ABK Architects

Design Statement

Older Persons' Accommodation
at
The Orchard Site
Kings Island
Limerick

June 2019

CONTENTS

1.0 Introduction

In 2014 Limerick City Council appointed a Design Team, led by ABK Architects, to develop a design for sheltered housing to cater for the needs of older persons on the Orchard Site at Island Road and Castle Street, Kings Island, Limerick. The design team consists of ABK Architects, Punch Consulting Engineers, Homan O'Brien Environmental Engineers and AECOM Cost Consultants.

The project was divided into to design stages, namely:

- The preparation of a context study of the immediate environs in order to establish an understanding of the character of the wider area in question and its relationship to the Limerick City.
- The development of a design for sheltered housing on two sites separated by Old Dominick Street, 'The Orchard Site' and 'The Garden Site'.

Aerial view of site from South West

2.0 Site Description

The Site consists of two discrete areas of development bisected by Old Dominick Street: 'The Orchard Site' to the north and 'The Garden Site' to the south.

2.1 The Orchard Site: This portion of the site is defined to the north by Island Gate, a narrow, predominantly single-storey residential lane, to the west and south by Old Dominick Street and to the East by the Northern Relief Road Known as Castle Street. The site is enclosed along its northern and western edge by substantial C19th walls which are characteristic of this particular quarter. Internally, the site is divided into two sections with the southern section being partly-used as a surface carpark run by Shannon Heritage serving King John's Castle while the northern section of the site is covered in vegetation and roughly defines the area of the site occupied by the city wall and defensive 'fosse', which together form part of the recorded archaeological monument and a Protected Structure known as the Limerick City Walls. There are no permanent existing buildings on site at present. There are a number of containers / port-a-cabins used in the running of the carpark.

2.2 'Garden Site': This portion of the site consists of a fragment of land defined by low garden walls to adjacent residential properties to the south, by palisade fencing along its frontage to Old Dominick St and by a section of new stone walling to Castle St that was built as part of the inner relief road works. Once occupied by a terrace of cottages, the site is currently occupied by a temporary communal garden.

3.0 Archaeology, Monuments and Protected Structures

The Site is within the zone of archaeological potential for the City of Limerick. And is within the North-Western corner of English Town, which was walled in the medieval period and refortified in the seventeenth century.

Remains of the medieval city walls cut across the site running from Verdant Place, through the Orchard Site to St Mary's Convent. This town wall, together with its towers, gates, defences, and other features including the 'Fosse' identified within the Study Area collectively have become known as the "Limerick City Walls". This monument is both a recorded archaeological monument (an element of RMP LI005-017---) and a Protected Structure (RPS various numbers in City Development Plan). As such, the monument 'Limerick City Walls' has legal protection under the National Monuments Acts 1930-2004 and the Planning and Development Acts. The Heritage Act (1995), and The Heritage Council is now furthering this protection and public knowledge of walled towns through the Irish Walled Towns Network (IWTN).

Analyse of Historic setting overlaid with existing site plan - Policy BHA.4 (Protection of Limerick's Historic Street Pattern & Medieval Plot Widths) It is the policy of Limerick City Council to protect Limerick's historic street pattern, and in particular, seek to conserve and enhance the laneways within the setting of the streetscape and seek to retain and protect historic building lines and traditional plot widths where these derive from medieval origins

A detailed Archaeological appraisal was carried out for 'The Orchard Site' (Plot 1) and 'The Garden Site' (Plot 17) by Arch Consultancy Limited to ascertain the nature, extent and location of any archaeological remains on the site in question. A copy of this report has been submitted as part of this application.

The investigation found evidence of a small section (approx. 1.2m in height including foundation) below ground level of the medieval town wall together with fosse as well as the remains of C19th dwelling houses, drains and laneway. Findings were documented and mapped onto the existing site survey.

There are a number of significant monuments and protected structures in the vicinity of the site including:

- King John's Castle: Constructed in the C13th marks the western end of Castle Street and the point of arrival upon crossing Thomond Bridge.
- The Bishop's Palace: Home to the Church of Ireland bishopric until their move in 1784, it dates from the C17th and is considered one of the oldest domestic buildings in English Town. It is currently the home of The Limerick Civic Trust.
- Villiers Alms House: designed by James Pain in 1830 and constructed in the gardens of the Bishops Palace, it marks the northern edge of Old Dominic Street.
- St. Munchin's Church (Church of Ireland): Built on the site of the original medieval church, the current building was built in 1827 to designs by the Pain brothers. The church was renovated in 1980 by the Limerick Civic Trust.

Site plan indicating structures of archaeological / architectural importance

While the site is within the heart of the medieval City of Limerick and immediately adjacent to King John's Castle, the relatively recent construction of the Northern Relief Road and in particular the associated round-about has resulted in the destruction of much of the medieval urban fabric, plots, routes and connections. This new road has cauterized the northern end of the mural city from the main body of the historic city of Limerick and in particular has severed the pedestrian thoroughfare of Mary Street, Nicholas Street and The Parade that once linked the Cathedral via the Castle to the Bishop's Palace and St Munchin's.

4.0 Planning Context

4.1 Relevant Policy Documents

The proposed design is informed by The Limerick City Development Plan 2010 -2016 (LCDP) which defines the principles of planning for the area and the Limerick Regeneration Framework Implementation Plan (LRFIP) which sets out objectives for the rejuvenation and redevelopment of various areas of Limerick which have become dilapidated and disconnected from the general urban fabric. Both documents have been referred to and have informed the design of this project.

4.2 Zoning

The application site is zoned '2A Residential' in The Limerick City Development Plan. The proposed development accords with this primary zoning.

Development Plan Objective ZO.2 (A) seeks "to provide for residential development and associated uses", while Objective ZO.1(C) 'Inner City Residential Neighbourhoods' looks "To reinforce the residential character of inner city residential neighbourhoods, while supporting the provision and retention of local services, and civic and institutional functions" The proposed development is supportive of these objectives

Policy BHA.4 (Protection of Limerick's Historic Street Pattern & Medieval Plot Widths) pertains to any proposed development as it is the policy of Limerick City Council to protect Limerick's historic street pattern, and in particular, seek to conserve and enhance the laneways within the setting of the streetscape and seek to retain and protect historic building lines and traditional plot widths where these derive from medieval origins. This has informed the design approach to this project.

Policy BHA.7 of the Limerick City Development Plan recommends the promotion of Limerick's Medieval City Walls with a view to improving public awareness and increasing knowledge and appreciation of this historic defensive infrastructure.

4.3 LRFIP Objectives

The site lies within the boundary of the 'St Marys Park Regeneration Area' as described in The Limerick Regeneration Framework Implementation Plan (LRFIP). The LRFIP outlines a strategy for the redevelopment of the area. This strategy has informed the proposed development.

The LRFIP sets out the key challenges and opportunities for the area including the creation of a more balanced social mix of housing by the provision of private and affordable housing and the necessary social and economic infrastructure to support the economic needs of the communities. The LRFIP Social Framework Strategy outlines a number of key themes which are seen as pivotal to achieving the overall strategy. These themes are directly relevant to this development:

- Health and wellbeing - with age-appropriate provision;
- Ageing Well, Health and Well-being of Older People - neighbourhoods to reflect changing demographics and respond to the particular needs of older residents;
- Community development and participation- empowerment and capacity building;

LRFIP further outlines a Physical Framework Strategy which sets out the basis for a more coherent and sustainable use of land in the regeneration areas, which makes socio-economic development more likely, improves housing quality and placemaking. The strategic objectives of the Physical Framework Strategy are directly relevant to the proposed housing at the Orchard Site. These factors include

- promote healthy communities
- require good design
- promote sustainable movement
- deliver a wide choice of high quality homes
- conserve and enhance the natural environment

5.0 Context Study

5.1 Introduction

As part of the development of a design for the site, a study of the wider site context was carried out by the design team encompassing the area currently dominated by Castle Street, an inner relief road constructed in the 1990's which cuts through the medieval core of Limerick separating the Orchard site and more significantly, the residential quarter known as St Mary's Park from the medieval city to the south. The objectives of the study may be outlined as follows:

- To integrate the Study Area into an overall strategy for the King's Island area with particular emphasis on creating legible vehicular connectivity and access to Mary's Park and beyond
- To outline a medium/long-term strategy for the realignment of Castle Street so as to create a civilized and appropriately scaled urban thoroughfare;
- To create a context for the future development of adjacent sites and in particular the Orchard site by addressing matters of building alignment, frontage and height as well as the long-term creation of public and private open space; and
- The integration of existing fragments of city wall that traverse the Study Area into an overall urban design strategy.

5.1 Monuments and Architectural Heritage

The study identified the extent of archaeological fragments, monuments and public buildings of architectural interest that define the character of this part of the city.

Outline of context study findings showing the potential to create two clear, legible routes to St Mary's Park, one directly along Upper Island Road and a second route along Island Gate via Verdant Place which follows the line of the City wall and defines and makes legible the edge of the medieval city

5.2 Linear Park and City Walls

The study resulted in a potential long-term plan to extend existing green swathes that follow the line of the medieval City Walls (such as those found at Verdant Place and along Castle St) so as to create a continuous linear park along this section of the City Wall that would connect Verdant Place through the Orchard Site to Castle Street and Lower Island Road.

Subject to detailed study, context study found the potential for the creation of a new pedestrian route, 'City Wall Walk", that follows the line of the city wall across the Orchard Site together with the introduction of a park/ green space that would incorporate the original 'fosse' that formed part of the medieval defences and that would provide both amenity and pedestrian connectivity to those in adjacent residences.

Site plan illustrating a potential line of existing open/green space along the line of the city walls

5.3 Urban Morphology

The study identifies the original urban morphology of the northern end of English Town as a critical part of the city fabric. The C19th stone boundary walls that run along Church Street enclosing St Munchin's, the Villier's Alms Houses and the Orchard Site provide much of the character to this quarter of the city. These boundary walls have been identified by LCC Conservation Officer as an important element of the urban fabric and should be retained where possible and in particular along Old Dominick Street. The study identifies the retention of these walls as key to retaining the character of this Quarter.

Plan illustrating the potential for a series of linked public spaces

5.3 Existing Urban Edge

The recent extension of Castle Street (Inner Relief Road) through existing city fabric to link with Island Road Lower has resulted in extensive damage to the legibility of this area, erasing medieval

grain such as Broad Lane and the remains of St Dominick's Abbey.
The study resulted in potential outline strategies for the re-instatement of street edges and building lines with a view to re-establishing a sense of containment and creating public spaces.

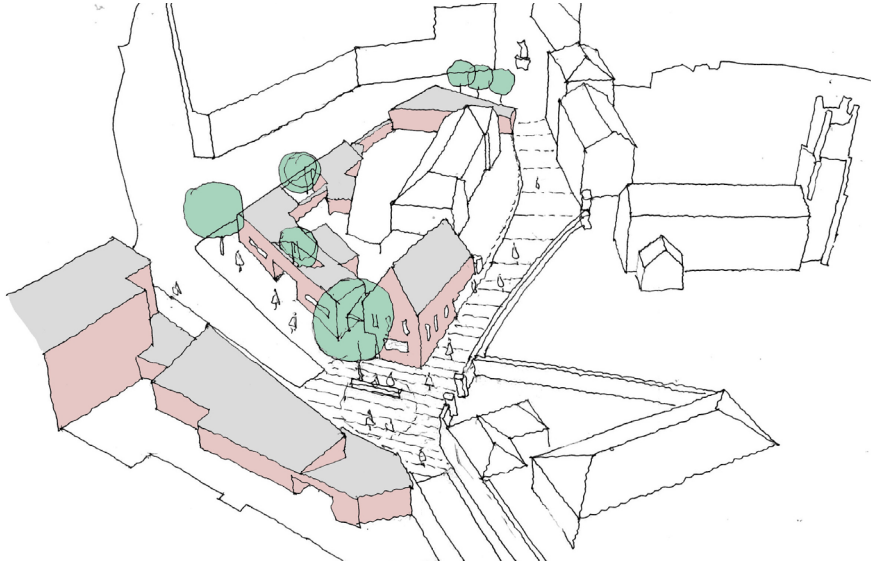
5.4 Existing Pedestrian Routes, Spaces and Connections

Mary Street and St Nicholas Street once marked the central spine of the medieval city of Limerick connecting St Mary's Cathedral to King John's Castle and linking Ball's Bridge to Thomond Bridge and Island Gate to the north. The study area incorporates the northern section in this linear route which, although disrupted by the re-aligned Castle Street retains much of the character and incident that was once a part of an unfolding sequence of urban spaces.
The study found the potential to reconnect the Study Area with the medieval Town to the south by creating a sequence of public spaces pedestrianized / shared-surface areas.

5.5 Dominick Street and Square

A public space is possible at the junction of Church Street and Old Dominic Street. This space is defined by the development for Older Person's Accommodation on the 'Orchard' site, the' Garden' site and the gated entrance to Villiers Alms House. Seating, planting and pavement surface should be designed to reinforce the character of this space. Consideration should be given to closing the vista along Church Street from the south and along Old Dominic Street from the east.

Plan indicating absence of urban edge along Castle Street


Sketch illustrating potential for shared surface and public at Old Dominick Street

Aerial view of proposed Older Persons Housing at the Kings Island shown with public spaces as defined by context study

6.0 Project Description

The project seeks to deliver an appropriately-scaled residential development for older persons that will re-establish the urban grain of this much-neglected part of the city and respond sympathetically to the existing fabric of stone walls, and narrow lanes that make up this quarter.

The project looks to establish an appropriately-scaled building line to Old Dominick Street and Castle Street (The inner relief road) while creating an appropriate context to enable the development of a long-term vision for the viewing of the remaining fragments of city walls throughout the City.

The project consists of the development of 27 residential units for older persons on two plots either side of Old Dominick Street consisting of:

- Orchard Site: 17no 6no. 1-bed and 14no. 2-bed apartments in buildings varying in height from 1 to 3 storeys organised around a central garden
- Old Dominick Street Site: 3no 1-bed and 4no 2-bed apartments in buildings varying in height from 1-2 storeys

6.1 Archaeology, Limerick City Wall and the "Buildable" area of site

The proposed Orchard site lies within the "Zone of Archaeological Potential" as noted in Map 7C of the LCDP.

The medieval city wall (Archaeological Monument RMP LI005-017) runs east-west across the Orchard site and together with the original defensive 'fosse' occupies a significant portion of the northern portion of the site. Archaeological testing has revealed that there are small sections of the City Walls extant below ground level.

Ground Floor Plan in Context

An approach to building beside the city walls was developed through consultation with Limerick City Council Executive Archaeologist, who in turn consulted representatives from The Department of Culture, Heritage and the Gaeltacht.
It was agreed that any building line would be set back 5 meters from line of City Wall and Fosse with consequent reduction in the buildable area of the site. It was also agreed that where possible, existing C19th stone walls, in particular along Old Dominick Street would be retained and integrated into the development.
These approaches to archaeology and existing fabric underpin the design strategy.

6.2 Urban Design Strategy

The design is informed by strategies and approaches identified in the study of the wider context. These include:

6.3 Connection and Enclosure

The development looks to re-establish a connection with the medieval town to the south by extending the sequence of public spaces and shared-surfaces from 'The Parade' past 'The Bishop's Palace' through to the intersection of Dominick Street and Church Street and beyond.
It is proposed to create a new informal public space or moment of 'visual incident' at the intersection Dominick Street and Church Street,
Here, a new corner building with its tall north-facing elevation a focus for this corner and closes the vista along Old Dominick Street from the east. A stone bench is proposed to the base of this structure to create a place of rest and gathering for passes by while a specimen tree set in the pavement provides relief and greenery.
This informal space is seen as an extension of the shared surface that currently exists along Church Street. It is proposed that the brick paving of

View South along Old Dominick Street and the terrace at City Wall Walk showing retained C19 walls

Church Street be extended along Old Dominick Street towards Castle Street so as to reinforce this pedestrian-friendly area. (A raised table is proposed along this section of street as part of an approach to traffic calming.)
This urban corner is further animated by the retention of the stone arched gateway that will form a pedestrian entrance to the sheltered housing on the Orchard site.

Urban Enclosure
In order to maintain the enclosed mural character of Old Dominic Street, the existing stone walls to the Orchard Site have been retained. The building line of previous structures has been used as a guide so that the character of the quarter might be retained.

6.4 City Wall Walk:
Policy BHA.7 of the Limerick City Development Plan recommends the promotion of Limerick's Medieval City Walls with a view to improving public awareness and increasing knowledge and appreciation of this historic defensive infrastructure.
In keeping with this strategy, the design proposes the introduction of a new pedestrian route, 'City Wall Walk' a broad esplanade that follows the line of the city wall across the Orchard Site. This new walk will allow members of the public to trace the line of the city wall from Verdant Place to the remaining mural fragments along Castle Street and beyond.
As part of this strategy to reveal the line of the City Walls, a new opening is proposed in the existing stone wall of Old Dominick Street. A ramped approach will connect the existing pavement level with the higher ground level within the site.
Where the existing fragment of the city wall is exposed along the northern face of the ramped approach, the wall will be exposed to view.

Aerial view in context

For the majority of the new Walk, it is intended that the fragments of city wall will remain covered. Stone slabs laid flush with the adjacent pavement will be used to demarcate the line of the wall. It is proposed to integrate a narrative / map into the adjacent walls illustrating the historic context

6.5 Green Space and Fosse
As part of the overall conservation strategy for the city wall, it is proposed to maintain a green swathe on the site of the original 'fosse' that formed part of the medieval defences. This space will be enclosed by existing stone walls along Island Gate and Old Dominick Street with the introduction of new railings onto Castle Street. It is proposed to treat the space as a meadow seeded with wild flowers and planted with selected trees.
The proposed arrangement will facilitate the development of a new park as part of a long term strategy to promote Limerick's Medieval City Walls by creating a continuous linear park connecting Verdant Place through the Orchard Site to Castle Street and Lower Island Road. This approach is in line with findings of the wider context study document prepared as part of this design process.

6.6 Design Strategy: 'Orchard Site'

The proposed development on the Orchard Site looks to create a secure, residential community organized around a central, private, south-facing communal courtyard while forming a varied and animated edge to the city. This part of the project consists of three integrated parts that together form a coherent development.

Apartment Building: A three-storey apartment building marks the eastern end of the site. This volume looks to provide an appropriate scale and level of enclosure to the arterial route that is Castle Street. The building cranks to follow the curve of the street and forms a distinct corner to the north marking the head of 'City Wall Walk' point where the City Wall crosses Castle Street.

The building is organised with three units per floor around a common stair and lift. Each unit is 'dual-aspect' by availing of various corner conditions. The apartment foyer is accessed directly from Castle Street giving active frontage to the street while providing direct access for residents to the communal garden.

View of Apartment building looking South along Castle Street

Residential Terrace: A two-storey residential terrace forms the northern side of the private communal garden with its front doors and gardens addressing the new pedestrian route, 'City Wall Walk' that follows the line of the medieval wall.
Expressed as a series of 'houses' linked at ground level with upper floors expressed as separate, articulated roofs, the terrace consists of a series of apartments, accessed directly from City Wall Walk with first floor 'walk-up units' being accessed directly from the street via independent, internal stairs. Both ground and first floor units have direct access to the central communal garden.
The western end of the terrace cranks to align with the geometry of the historic city wall and engages with the C19th stone wall of Dominick Street. A first floor balcony animates this corner when viewed from Island Gate.

Perimeter Walls: In keeping with Limerick City Council's Policy BHA.4 which recommends the protection of Limerick's Historic Street pattern, it is proposed to retain the existing stone walls that define the west end of Old Dominick Street.

An existing stone arched entrance is integrated into the project to form a new, gated pedestrian entrance to the communal courtyard while the western corner of City Wall Walk engages with the existing boundary walls to form new corner. Low structures such as substation and communal bin store abut the walls, their height relating to the existing.
Along the eastern section of Old Dominick Street, a new, single-storey structure is proposed that follows the original medieval building line. This single storey unit, with its front doors and windows provides active frontage along this section of street. Its mono-pitch roof allows light to penetrate into the communal courtyard beyond.


View along City Wall Walk looking East

6.7 Design Strategy: 'Garden Site'
The element of the project located to the south side of Old Dominick Street looks to re-establish the historic street pattern of the medieval city.

Consisting of a mix of one and two-bed apartments for older persons and varying in height from one to two storeys, it creates an animated urban edge to the street and forms a modest, shared, south-facing garden to the south for use by residents. Low garden walls and gates provide a defensible buffer onto the street.

At the intersection of Castle Street, a taller unit closes the vista from Island Gate and a local bench creates a moment of rest for passers-by.

Although separated from the main body of accommodation, this part of the development is linked by its expression, materiality and the repaved shared surface of Old Dominick Street.

7.0 Apartment Design

All the apartments have been designed in accordance with the spatial requirements as outlined in the "Sustainable Urban Housing: Design Standards for New Apartments" as published by Department of Housing, Planning and Local Government in March 2018. Apartment net internal floor areas are in accordance with or greater than requirements.

Specifically -Two-bed apartments have a minimum overall gross floor area of 73 m² and one-bed apartments have a min area of 50 m². (Note: The additional 5m2 above the DoE guidelines of 45M2 for one-bed apartments is required to allow for disabled access requirements in particular bathrooms)
Apartments comply with the following minimum space requirements for rooms as defined in Table 16.6 of the LCDP:

- Living room: minimum of 11 m²
- Kitchens: minimum of 5 m²
- Dining areas: minimum of 4 m²
- Bedrooms (Double) minimum of 10.2 m²
- Bedrooms (Single) minimum of 6.5 m²

In general, apartments have been designed to be dual aspect.

7.1 Private Open Space

Private open space in the form of gardens and terraces has been provided in accordance with DoE requirements with 6m² for one-bed apartments and 8m² for two-bed apartments. The majority of the terraces on the upper floors are south-facing.

View of communal garden on the Orchard ite looking East

The south-facing communal garden is modelled on the successful shared garden developed by Limerick City Council for the Southill Older Person Accommodation at Colivet Court and is designed to increase social interaction amongst residents.

8.0 Roads and Transportation

A Traffic and Transport Assessment has been carried out for the proposed scheme. This is included within the Engineering Planning Report submitted as part of this application.

Currently Old Dominick Street is a two-way street. It is proposed to make this street one-way from the junction of Island Gate/Old Dominick Street to the junction of Old Dominick Street/Castle Street.

In accordance with the DMURS, a shared surface is proposed for the section of Old Dominick Street from a new ramp/table at the junction of Church Street to the junction of Castle Street to align and match with the shared surface of Church Street. Auto track analysis has been undertaken for a fire tender and an ambulance on the existing public roads network surrounding the development.

The remaining section of Old Dominick Street to Island Gate will be resurfaced and the existing pedestrian pavement will be widened to 1.8m

A new entrance and one–way access route, City Wall Walk, is proposed to the northern edge of the Orchard Site development providing access to this new residential terrace. Access is from Old Dominick Street and exit is onto Castle Street. Access is limited to pedestrian and resident vehicles only. This new route will be designed to be a shared surface.

9.0 Car Parking

The quantum of car parking in compliance with "Sustainable Urban Housing: Design Standards for New Apartments" published by Department of Housing, Planning and Local Government (March 2018.) which states that, in higher density developments comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. (We would note that Clause 1.1 of this document states that the Guidelines apply to all housing developments that include apartments that are built specifically for rental purposes, whether as 'build to rent' or as 'shared accommodation'. Unless stated otherwise, they apply to both private and public schemes.)

In addition we would note that, while the Limerick City Development Plan sets a requirement for 1no parking space/ unit for Zone 1, the plan allows for parking provision to be relaxed in certain scenarios. A number of factors have influenced the quantum of parking spaces for the development including:

- The central location of the development adjacent to amenities and city centre.
- Adjacency and easy access to public transport
- The demographic of the population which has a limited car ownership and demand.
- The restricted nature of the site which has been exacerbated by the presence of the city wall
- The requirement to maintain the particular medieval character of streets and lanes as set out in the LCC Development Plan

On the above basis, Approx 0.4 spaces have been provided per unit equating to a total of 10no. car parking spaces for the development including 1no. accessible space. Eight spaces are provided along City Wall Walk with a further two spaces located as on-street parking on Old Dominick Street.

10.0 Environment and Waste Management:

Orchard Site: A communal, enclosed bin store located to the western end of the central court is proposed to serve all units to this part of the project. Separate bins will be provided for:

- Paper/Cardboard
- Plastics
- Tetra pack
- Glass
- Organic waste

Residents will bring their separated waste to this central store. It is proposed that bins will be taken from the bin store to the waste vehicle by the waste collection company via the gated entrance immediately next to the bin store.

Garden Site: In accordance with the requirements of the Limerick City Development Plan, space provision for three-bins (non-recyclable, recyclable and organic waste) per unit will be incorporated into the proposed development.

Ground floor units typically have bin storage located in the garden area to the rear. First floor units have bin-storage built in to the street façade. Tenants will be individually responsible for bringing their bins out to the street for kerbside collection.

11.0 Drainage

Surface Water and Foul Drainage

Investigations into the existing surface and foul infrastructure confirmed that existing infrastructure is compromised and not suitable for connection. A new dedicated surface water sewer shall be provided for the proposed development along Castle Street and Old Dominick Street. A section of existing watermain will need to be re-laid on Old Dominick Street to facilitate proposed drainage infrastructure.

It is also proposed to construct a new dedicated foul sewer to service the proposed development. This will comprise of a new network which will fall by gravity and discharge to an existing interceptor foul sewer located on Verdant Place.

A drainage design and report has been completed and submitted as part of this application. Please refer to Punch Consulting Engineers' Report.

SUDS

The scheme design will incorporate surface water management and Sustainable Urban Drainage Systems. Please refer to Punch Consulting Engineers' Report which has been completed and submitted as part of this application.

12.0 Flood Risk Assessment

A Flood Risk Assessment has been completed by Punch Consulting Engineers and this has been submitted as part of this application. The Orchard Site has been assessed in accordance with the "The Planning System and Flood Risk Management" guidelines. As part of the sequential test, the OPW flood hazard maps have been consulted, as have the Catchment Flood Risk Assessment Maps produced by the OPW. In all cases it was found that the development is at low risk of flooding and the development is deemed appropriate within the proposed site location.

13.0 Community Consultation

A public consultation meeting took place at Kings Island Community Centre, on Wednesday 30th March 2016. The proposed design for the Orchard housing scheme was presented to the group by ABK Architects. Feedback was positive and supportive.

14.0 Accessibility

The project has been designed so as to provide convenient access to tenants in accordance with current guidelines.

Old Dominick Street Site: The project follows existing street levels with internal ground floor levels being set to align with adjacent street levels.

Apartment Access:
The three-storey apartment building will be fitted with an 8-person lift in compliance with part M providing wheelchair access to all units.

Ground Floor units will have level access from adjacent pavements and will be wheelchair accessible.

First-floor units have independent access from street level via a Part M-compliant private stairs. These units been designed to allow for upgrading to full wheelchair access with space being provided within the private stair halls of each unit for the installation of platform lifts as required. The process of retro-fitting may be carried out as needed by tenants in a cost-effective manner over time.

Generally, all bathroom facilities consist of 'wet rooms' with shower facilities in compliance with BS 8300.

15.0 Materials and Construction

Further to ground investigations it is anticipated that the development will consist of piled foundations with ground beams cast between piles. The structure above ground will comprise load bearing brick and blockwork walls, hollow core precast concrete planks and prefabricated timber roof trusses. All of which prove to be economical and practical structural solutions which can utilise local skills during the construction period.

The external palette of materials will consist mainly of clay brick façades facing onto the streets and rendered walls facing into the shared courtyard space. The existing 19th century stone walls will also form part of the material palette as these walls are being retained and incorporated into the development. The decision to use brick as the primary external material was informed by local precedent along Church Street, Island View Terrace, Island Gate and the desire to be aesthetically consistent within the context of residential buildings around the site. Additionally, brick is a low maintenance, durable material which will prove desirable in this context

Study of elevation and material palette

16.0 Services & Sustainability

16.1 Electrical Supply

The availability of the electrical supply to the development has been confirmed. An electricity supply to the development shall be taken from an existing ESB substation on the site, A new substation will be provided as part of the new development.

This new substation will supply numerous recessed mini-pillars thereafter strategically located in the new development. Each residential unit shall be provided with individual low voltage electrical metering in accordance with the ESB Code of Practice for Customer Interface and ETCI Regulations. The apartment block to the East will have a meter cupboard located in the shared core at ground level. This strategy has been approved in principle in advance with the ESB.

16.2 Telecom/Internet Services

A new Eir incomer to the development shall be provided from an existing Eir supply duct. Multicore telephone cables shall be installed by Eir and terminated in a new junction box and distributed to each residential unit.

Data services cabling shall be installed to permit each residential unit to receive broadband via DSL or via cable modem link as required.

16.3 Television

Cable television services to each residential unit shall be provided. The associated cabling to each residential unit shall be provided from a new central Communications Distribution Hub, the location of which to be agreed with the provider.

16.4 Heating

Air source heat pump technology is a viable solution for this project and will be included in the development as part of the measures to achieve NZEB compliance. Each apartment will have a central heating system supplied by an exhaust air heat pump system. This exhaust air heat pump system will also provide mechanical ventilation and heat recovery for each apartment.

16.5 Thermal Performance

The 'U' Values of individual Building Elements in addition to the overall average 'U' value of the scheme will be compliant with the NEZEB requirements. The building fabric will have the following target performance

- External wall 0.12 W/m2k
- Roof 0.14 W/m2k
- Ground 0.14 W/m2k
- Windows 1.2 W/m2k (Double glazing)
- Thermal Bridging 0.08 W/m2.K

16.6 Renewable Technology

A total of No.45 photovoltaic panels are proposed for the scheme to provide renewable energy in accordance with Part L. The basis of calculating the appropriate number of PV panels for the scheme is detailed in the Mechanical & Electrical & Sustainability Report which has been submitted as part of this application. The PV solar panels will be located across the main roof levels.

16.7 Water Saving Measures

The water supply for the site will be taken from the mains network. There are a number of features which will be included in the design of the water services installation which will reduce the consumption of potable water. Low use appliances such as aerated taps, dual flush WC's and low water use showers will be installed throughout the development.

The maximum water consumption for various appliances is detailed in the Mechanical & Electrical & Sustainability Report which has been submitted as part of this application.

View of apartment building from Castle Street looking North West

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