost rental accommodation versus (2) other uses on site (including social housing) is beyond the remit of this framework plan but is a recommended next step in the delivery of the scheme.
2. For the purposes of testing a financial model and to act as a benchmark study, it was assumed that Zones 3 and 4 would be cost rental only. (In reality up to 30% of the units would be offered as social housing). See zoning map on page 53 for reference.

Rent Levels

Order of magnitude costs ("OMC", a high level costing exercise) were then prepared for the proof of concept indicative proposal and used to estimate the expected monthly rent for the four unit types (studio, 1 bed, 2 bed and 3 bed) using a range of scenarios, to test the effect of the different cost drivers. For example,

- it was found that by reducing the gross floor areas by 4% the monthly rent reduced by 2%,
- increasing the term of the financing, reducing the allowance for vacant units, and reducing the figure for maintenance and lifecycle costs can all make a significant difference to the affordability of the units.
- increasing the affordability band to 40% of net disposable income offers the potential to allow provision of larger affordable units to cater for larger family types.

For a 1 bed unit, with reference to affordability for an individual earning €50,000 per annum, 35% of the monthly net income would provide a monthly rent of €1,073 and 40% of the monthly net income would provide a monthly rent of €1,226.

For a 2 bedroom unit, with reference to affordability for a couple earning €75,000 per annum, 35% of the monthly net income would provide a monthly rent of €1,554 and 40% of the monthly net income would provide a monthly rent of €1,765.

The conclusion that can be drawn from the costing exercise is that it is possible to deliver an affordable cost rental housing development on the site, but it is essential that all key cost drivers are carefully managed.

Conclusion

Conclusion

This Development Framework Plan and the proof of concept indicative proposal provide a firm basis for briefing a design team to undertake the design and construction of a sustainable neighbourhood of the highest quality that is a balanced response to competing considerations of affordability, sustainability, development standards, mobility, safety and placemaking of quality.

The development proposed is predominantly residential in nature, supplemented and supported by community facilities and a neighbourhood centre fronting a new civic space off Emmet Road. The residential accommodation proposed is a mix of Social Housing and Cost Rental Housing. This Cost Rental model of housing is a first-in-type initiative for Dublin City Council that must relate to affordability for low to middle income earners.

Overall, in excess of 50,000 m^2 of construction is envisaged, divisible in five tranches that may be delivered simultaneously or in sequence subject to planning permission.

Sketch Model of Proof of Concept Indicative Proposal

Recommendations

Recommendations

Dublin City Council Housing & Community Services will coordinate and manage the implementation of the Development Framework Plan.

It is critical to see the Development Framework Plan as a holistic strategy. Delivery of each of the elements will require a series of ongoing negotiations with funding agencies to secure the necessary budget allocations needed for successful implementation of the whole plan.

The success of the project will depend on multiple factors, perhaps the most important of which is achieving the right balance between competing demands for the site. Issues of density, height, size and quality of public realm, housing mix, housing typologies and construction costs will need to be carefully monitored as the project progresses to the next stage.

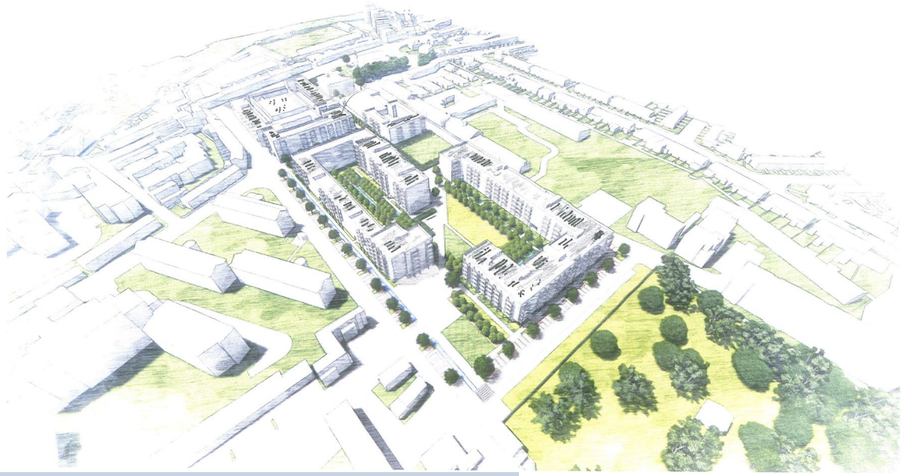
The importance of the project's financing arrangements should not be underestimated. While economic layouts and construction systems can assist in ensuring that cost-rental levels are kept within acceptable limits, the choice of funding model and length of loan tenure has a far greater degree of influence in establishing the levels of rent for users.

Given the investment required to bring the project to fruition, it would be beneficial for DCC to view the development as a long term asset. Effective regular maintenance and sensitive management of the development will be key in creating a desirable residential neighbourhood that flourishes over time.

In this regard it is important that the maintenance and management is carried out under the supervision of a professional management company. The sale of all or parts of the development to third parties, (including tenants via a tenant purchase scheme), could interfere with the ability to maintain this.

The mix of social and cost rental housing tenures on the site has the potential to achieve a diverse neighbourhood that can act as an exemplar for similar developments in the future. A key factor in combating social housing stigma will be to ensure that there is no visible differentiation between social and cost-rental homes in the completed development. Pepper-potting, whereby the two tenures are dispersed amongst the site, will be an important principle to establish from the outset.

The principles of pepper-potting will be more easily achieved if the social and cost-rental elements are under the same management. This will also allow for the same design standards (eg. sprinklered vs. non-sprinklered layouts) and allow for a more flexible distribution of unit sizes amongst the two tenures.



Overview of Proof of Concept Indicative Proposal

Next Steps

Next Steps

The Development Framework Plan provides a set of guidelines and briefing parameters to inform a development proposal involving commercial, community and residential development with a housing mix of social and cost rental accommodation. The following measures are identified as the next steps towards realising this development:

- To appoint an integrated multidisciplinary design team to prepare a detailed design proposal based on the Development Framework Plan.
- To engage in public consultation with local residents, businesses, community groups and representatives.
- To prepare Environmental Scoping Reports for the subject site in anticipation of an application for planning permission under Part 10 of the Planning and Development Act 2000 (as amended)
- To prepare a Conservation Report to evaluate the impact of proposed development on the setting of the Richmond Barracks Exhibition Centre, on the setting of the Goldenbridge Cemetery and on the fabric of the remnant of historic wall at the junction of Emmet Road and Saint Vincent Street West.
- To undertake a commercial appraisal of the marketability of the commercial elements to potential retailers and commercial operators.
- To undertake a comprehensive mapping of the utilities infrastructure on and adjoining the subject site (to verify the information in Appendix 2) and to establish the capacity of the existing/proposed networks to supply proposed development.
- To develop an integrated strategy for public lighting and security monitoring in the public realm.
- To complete a full ecological survey of the existing site and adjacent areas (between the Grand Canal and the Camac River) to establish baseline data regarding biodiversity.
- To commission a geotechnical investigation of the ground including trial holes and a survey to establish the water table level and bearing and percolation capacity of the soil.
- To prepare a Mobility Management Plan to promote travel by sustainable modes of transport.
- To develop a management and maintenance strategy for the whole development.
- To prepare a strategy for enhanced security based on stakeholder requirements including CCTV coverage and GDPR issues.
- To further explore expressions of interest from Fitness Centre operators and Childcare Centre operators.

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Recommendations for Site Development Works for Housing Areas

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Sport England Comparative Sizes of Sports Pitches and Courts, September 2015 Update

Briefing Documents

Outline of Service Provision and Schedule of Accommodation Requirements

Dublin City Council Indicative Briefing for a Community Library, available from DCC Libraries and Archive Service

Benchmarks (Non Dublin City Council)

Aberfeldy Development, Canary Wharf, London, United Kingdom. Client: Poplar Harca / Prime Place Architects: Levitt Bernstein

Silchester Estate, Shalfleet Drive, London, United Kingdom. Client: Peabody Trust. Architects: Haworth Tompkins

Vaudeville Court, Saint Thomas's Road, Islington, London, United Kingdom Client: London Borough of Islington. Architects: Levitt Bernstein

Burridge Gardens, Clapham, London, United Kingdom Client: Peabody Trust, Architects: Hawkins Brown

Peckham Library, 122 Peckham Hill Street, Peckham, London SE15 5JR. Architects: Alsop and Stormer Architects