Architectural Design Statement

Development at Rosshill, Galway

On behalf of Alber Developments Limited

ALBER DEVELOPMENTS

O'Neill | O'Malley

RIAI Practice Member 2021 | Practice Accredited in Conservation G3

Architecture + Project Management

London • Galway

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Proposal Introduction

This architectural design statement has been prepared in support of a full planning submission to the strategic housing development process by Alber Developments limited (the applicant) for a development on lands at Rosshill, Galway.

The application is for a development consisting of a Childcare facility, a commercial retail space & No.102 residential units comprising of 67 no. houses and 35 no. apartments broken down to:

- 11no. 1-bed 2-person Apartment
- 21no. 2-bed 4-person Apartment
- 03no. 2-bed 3-person Apartment
- 08no. 4-bed 2 story semi-detached Houses
- 24no. 3-bed 2 story semi-detached Houses
- 15no. 3-bed 2 story end of terrace Houses
- 15no. 3-bed 2 story semi mid terrace House
- 05no. 4-bed 3 story town house terrace Houses

The proposed development includes a commercial/ retail unit and a two-story childcare facility. Also proposed is provision of public realm landscaping including shared public open space and play areas, public art, public lighting, resident and visitor parking including car rental bays, electric vehicle charging points and bike rental spaces along with pedestrian, cyclist and vehicular links throughout the development. Included are access road and junction improvements at Rosshill Road/ Old Dublin Road & provision of all associated surface water and foul drainage services and connections including pumping station with all associated site works and ancillary services. A Natura Impact Statement ('NIS') and Environmental Impact Assessment Report ('EIAR') have been prepared and accompany the application.

The overall site measures approximately 4.7042 hectares of which approximately 2.844 hectares are considered developable. The provision of 102 residential units across the site equates to a density of 35.8 units per hectare. The Plot ratio equates to 0.41 with a site coverage of 17%. The site is located to the east of Galway City and is located south of Merlin Park University Hospital. The Galway to Dublin railway line partially adjoins the site to northern boundary.

The Design Team

Client	- Alber developments Ltd.
Planning & Environmental Consultants	- McCarthy Keville O'Sullivan
Architect	- O'Neill O'Malley Architects
Civil, Structural & traffic engineering	- Tobin Consulting engineers
Services & Public Lighting	- Tobin Consulting engineers
Arborist	- Cunnane Stratton Reynolds
Landscape Architect	- Cunnane Stratton Reynolds
Archaeology	- Ms Miriam Carroll, Tobar Archaeology
Mechanical & Electrical Engineers	- Moloney Fox Consultant Engineers
Topographical Surveyor	- PK surveys
Macroworks	- LVIA photomontages
Integrated Environmental Solutions	- Daylight Analysis

Aims

The aim of the proposal is to create an inclusive community that respects the sylvan character of the area but acknowledges the sustainable growth of Galway city in a regional context. The proposal looks to provide connectivity throughout the scheme that priorities the individual rather the vehicle. Also to ensure the locality and sylvan context would be connected to as much of the proposed route finding, vistas and amenities as possible while creating a sense of place.

Through this architectural design statement, it is aimed to: describe the proposal; outline the conceptual & design process; how the existing site context and landscape is respected; show how ministerial, local authority and development standards are met and exceeded and how the proposal will be ecologically and socially sustainable.

Methodology

The purpose of this design report is to describe the development in detail including information relating to the context, design analysis & concepts, layout responses and access.

The report has been divided into the follow sections:
Section 01 - Site location & description
Section 02 - Site Analysis, Concept & Development regulatory concerns
Section 03 - Design Statement - Neighbourhood
Section 04 - Design Statement - Site
Section 05 - Design Statement - Home

Sections 3, 4 and 5 are structured along the 3 groups and the 12 key criteria considered and set out in the *Urban Design Manual – A Best Practice Guide 2009* which is referred to in page 123, Chapter 8.7 Urban design of the *Galway City Council Development Plan* ***2017-2023.***

Section 01 - Site Location

1.1 Regional/ Wider Context

Figure 01. Wider Context

1.2 Site Aerial - Local Context

Figure 02. Aerial Image

1.3 Site Aerial - Immediate Context & adjacent uses

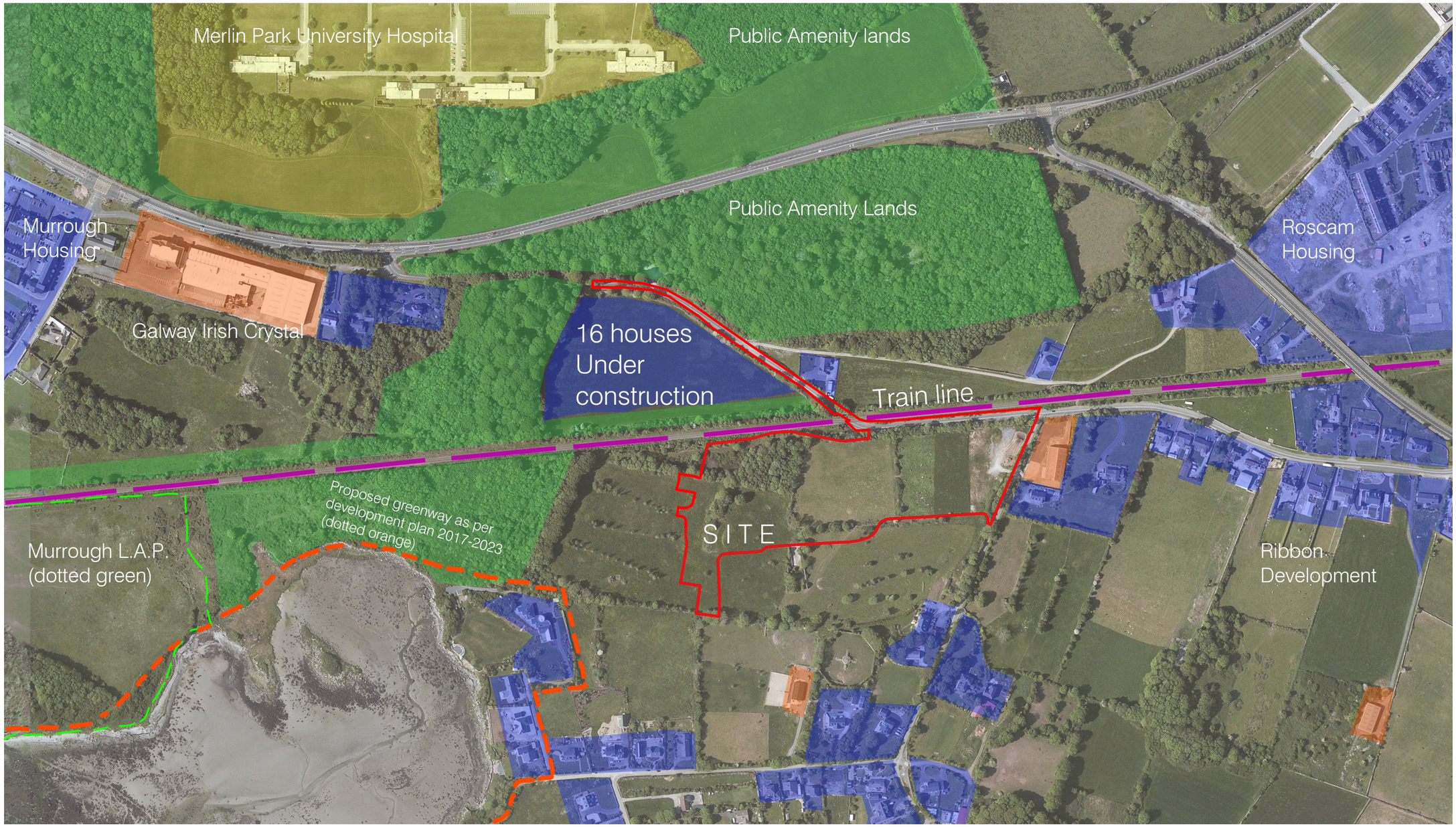

Figure 03. Aerial Image showing adjoining uses.

Section 02 - Site Analysis & Development regulatory concerns

2.1 Site description

The site is located to the east of Galway city and south of Merlin Park University Hospital and old Dublin road (the R338). The site is 5km by car from the Eyre square, the perceived centre of Galway City and 3.8km by car from Main street, Oranmore.

The development site is accessed from the Rosshill Stud Farm Road just off the Rosshill road, south of the existing railway bridge. The Rosshill Road can be accessed from the Old Dublin Road (R338) via a junction close to Galway Irish Crystal to the north and from the Coast Road serving Oranmore from the east.

The overall site measures approximately 4.7042 hectares of which approximately 2.844 hectares are considered developable. The Galway to Dublin/ Limerick railway line bounds the site to the north. North of this Railway line a housing development of 16 houses is currently under construction (Galway City Pl reg. ref. 16/228). To the east of the site is Agricultural/ high amenity lands and beyond this are the Murrough Local Area Plan lands. To the west is what appears to be a family business unit and some one off houses following a typical ribbon development.

The south of the site is bounded mainly by undeveloped zoned low density residential land. These lands are backed onto by ribbon development of one off houses and a small stud farm.

To the southeast, close to the site is an orthogonal stone walled folly (Recorded monument GAO94-070). It is unclear the purpose of the folly. Regarding this please refer to Archaeological report enclosed. Adjoining this is a large dwelling which had been converted to a number of apartments.

The site was previously a par 3 pitch & putt course. The newer landscaping and typography including bunkers and hillocks show evidence of this. Close to the centre of the site is an old farmstead in ruins. Vegetation has taken to allot of the farmstead ruins. To the central part of the farmstead a modern concrete apron & walls has been constructed for the use as a modern silage storage pit. 40sqm of this concrete slab is within the site boundary and proposed for removal. The typology is generally flat except for falls in level forming a ridge generally running north to south, located to the west of the site. A report on the farmstead ruins and archaeology on the site is enclosed.

A triangular copse of trees are located to the northeast but are of a low quality. It is proposed to maintain & enhance the best quality existing trees where possible. (Please refer to enclosed arborist & tree survey). The intention of the proposal is to maintain as much tree group (no. 6 & 7) as possible and its existing stone walling, maintaining the existing site character.

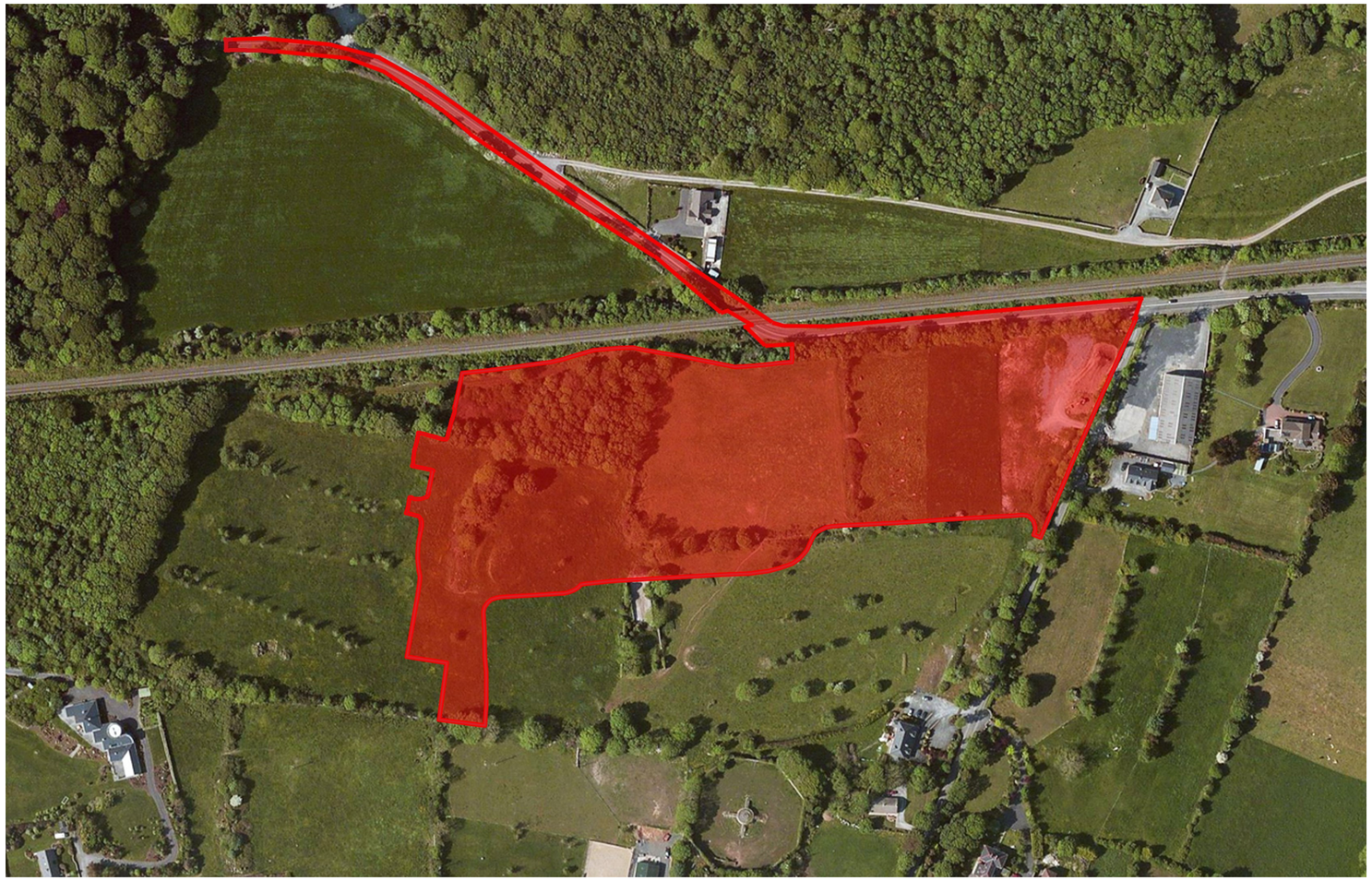

Figure 04. Site Aerial - Immediate context

2.2 Site Photographs - Location Key

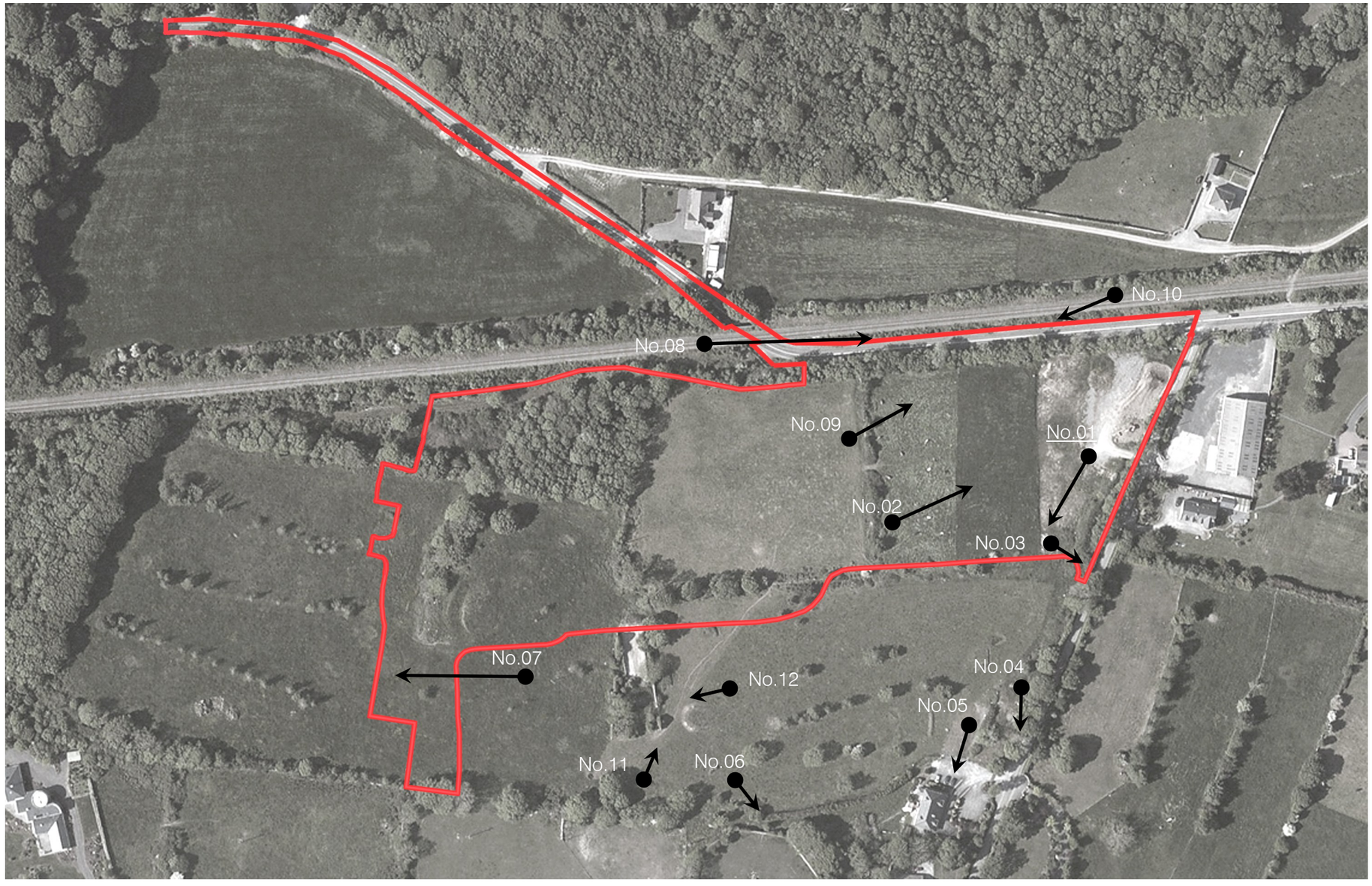

Figure 05. Location of Photographs

2.2 Site Photographs

.01

.02

2.2 Site Photographs

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2.2 Site Photographs

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2.2 Site Photographs

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11.2.8 Residential R and LDR Land Use Zoning Objectives

Zoning Objective R **To provide for residential development and for associated support development, which will ensure the protection of existing residential amenity and will contribute to sustainable residential neighbourhoods.**	
Zoning Objective LDR **To provide for low-density residential development which will ensure the protection of existing residential amenity.**	
Uses which are compatible with and contribute to the zoning objective, for example:	• Residential • Residential institution • Outdoor recreational use • Accommodation for Travellers • Local shops, local offices, licensed premises, banks & other local services • Buildings for education • Childcare facilities • Buildings for the care of the health, safety or welfare of the public • Buildings for community, cultural or recreational use
Uses which may contribute to the zoning objective, dependent on the R and LDR location and scale of development: for example:	• Hotels, Guesthouses, Hostels and B&B's • Part conversion or extension of private residence to studio, office, childcare facility or small enterprises by the occupier of the dwelling, at a scale as would not unduly interfere with the primary use of the dwelling • Places of worship • Public utilities

Figure 6 : Galway Zoning objectives. Relevant zoning outlined in black

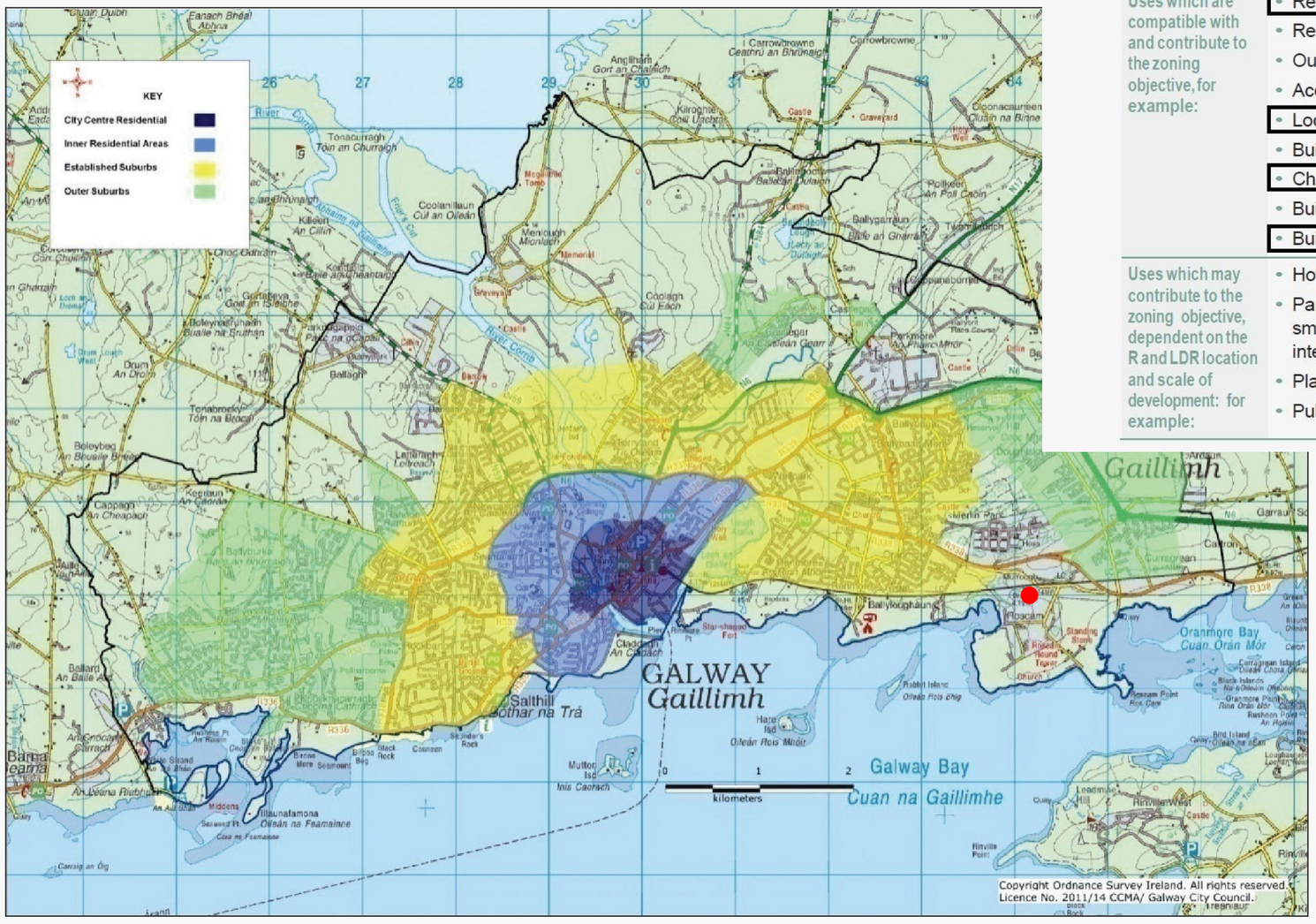


Fig. 11.27 Neighbourhood Areas

Figure 7 : Galway City Residential Neighbourhoods. Site approximate location in RED

2.3 Land use zoning - Zoning Map

Galway development plan 2017-2023 - zoning map extracts

Figure 08 : Galway City Zoning Map. Applicants site outlined in Red

Figure 09 : Galway City Zoning description
Relevant zoning outlined in Red

Figure 10 : Area specific zoning

Fig. 11.13 LDR Roscam Pitch and Putt and adjacent lands

- The maximum plot ratio density of 0.2:1 shall only be considered following agreement on an overall layout of the area.
- This layout will have regard to the sylvan character of the site and where appropriate the protection of existing trees and the Roscam Folly.
- Development will only be considered where it accords with strategic main drainage proposals.

11.3 - R zoned Residential standards

11.3.1 (a) General

- All relevant residential development shall comply with the requirements of the Housing Strategy.
- Planning applications for residential developments on sites over one hectare in area shall include a design statement that demonstrates the relationship between the proposed development to the site context, adjoining developments, the achievement of safe and convenient movement within the site, and how existing features are to be integrated into the development.
- Residential development shall be laid out in such a way so as to maximise accessibility to local services, public transport and to encourage walking and cycling.
- Pedestrian, cycle and vehicular movement shall be convenient, safe and integrated into the overall layout of the development.
- The layout of all new residential development shall have regard to adjoining developments and undeveloped zoned land. Where appropriate, linkages and complementary open spaces shall be provided between adjoining developments.
- Gated residential developments will be discouraged.
- Innovative layouts, including courtyard developments, shared open spaces and the clustering of dwellings shall be used, where appropriate, to achieve high standards of amenity.
- Existing hedgerow, trees, watercourses and stone walls shall be retained where feasible. A landscaping scheme including hard and soft landscaping, and incorporate SUDS principles where appropriate, shall be designed as an integral part of the development.
- A plot ratio of 0.46:1 for new residential development shall not normally be exceeded.
- Residential developments of 10 units and over shall normally provide a mix in type of residential units.
- Non residential development shall be considered at appropriate locations on residentially zoned lands where it is of a scale that serves the local need and where all other development management requirements are satisfied. Plot ratio for such commercial, leisure, community and mixed developments on residentially zoned lands shall not normally exceed 1:1. On distributor roads or other major access roads where commercial development will contribute to the quality of urban design and is otherwise acceptable a higher plot ratio may be considered.

Figure 11: Galway City Development plan 2017-2023 extract - page 185

11.3.1 (d) Overlooking

- Residential units shall not directly overlook private open space or land with development potential from above ground floor level by less than 11 metres minimum.
- In the case of developments exceeding 2 storeys in height a greater distance than 11 metres may be required, depending on the specific site characteristics.

Figure 12 : Galway City Development plan 2017-2023 extract - page 187

11.3.1 (f) Distance between Dwellings for New Residential Development.

- The distance between side gables and side boundaries of dwellings shall normally be a minimum of 1.5 metres.
- Within all other residential developments, including apartment buildings and large dwellings, (greater than 200m^2), the distance between buildings shall be greater, to provide a good layout and context for the development.

Figure 13: Galway City Development plan 2017-2023 extract - page 187

11.3.1 (i) Bin Storage Standards

- Each residential unit shall have adequate storage for three wheeled bins to facilitate the recycling policy of the City Council. Residential units with no rear access shall provide adequate storage for the bins to the front of the development, in contained units.
- For residential units without suitable private open space a set of three x 240 litre bins shall be provided for each pair of apartments or a set of three 1100 litre bins shall be provided for a block of ten apartments.
- Bin storage shall generally be on the ground floor of developments and be screened from public view and adjacent to the block it serves.

11.3.1 (c) Amenity Open Space Provision in Residential Developments

All residential developments shall provide for amenity open space areas made up of the following ratios:

Communal Open Space:

Communal recreation and amenity space is required at a rate of 15% of the gross site area.

Where acceptable 'home zones' are proposed, in accordance with Council Guidelines, the shared spaces shall be regarded as communal open space but shall not exceed one third of the total communal open space requirement. Shared spaces shall be regarded as communal open space where it is designed primarily to meet the needs of pedestrians, cyclists, children and residents and where the traffic speeds and dominance of the cars is reduced through design.

Lands zoned for Recreation and Amenity use (RA) shall not be included as part of the open space requirements or used for density calculation for housing developments.

Figure 14: Galway City Development plan 2017-2023 extract - page 188 & 189

Section 02 - Site Analysis & Development regulatory concerns

2.5 Existing Buildings & Structure

Close to the south west boundary of the site is a farmstead in ruins and what appears to be a modern agricultural silage storage pit. An Archaeological report is enclosed with this submission which explores the site structures as well as adjoining structures for archaeological significance.

Of the farmstead only c.40sqm of a modern agricultural concrete ground base serving as a silage pit impinges onto the application site. This 40sqm are the only demolitions proposed. Please refer to O'Neill O'Malley Architects drawing no. 3010.

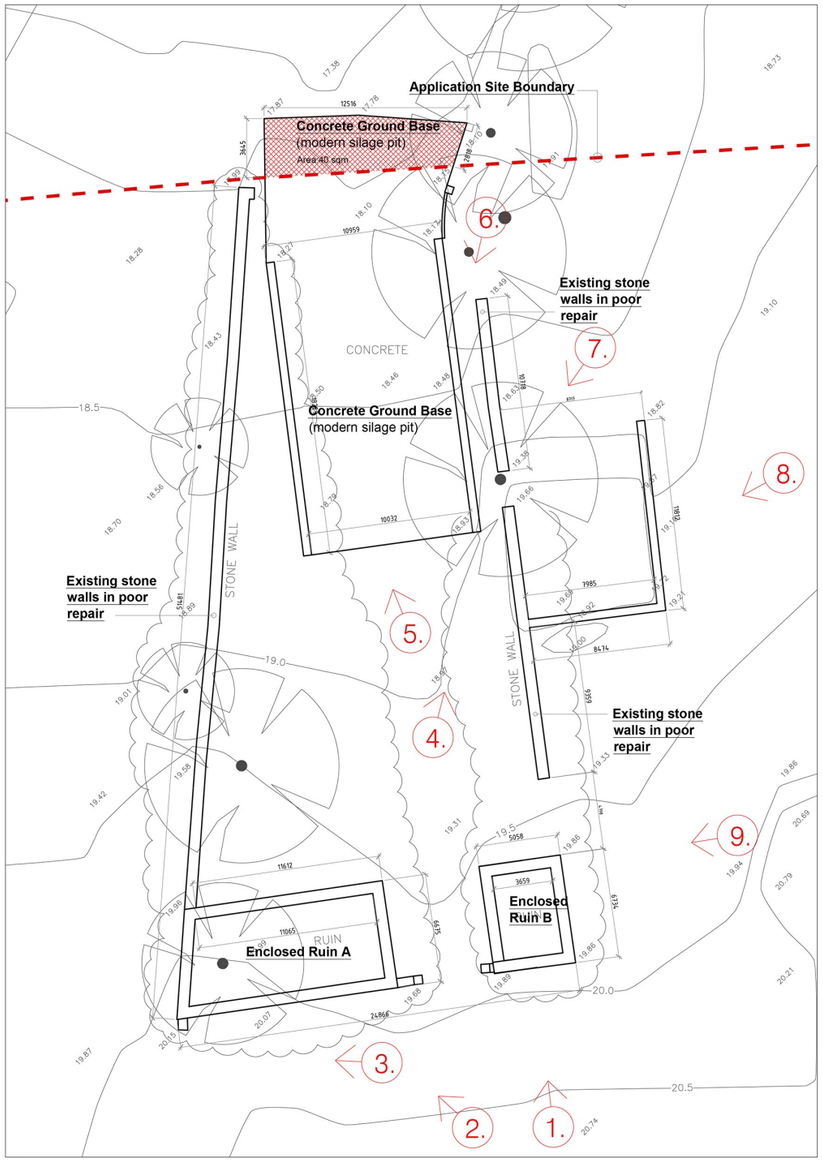
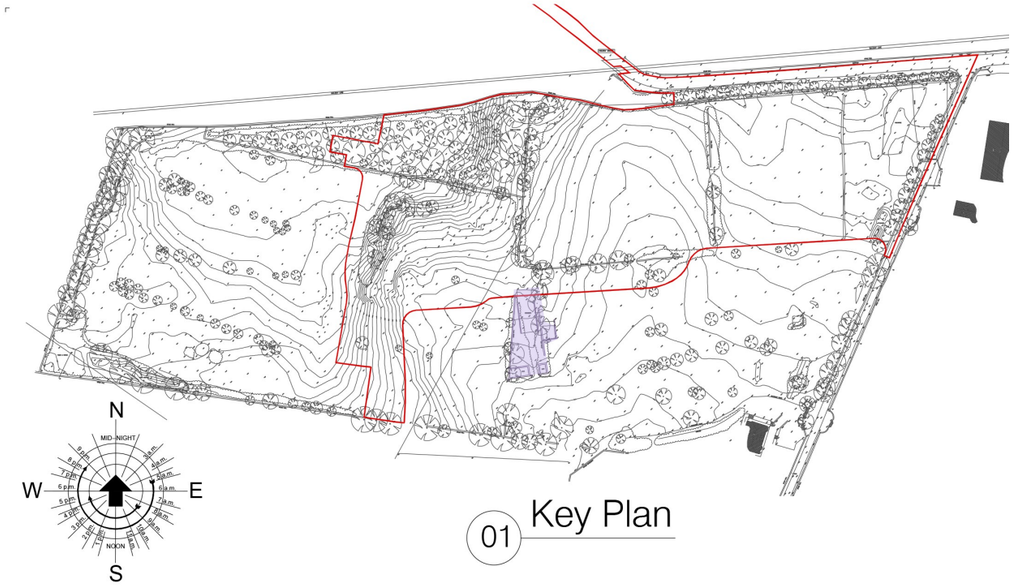


Figure 15. ruins/ structures to be demolished
Please refer to drawing no 3010



01 Key Plan

Photo Location 1

Photo Location 2

Photo Location 4

Photo Location 5

Figure 16. images of ruins/structures. Only partial section of modern concrete base to be removed

2.6 Universal Design Statement

The proposed development scheme must meet the requirements for Part M of the Building Regulations. The Technical Guidance Document (TGD) Part M 2010 provides advice to provide 'Prima Facie' compliance with the building regulations. This document has been closely followed during the design process and is referenced below to indicate compliance.

The proposed development has been also been designed with due regard to the principles of universal design, including the 'Universal Design Guidelines for Homes in Ireland' and the 'Building for everyone' publications.

Also please refer to Section 3.3 Inclusivity in relation to universal design in this Document.

All 35 Apartment units are fully accessible with 1800mm wide turning areas to all corridors and lifts to all floors. All homes will have direct level access.

Site Access Strategy
The design of the scheme has been developed to create a mixed and inclusive neighbourhood. The road routes & levels work with the existing contours to ensure every road & path gradient across the site is below 1:20. Please refer to drawings 3001 to 3005 and 3015 to 3019 for site layouts and sections indicating proposed access levels and gradients. Accessible Car parking spaces provided are designed to be in line with section 1.1.5 of TGD M 2010. This includes the bays layout and design.

All access routes are at least 1800mm in width across the site. Legible crossing points will be provided with dropped kerbs and textured paving. Raised table areas are designed within the scheme as a traffic calming areas.

A series of accessible amenity & play areas are situated across the site all of which are passively overlooked.

Approach to Dwellings & Apartment building
All access roads have been designed to have a gradient of less than 1:20. All Dwellings will have on-curtilage parking directly to the front of each dwelling.

Access to Dwellings & Apartment building
All dwellings being designed to TGD Part M section 3.3 have a minimum width of 800mm and have a minimum level clearance of 1.2m at all front doors of dwellings and apartment units . All entrances to the apartments building and retail are provided with a 1800 level landing with entrances designed per section 1.2 and table 2 of TGD part M.

Circulation within Dwellings & Apartment building
Each dwelling and apartment unit have been designed to be fully compliant with TGD Part M section 3.3. A visitable W.C. is provided to all dwellings and apartment units at entrance levels associated with habitable rooms. All common corridors and access routes to Apartment units are designed to have access widths exceeding the requirements of TGD Part M section 2 with a minimum 1800mm turning circle provided in each instance.

2.7 Statement of Compliance with guidance on housing design & Urban design standards

The proposed scheme is being developed in a manner which employs best practice in urban design and having regard to the following policy documents:

'Best Practice Guidelines for Delivering Homes Sustaining Communities 2007'
'Sustainable Residential Development in Urban Areas 2009'
'Sustainable Urban Housing: Design Standards for new Apartments -March 2018'
'Permeability Best Practice Guide - National Transport Authority 2015'
'Quality Housing for Sustainable Communities'
'Design Manual for Urban Roads and Streets 2019'
'Urban Design Manual – A Best Practice Guide May 2009'
'Galway City Development Plan 2017 -2023
'Galway Clustered housing Guidelines'

Compliance with 'Quality Housing for Sustainable Communities - 2007' is demonstrated in the housing drawings and appendix 03 '*Housing quality assessment'* pages 1 and 2 which show each housing unit and associated accommodation areas exceeding those required. Please refer to Appendix 08 in relation to 4 bedroom 6 person homes.

Compliance with 'Sustainable Urban Housing: Design Standards for new Apartments -March 2018' is demonstrated in the Apartment drawings and appendix 02 '*Apartment quality assessment'* pages 1 and 2 which show each Apartment unit and associated accommodation areas exceeding those required.

2.8 Possible overshadowing onto adjoining buildings

Please refer to Appendix 09 - O'Neill O'Mallley's Shadow analysis report and shadow analysis drawings numbers 3031,3032, 3033 & 3034.

It is our opinion that with no adjoining residential buildings in the immediate vicinity to the north, east, south or west there is no possibility of the proposal inhibiting a neighbouring buildings solar access and that acceptable solar access has been maintained for the public realm.

As has been illustrated, these structures will have unobstructed solar access save for short periods in the late evenings of the Winter and Summer Solstices and Spring/ Vernal and Autumn Equinoxes.

The building orientations, heights and massing have been carefully calibrated to maximise compatibility with the surrounding area to mitigate shadow impact.

The applicant has appointed Integrated Environmental Solutions to assess and submit a report evaluating the proposals daylighting factor to residential habitual rooms.
This report is enclosed with the application.

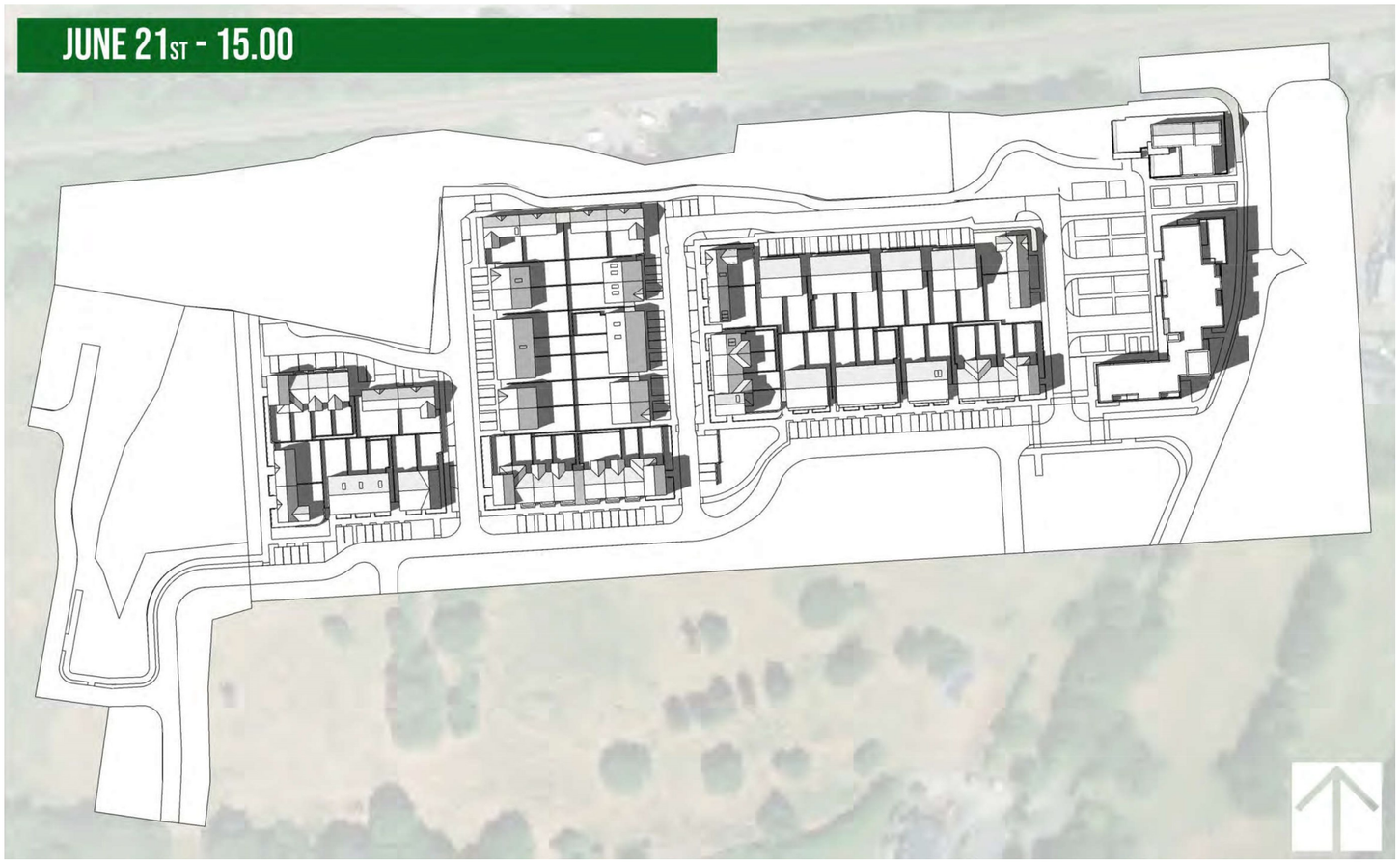


Figure 17. O'Neill O'Malley's Shadow Analysis extract

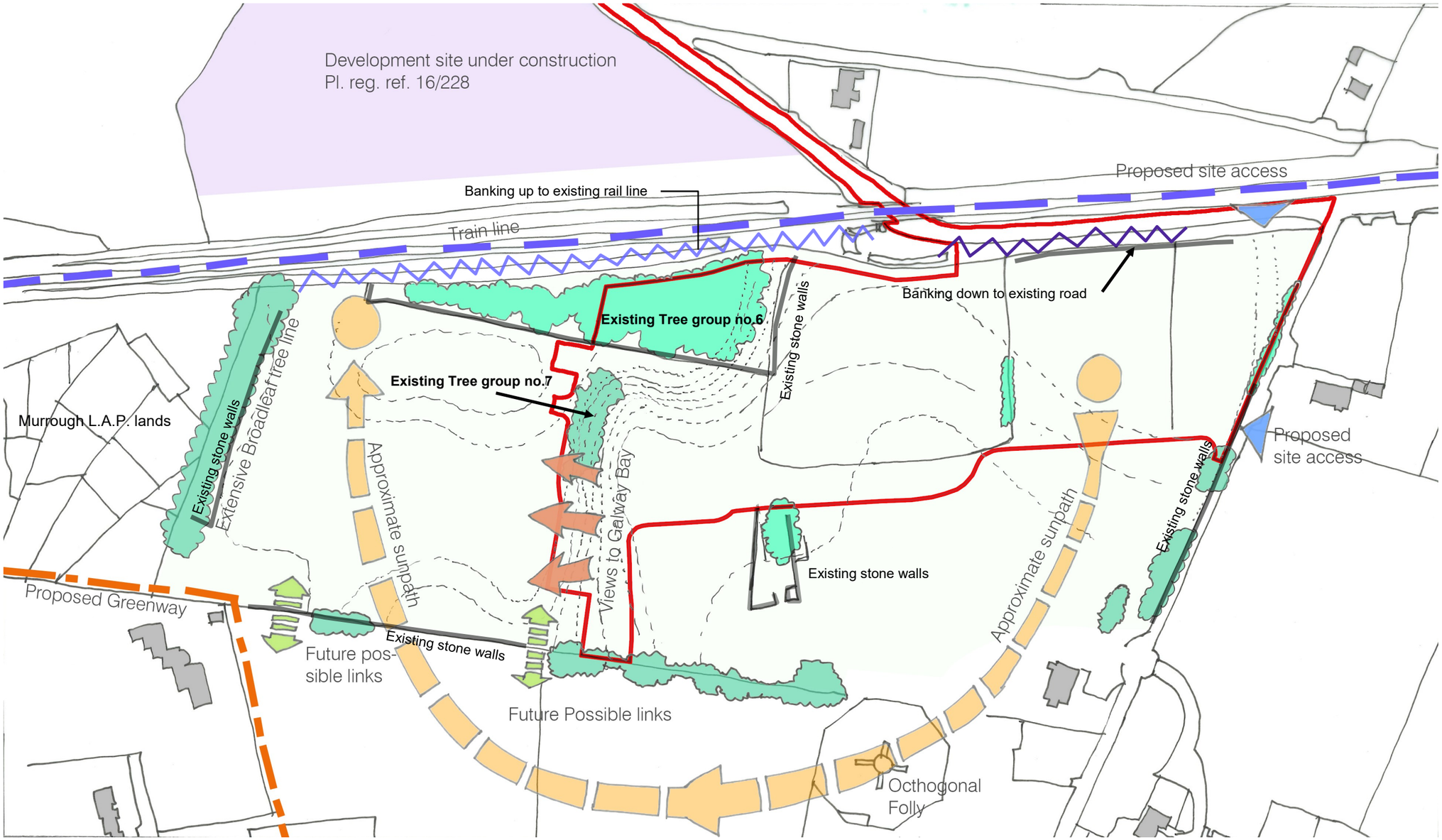
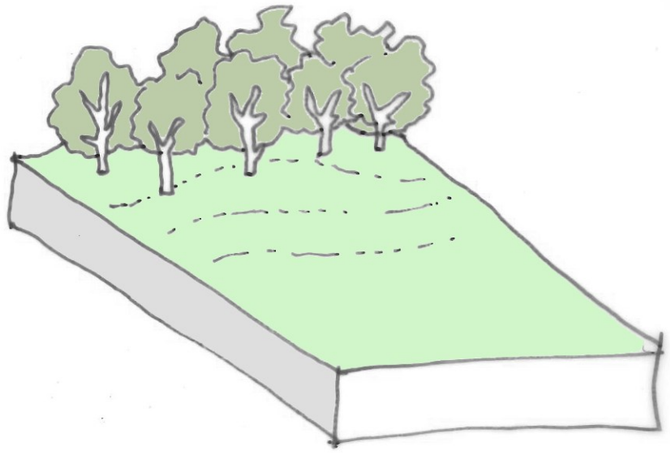


Figure 18. Site Analysis

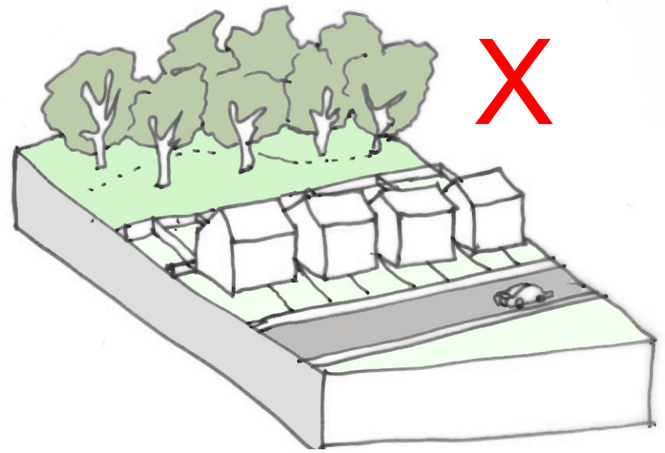
2.10 Site Concept & Initial Design Strategy



19. Sketch 01 - Existing condition

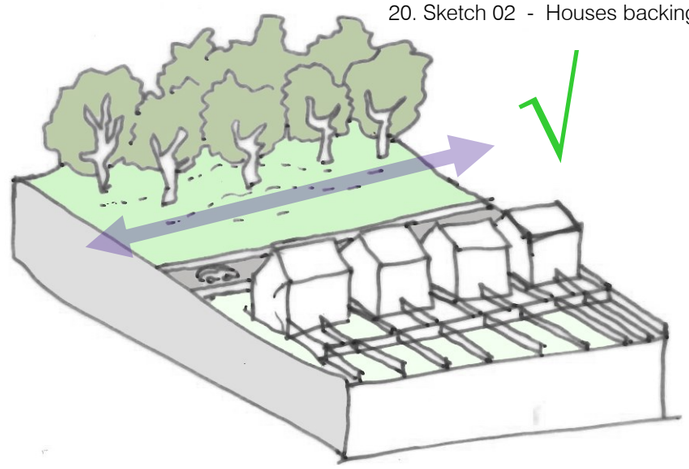
The concept aim was to ensure the locality and sylvan context would be connected to as much of the proposed route finding, vistas and amenities as possible.

This exercise shows the advantages of having access routes along and perpendicular to the boundary, treating the car as secondary towards these locations and avoiding 'backing on'. providing an pedestrian access linking up with the ends of vehicular access routes.



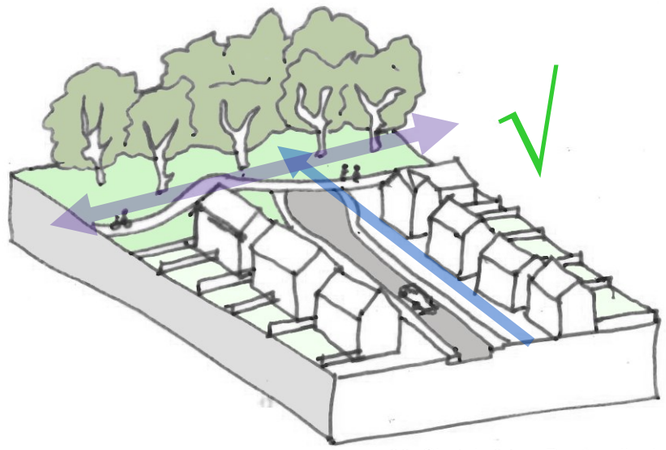
20. Sketch 02 - Houses backing to Boundaries

Sketch 02
- Housing back to boundary and sylvan character
- Rear Gardens create barrier of the neighbouring habitant.
- Line of houses create visual barrier to context
- Road and circulation no connection (visual or otherwise) with wider area.



21. Sketch 03 - Outer edge access road

Sketch 03
- Houses get to face onto the Green amenity
- Access route also allows visual connection to the amenity.
- Connection important as road can create a barrier from the houses to the green spaces.
- Creation of pedestrian sylvan route passively surveilled.



22. Sketch 04 - Perpendicular Road access

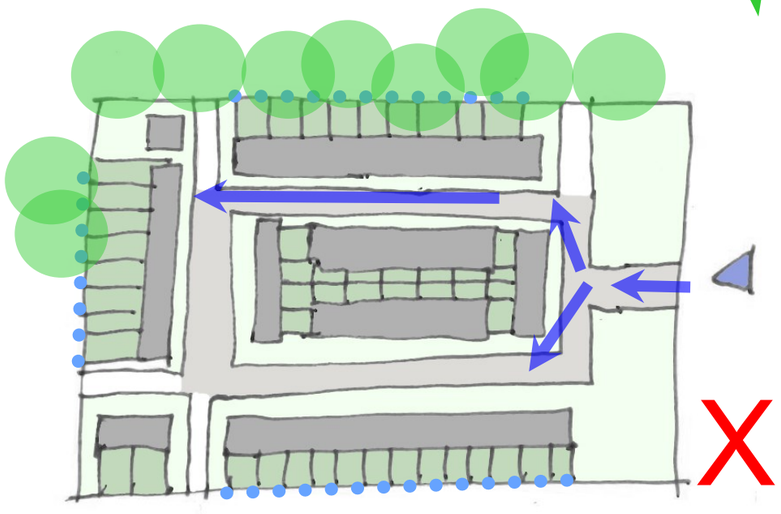
Sketch 04
- Perpendicular dwellings to the sylvan boundary.
- Oblique views from all houses and access route deep within the proposed development.
- Road does not create a barrier to the green spaces.
- Although some cul de sacs created these are only a vehicular barrier. A radial 3m walking path running parallel to the sylvan areas connects all dwellings for pedestrians and cyclists.

2.10 Site Concept & Initial Design Strategy

A real world example of perpendicular layouts to make the most of natural amenities can be seen in modern coastal developments in Copenhagen, Denmark. This visual and physical connection is maintained to the water edge. Compare this to Spanish 60's and 70's tourist boom coastal development. Large blocks of accommodation fighting for their own private view of the waterfront created an impenetrable physical barrier to whomever may be behind.

23. Danish Waterfront - Copenhagen

24. Spanish Waterfront - Traditional 70's Tourist boom Develop-



25. Backing to Boundaries / Circular Access route diagram

ROUTE CONCEPT- BACKING ON TO BOUNDARY & CIRCULAR ACCESS ROUTE
A circular access route although very useful for infill schemes and providing connectivity to future development would have cons for the application site. Other than a partial boundary to the site which bounds residential zoned lands banking on to any other boundary would restrict amenity. This layout diagram also shows the how wayfinding and views outwards are restricted.

26. Main access route/ Perpendicular access

ROUTE CONCEPT- MAIN ACCESS ROUTE
A main access spine road proposal on the proposed site would be beneficial where it may not be in other sites. Along the route wayfinding views are achieved towards the boundaries and the treelined setting. The route can meander to accentuate the physical obstacles on site and make the most of vistas and views. There is clearer definition of secondary and tertiary roads.

2.10 Site Concept & Initial Design Strategy

MASTERPLAN:
A masterplan sketch design was explored with the application design to ensure a future linkages are considered and the proposed site will integrate successfully with any adjoining proposals. It is important the application scheme works successfully standing alone and with future adjoining proposals.
Major principles behind this exercise were: to ensure the Public open spaces all work together are connected but also work for individual phases; to ensure there is vehicular/ pedestrian connections through the whole scheme – every dwelling is a short walk from their neighbour;
respect the setting by stepping off sylvan boundaries and avoiding backing on to important boundaries; respecting the context of Rosshill Folly; and to provide dedicated pedestrian routes through linked green spaces providing a car free route.

Circuitous routes around housing cells were preferred in developing the layout however circuitous roads tend to lead to an increase in road network. In this instance this increase and extra coverage would erode/ intrude upon green spaces, tree groups and sylvan character areas.

We have aimed to reduce Cul de Sac's. However where the masterplan routes abut sylvan areas we have proposed shared surfaced cul-de-sac's. These shared surface areas indicate the importance of the pedestrian with directly joining dedicated pedestrian 3m footpath routes. As mentioned all dwellings have direct pedestrian routes to their adjoining neighbours.

As a concept a linear park with a 3m wide pedestrian route is proposed running the length of the masterplan from the plaza to the northeast to the proposed greenway to the southwest via the northern and western tree stands. This route is shown in red dotted line on the attached image. A smaller pedestrian route to the south east runs from the Rosshill Stud Farm Road by the adjoining folly to connect into the main body of green space in the centre of the masterplan (application western boundary green space).

Fig. 27 Concepts applied to Masterplan - Focus on maintaining setting and creation of connections

2.10 Site Concept & Initial Design Strategy

Focusing on the Application Site:
The design developed along the principles & concepts adapted in the masterplan as mentioned on the previous page. Additional to this the application site has been developed to:

- Work with the existing contours to inform the design, reduce cut & fill, retaining walls & engineered retaining solutions. Buildings are placed where they are best supported for construction and away from sylvan and areas with topography changes.
- Provide a coherent route through the site with pedestrian routes, play equipment and a number of green open spaces to ensure way finding.
- Please refer to section 4.4 which outlines the Public open space concept and strategy.
- Pulling away from Sylvan boundaries to create a green buffer to the site edges. There is no backing on of dwellings onto boundaries.
- Legible house cells providing primary elevations to public areas as well as passive supervision. The cellular layout also provides sheltered private open spaces behind the building line.
- The development of house types and their positions where guided by the aims of reducing garden screen walls and increasing passive surveillance. Garden screen walls onto the public realm have been kept to a minimum.
- Aim to maintain the best quality trees and the existing landscape.
- Create activated and well supervised streets.
- Linkages to adjoining zoned residential land for possible future developments.
- All primary elevations are shown as a brown line on the image sketch below. All public open spaces are overlooked with primary elevations with living space and bedrooms.

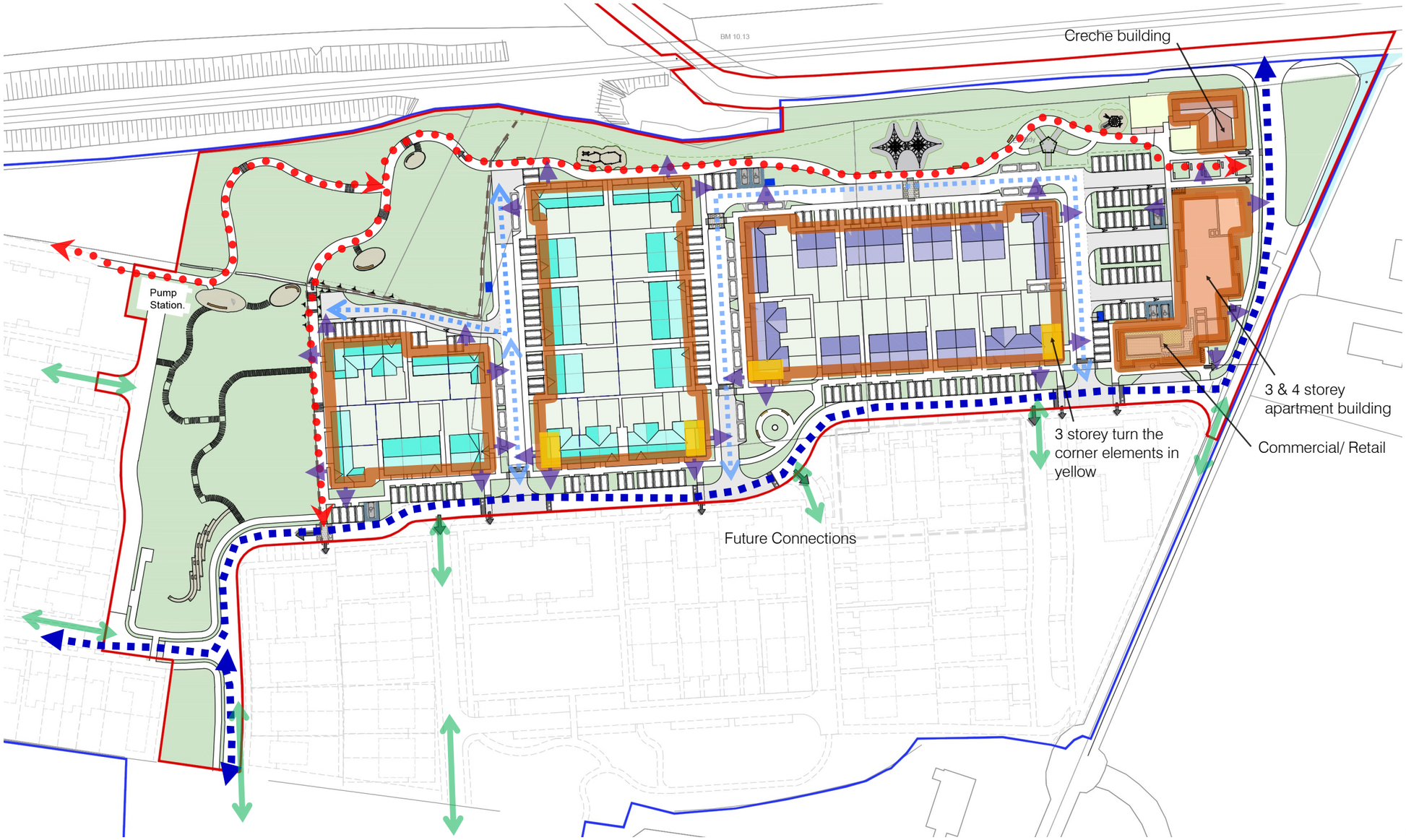


Figure 28. Site Concept

Section 02 - Site Analysis & Development regulatory concerns

2.11 Site layout amendments and design development

The following are some of the alternations that occurred during the S.H.D. process from feedback from Galway City Council and An Bord Pleanala. These alterations are non exhaustive but examples of a few of the significant changes that occurred during the design process. Further design alterations are mentioned and discussed in Section 03, 04 & 05

CENTRAL GREEN PARKLAND and CRECHE LOCATION

Prior to a formal Stage 01 meeting with Galway City Council, an informal feedback meeting was held to get initial design and inform the design. Two of the items to arise from this were:

1. The central green parkland open space should be included in this Application. This will ensure high quality amenity to the development regardless whether further adjoining development were or were not to happen.

2. The concern regarding the large amount of parking around the apartment building and traffic movements that could be generated to the creche near the scheme entrance.

RESPONSE

1. The Applicant was happy to include the sloped central green space with the application area forwarding this amenity to the proposal. However as 15% open space requirement is met excluding this large quantum of space. It is proposed that it is not included with open space requirement areas or developable area given its topographical slope. It is proposed significant landscaping may occur to portions of the central green parkland in providing public open spaces for further adjoining development. Please refer to section 4.4 for more detail.

2. The location of the creche was reconsidered and placed to the northeast of the site. Locating it in this location removes the creche from the main throughfare and provides it with 7 decided parking spaces. It is proposed that some apartment parking spaces will be vacated during normal business hours and these can be used to meet the creche parking demand. The route to and from the creche can now be circuitous around the housing cell 01.

   It was aimed to lower the overall spaces to the location around the Apartment building by placing visitor spaces across the site and by sharing parking demand of the creche and retail with apartment spaces—a number of which will be vacated during normal business hours.

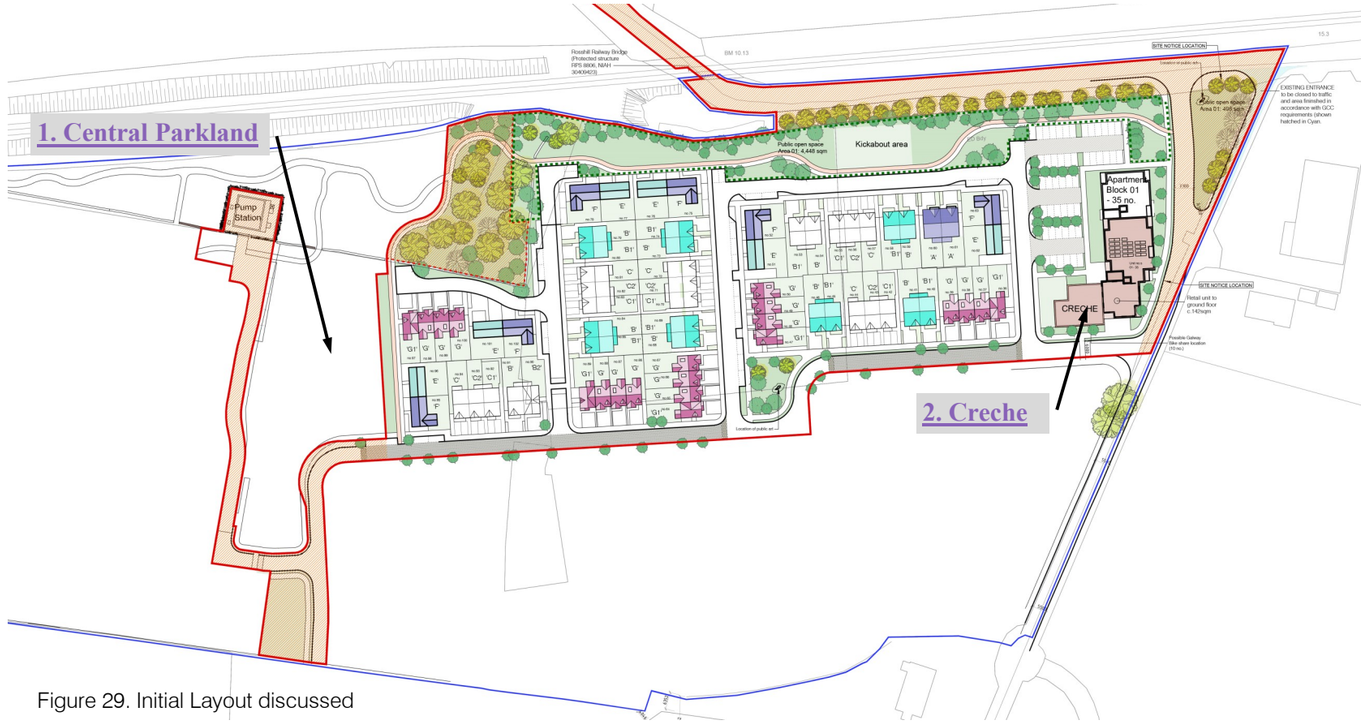


Figure 29. Initial Layout discussed

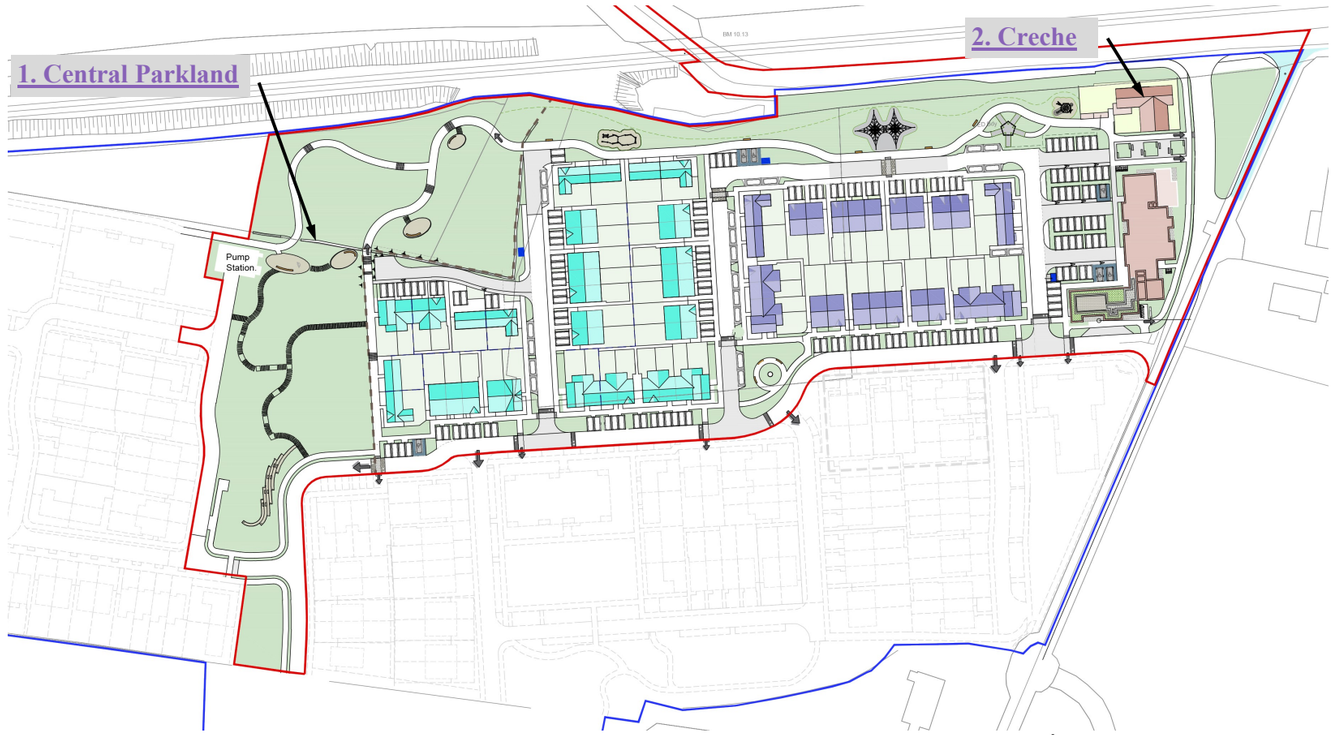


Figure 30. Final proposal

Section 02 - Site Analysis & Development regulatory concerns

2.11 Site layout amendments and design development

Again the following are some of the alternations that occurred during the S.H.D. process from feedback from Galway City Council and An Bord Pleanala. These alterations stemmed from the feedback from the Stage 02 tripartite meeting. Again these examples are non-exhaustive and further design alterations are mentioned and discussed in Section 03, 04 & 05

POSITION OF PUMPING STATION

The pumping station had been positioned in tree group 6 behind the existing stone wall (see stage 02 plan below) as this was a low area in the site and it was hoped the maintain tress around it along with the stone would conceal the pumping station. Both An Bord Pleanala and Galway City Council felt that this location would be too injurious to the tree group with the civil works involved and erode the existing character in that area.

RESPONSE

The pumping station had been pulled forward of the tree group and the existing stone wall so both remain untouched in the final submitted layout. The pumping station design is mainly underground and does not require a surrounding fence so will not be overly intrusive.

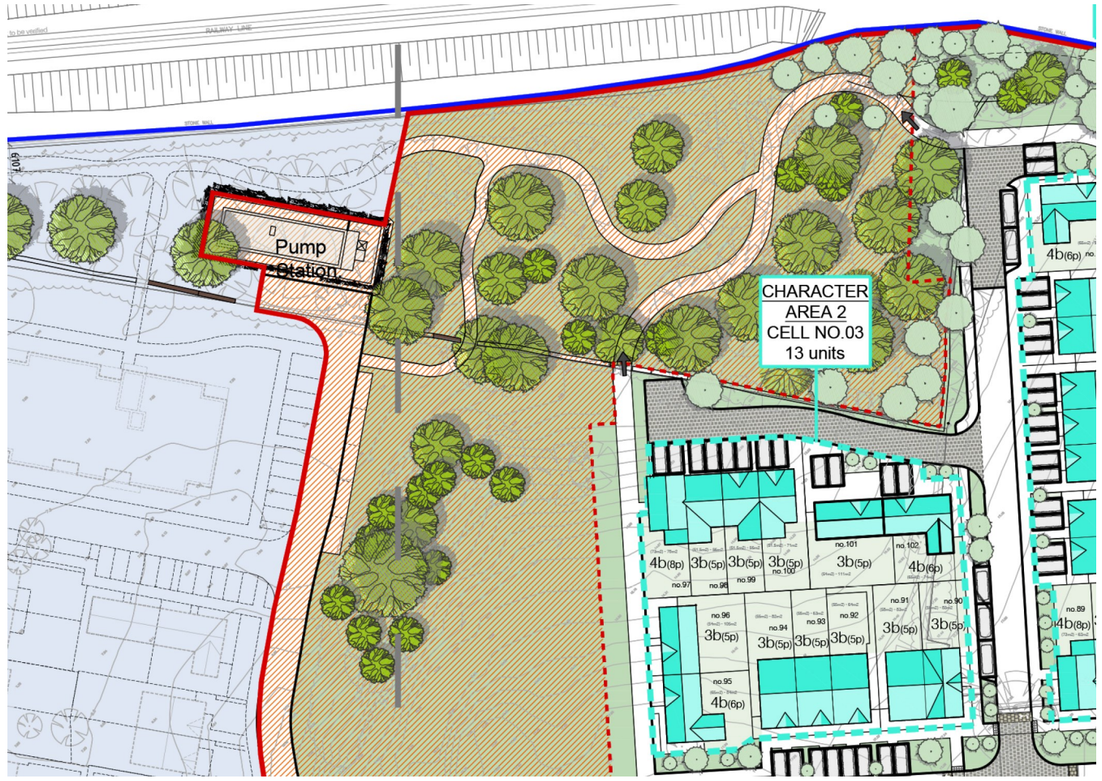


Figure 31. Stage 02 Plan showing location of Pumping station with in existing tree group

Figure 32. Final submission layout with pumping station outside the tree group.

Section 02 - Site Analysis & Development regulatory concerns

2.11 Site layout amendments and design development

Also the alterations below stemmed from the feedback from the Stage 02 tripartite meeting. Again these examples are non-exhaustive and further design alterations are mentioned and discussed in Section 03, 04 & 05

APARTMENTS COMMUNAL OPEN SPACE

Concerns were raised regarding the communal spaces provided for the apartment block. It was noted that communal open spaces should be provided to the Apartment building as per the Sustainable Urban Housing: Design standards for new Apartments guidelines and this should be independent of the 15% overall public open space. Concerns were also raised privacy buffers to residential units on the ground floor apartments.

RESPONSE

A new communal roof garden, open to all apartment residents has been proposed. This garden area is in line with Sustainable Urban Housing: Design standards for new Apartments guidelines and not included in the overall public spaces calculations. Please refer to Apartment roof plan drawing on drawing no. 3206.

1.5m minimum of a privacy landscaped buffer has been provided to all ground floor residential units. As apartment no.01 is the only apartment who's ground floor living space views directly into the carpark, 2 carpark spaces have been removed in the current layout and replaced with landscaping in this location.
Please refer to apartment ground floor plans drawing no. 3200.

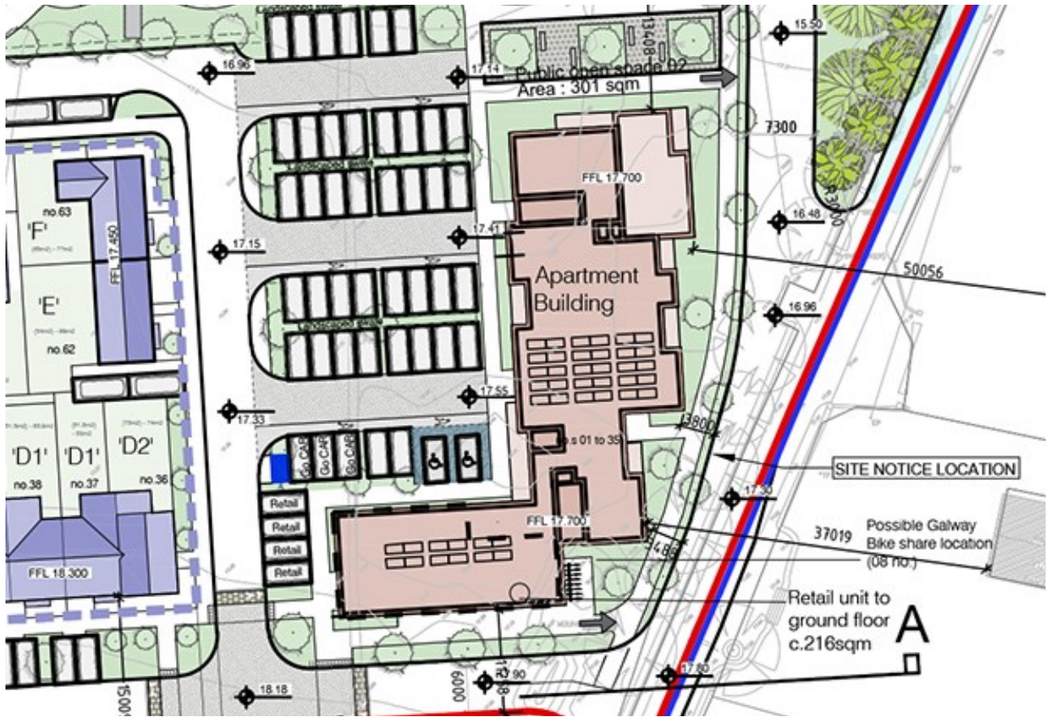


Figure 33. Stage 02 Plan showing the context around apartment building

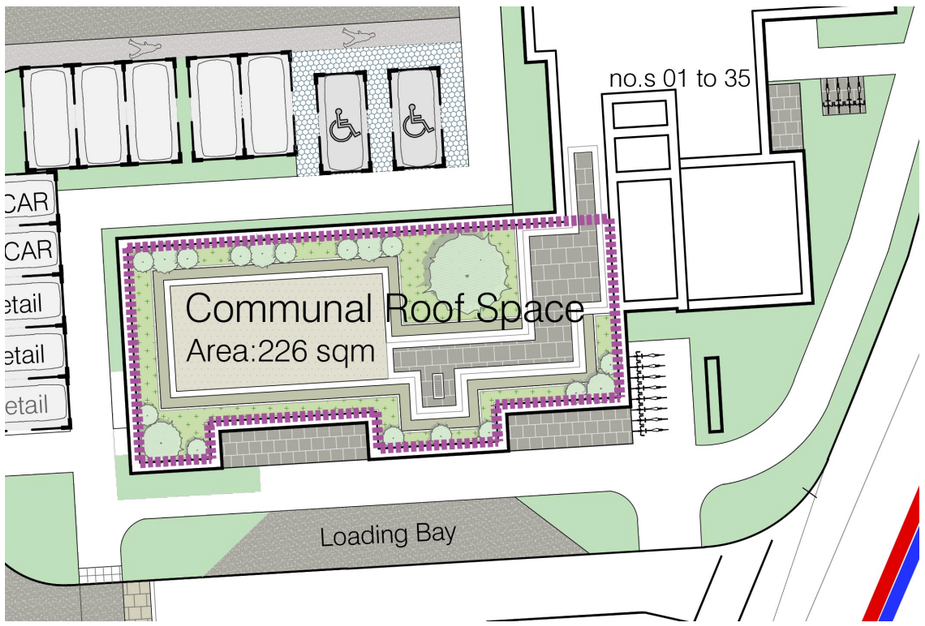


Figure 35. Proposed new roof garden providing 226sqm communal space to Apartment residents

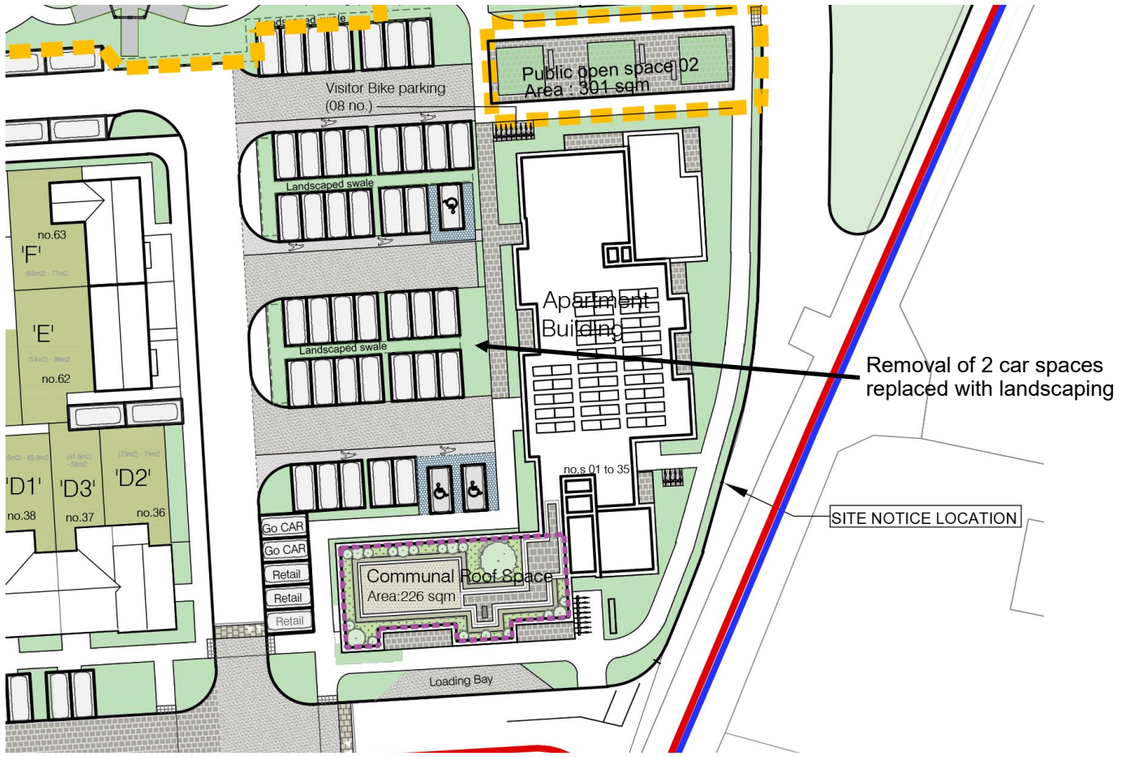


Figure 34. Final submission layout with roof garden

Section 03 - Design Statement - Neighbourhood

3.1 Context - How does the development respond to its surroundings?

In the wider context, the site is situated between three existing residential communities.
The Murrough and Renmore lie 1.2km and 1.9km respectively to the west.
Roscam is located only 850m to the east. These communities can be reached via car, on foot or by bicycle. Further east is Galway City Centre with Eyre Square 5km from the site. Main street Oranmore is 3.8km to the east. The development site is strategically located between these existing urban areas and residential communities and of the services & amenities they provide. There is a development of 16 houses currently being constructed immediately to the north of the site under planning reg.ref. 16/228.

The macro & micro context of the site has been examined for its unique constraints and opportunities informing the design such as;

The existing topography – The layout has been carefully considered to use the existing contours. Although generally level a fall in levels occur to the west of the ruined farmstead. This affords views over the lower lands and to Galway Bay. The area to the ridge will form a landscaped green area with play areas and terraced amenity seating, allowing the maximum usage of the views west.

The existing horticulture has been documented in an arborist tree survey report and trees survey drawings (please see enclosed) - There are a number of important mature broadleaf trees outside the site. The layout has considered these to ensure the best of the Mature trees & root areas are maintained and protected. The developed proposed layout has pulled buildings away from important tree roots specially to the tree group 6 and 7. An existing stone wall to these trees is to be maintained as a character feature.

Figure 36. Wider Context

3.2 Connections - How well connected is the new development?

As mentioned the site is located between urban & residential centres. The immediate access of the Rosshill Stud Farm Road onto the Rosshill Road connects with the Old Dublin road to the north with direct access to Galway City Centre and the Coast Road with direct access to Oranmore. Eyre square, 5km from the site, has a number of public transport terminus.

Wider regional vehicular connections is easily accessed from these urban centres. Connection to the M6 motorway is located north of Roscam, 3km by car from the site. This motorway is direct to Dublin & has links to the M17/M18 serving Sligo & Limerick and the M4 serving the south of the country.

Two residential neighbourhoods are in walking distance from the site providing restaurants and shops among other amenities. Murrough is located 1.2km to the west of the site and Roscam is located 850m from the site.

The context aerial overleaf is provided at a larger scale in drawing no. 3029. The aerial looks at the local connections and adjoining land uses and significant amenities close to the site.

Figure 37. Local Context

3.2 Connections - How well connected is the new development?

Figure 38. Aerial context analysis

With in the immediate context there is a Bus stop with routes 404 & 409 located 12 minutes walk to the north of the site on the Old Dublin Road. Another bus stop is located 9 minutes walk east of the site on the Oranmore road serving the 434 route. Please refer to ONOM drawings 3029 and 3030 which contains the aerial above showing route, connection and amenities walking distances from the site.

The Application has also proposed 2 no. GoCar rental car spaces. These spaces are proposed close to the scheme entrance and close to the Retail space. Also proposed, located in this area, are 08 no. Coke bike—bike sharing spaces.

An unused bus stop exists on the northern site boundary. The client has contacted City Direct Bus Limited. They have noted existing demand is low and but should the proposed scheme be implemented they would review the viability of the bus stop.

As mentioned within the site concept discussion a central vehicular & pedestrian route meanders its way through the scheme. This is connected with secondary routes with clear views to the sylvan setting and the wider context enabling place finding which is appropriate to a site of this type. These secondary routes are connected with a 3m public walkway running the length of the site through green and tree lined settings joining the ends of each vehicular route. Thus promoting the importance of reduced vehicular movements to the greener picturesque areas of the site.

The Pocket plaza between the creche and apartments provides a pedestrian only entrance to the scheme and linear park to the north.

All public walkways are designed for abluent & disable access. Where some portions of footpath in the green parkland area do have steps due to the existing gradient a second gentle sloped path is provided within the vicinity.

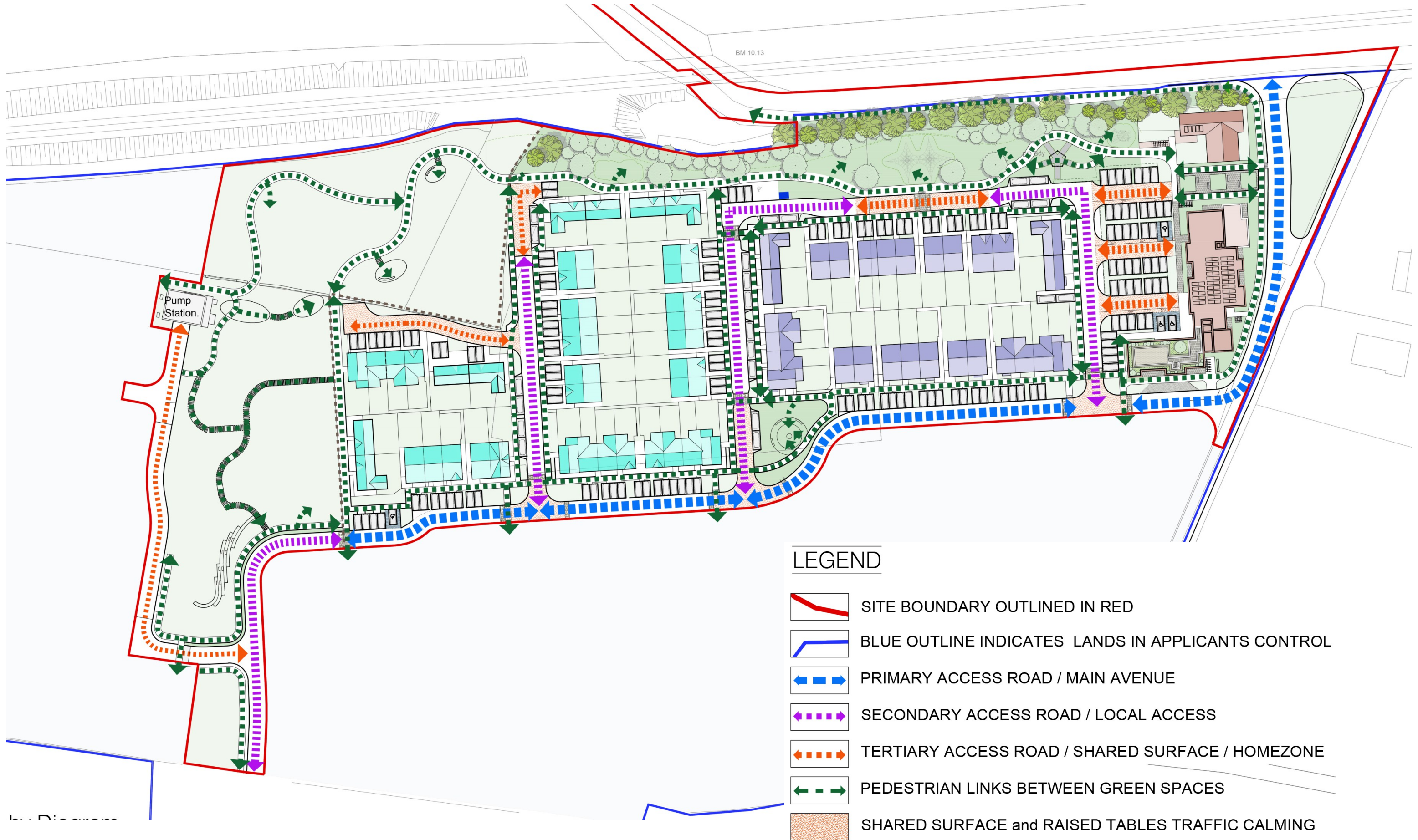


Figure 39. ONOM Connectivity drawing
Drawing no. 3020

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Section 03 - Design Statement - Neighbourhood

3.3 Inclusivity - How easily can people use & access the development?

The proposed development has been designed with due regard to the principles of universal design, including the 'Building for everyone' publications. Main features as follows-

All homes have level access and inaccessible areas have been eliminated as far as possible. The public realm is designed ensure accessibility on equal terms for people of a range of ages and physical mobility. Any slope will be mitigated as far as possible utilising cut and fill across the site creating a maximum slope of less than 1:20 to roadways and driveways.

A range of unit types have been proposed in terms of both size and design meeting the aspirations of a range of people and households. These range in gross floor area from 50.17m^2 to 146.40m^2 with a variety of 1, 2, 3 and 4 bedroom designs.

All 35 Apartment units are fully accessible with min.1800mm wide turning areas and lifts to all floors. Apartment units have a lift provided to all units so wheelchair access is possible to each front door. There a no steps in any floor plates

The proposed housing presents a positive aspect to passers-by, avoiding unnecessary physical and visual barriers. Future connections to adjacent lands subject to future development have been proposed. The network of roads and paths ensure full permeability throughout the scheme. Each junction will have dropped kerbs and tactile surfacing to allow easy logical crossing points for pedestrians. Raised traffic tables are also proposed as a traffic calming measure and are shown on the O' Neill O'Malley Architects site layout drawings.

3.4 Variety - How does the development promote a good mix of activities?

The proposal contains a number of uses across the development as well all as varying sizes and types of residential units ranging from apartments to semi detached dwellings. Uses include a crèche facility with 91 child spaces and a Commercial/ Retail space.

It is proposed the public open spaces will provide a number of amenities. The large green linear park to the north of the site will contain playground spaces. This linear park will respect the existing tree groups which are to be maintained and create a sylvan route east to west. A 3m wide pedestrian route through the site with significant green spaces is possible in an overall master plan running from the commercial / retail and apartment building to the east to the proposed greenway to the southwest corner.

35 apartments are proposed. These range from 50.17sqm 1 bed units to 85.8sqm 2 bed units. There are 3 no. 1 bedroom layout types and 5 no. 2 bedroom layout types.

There are 67 houses shown across the proposal. There are 22 types divided into A's, B's, C's, D's, E's F's, G's, H's, J's, K's, L's and M's. These are broken down with different elevation treatments with corner units having double fronted primary elevations. This adds additional variety to the scheme activating streetscapes. The houses vary in size from 103.1sqm to 146.40sqm, 3 bedroom (5 person) to 4 bedroom (8 persons). The majority of the dwellings can be extended into attic spaces and into rear Gardens.

With the landscaping & paths across the scheme, a number of amenities & uses as well as residential units ranging from 1 bedroom apartments to 4 bedroom homes, we submit the proposal provides a very good mix of units types for every life stage with a number of amenities and uses to serve the proposed community.

Proposed Apartment & Commercial units:	**No. of Unit Type**	**Floor Area (m2)**	**Floor Area (ft2)**	**Total Flr. Area (m2**	**Total Flr. Area (ft2)**	**% of Total:**
Apartment Type '1A' - 1 bed 2 person (1 Storey)	4	50.17	540	200.7	2160	3.92%
Apartment Type '1B' - 1 bed 2 person (1 Storey)	4	56	603	224.0	2411	3.92%
Apartment Type '1C' - 1 bed 2 person (1 Storey)	3	51	549	153.0	1647	2.94%
Apartment Type '2A' - 2 bed 4 person (1 Storey)	11	77.64	836	854.0	9193	10.78%
Apartment Type '2B' - 2 bed 4 person (1 Storey)	4	79.51	856	318.0	3423	3.92%
Apartment Type '2C' - 2 bed 4 person (1 Storey)	3	85.8	924	257.4	2771	2.94%
Apartment Type '2D' - 2 bed 4 person (1 Storey)	3	80.3	864	240.9	2593	2.94%
Apartment Type '2E' - 2 bed 3 person (1 Storey)	3	70.2	756	210.6	2267	2.94%
Commercial/ Retail	1	188.56	2152	188.56	2152	
Total Apartment units	**35**			**2647.2**	**28616**	**34.3%**
	Inc. Common areas/ Stairs/ external bin stores etc.			**3448.2**	**37116**	
Creche	1	399	4295	**399.0**	**4295**	

Conventional House types	**No. of Unit Type**	**Floor Area (m2)**	**Floor Area (ft2)**	**Total Flr. Area (m2**	**Total Flr. Area (ft2)**	**% of Total:**
House Type 'A/A1' - 4 Bed Semi Detached	2	134.90	1452	270	2904	1.96%
House Type 'B' - 3 Bed semi detached	4	113.90	1226	456	4904	3.92%
House Type 'B1' - 3 Bed semi detached	4	117.70	1267	471	5068	3.92%
House Type 'C/C2' - 3 Bed End of Terrace	4	113.90	1226	456	4904	3.92%
House Type 'C1' - 3 Bed Mid Terrace	2	117.70	1267	235	2534	1.96%
House Type 'D' - 2 storey town house - end of terrace - 3 bed	2	106.20	1143	212	2286	1.96%
House Type 'D1/D3' - 2 storey town house - mid terrace - 3 bed	4	103.10	1110	412	4439	3.92%
House Type 'D2' - 3 storey town house - end of terrace - 4 bed	2	146.40	1576	293	3152	1.96%
House Type 'E' - 3 bed Long Semi-Detached	2	108.00	1163	216	2325	1.96%
House Type 'F' - 4 bed Long Semi-Detached	2	130.00	1399	260	2799	1.96%
House Type 'G' - 2 storey town house - end of terrace - 3 bed	3	106.30	1144	319	3433	2.94%
House Type 'G1' - 2 storey town house - mid terrace - 3 bed	6	103.10	1110	619	6659	5.88%
House Type 'G2' - 3 storey town house - end of terrace - 4 bed	3	146.40	1576	439	4728	2.94%
House Type 'H' - 3 Bed semi detached	1	114.10	1228	114	1228	0.98%
House Type 'H1' - 3 Bed semi detached - Double front	1	115.60	1244	116	1244	0.98%
House Type 'J' - 3 Bed semi detached	4	114.00	1227	456	4908	3.92%
House Type 'J1' - 3 Bed semi detached	4	114.20	1229	457	4917	3.92%
House Type 'K' - 3 bed Long Semi-Detached	4	107.80	1160	431	4641	3.92%
House Type 'L' - 4 bed Long Semi-Detached	4	129.80	1397	519	5589	3.92%
House Type 'M' - 3 Bed End of Terrace	3	113.90	1226	342	3678	2.94%
House Type 'M1' - 3 Bed End of Terrace	3	113.90	1226	342	3678	2.94%
House Type 'M2' - 3 Bed Mid Terrace	3	114.10	1228	342	3684	2.94%
Total housing	**67**			**7776**	**83701**	**65.7%**

Total Proposed No of Units on Site	**102**			**10423**	**112318**	**100%**
			Inc. Common areas etc.	**11623.3**	**120817**	

Overall Site MIX/ UNIT TYPES		%			%
1 bedroom	11	10.8	Terraced	35	34.3
2 bedroom	24	23.5	Semi - Detached	32	31.4
3 bedroom	54	52.9	Detached	0	0.0
4 bedroom	13	12.7	Apartment	35	34.3
TOTAL	102	100.0	TOTAL	102	100.0

Figure 40. House & Apartment type Statistics

Section 04 - Design Statement - Site

4.1 Efficiency - How does the development make appropriate uses of resources, including land?

Careful consideration has been given during the design development process to integrate the proposal with the existing topography, minimising cut and fill and the necessity to construct retaining walls.

The proposed scheme provides a total of 102 much needed residential units. The houses are generally designed in a deep plan format which allow for an efficient and sustainable use of land while also providing for an efficient thermal envelope. The houses will be constructed to current building regulation standards delivering at least an A2 energy rating. The current building regulations energy loss standards are colloquially known as nZEB - near Zero Energy Buildings. Buildings will now be required to decrease their fabric energy loss, increase their proposition of energy from renewables, increase airtightness and overall improve the buildings construction. This will mean warmer, better built homes using much less energy. A provision for ducting will be made to all houses for Electric vehicle charging, thus helping to future proof the proposal.

At a macro level, the proposed development constitutes an efficient use of the development land, zoned for residential use, its amenities adjacent to the site while adding additional amenities and with proximity to major transportation nodes. The proposed development is appropriate to the zoning and the settlement strategy which is guided by regional and national development strategy.

Figure 41. Boundary image with existing stone wall.

4.2 Distinctiveness - How do the proposals create a sense of place?

The context of the sylvan setting, traditional dwelling and farmstead forms along with crisp finishing has been the stimulus for the material pallet. Traditional clipped eaves, dark pitched roofs, 'wet dash' rough cast & nap external render as well as stone plinths are used through-out, chosen for their aesthetic, lifespan and robustness.

A total of 22 different dwelling types with varying forms and elevational treatments are proposed. These variants be visually stimulating. However the elevation treatments have been carefully considered to present the same materials & details in a coherent manner. Character areas break up the scheme and form readable pockets through fenestration and detailing. This organises the scheme as a consistent whole with an intelligible theme running through out.

The apartment buildings, crèche and commercial/ retail unit have also been carefully considered to have a similar pallet of renders & stone and are discussed over leaf.

Figure 42. Precedent images

Figure 43. Site Context Elevation— Section A-A

4.2 Distinctiveness - How do the proposals Create a sense of place?

Dwelling Materials

The house designs feature a palette of Wet dash rough cast render , smooth sand & cement light colour render with dark pitched roofs with clipped eaves. These materials are contrasted with dark Upvc/Aluclad windows which match the pitched roofs and rainwater goods. These finishes all relate the rest of the scheme.

Materials have been chosen for their aesthetic relief and robust nature. Traditional pitch roof provide familiar dwelling forms appropriate to this location and a variety of 22 house types and elevational treatments which will visually activate the streetscapes.

Entrances are formed with set back doors which create canopies above which are subtly defined. House types alternate through out the scheme where they define significant areas within the site and punctuate changes to orientation and place.

The House types are all related to one another forming an overall village feel along the main avenue and public open spaces.

- 'Turn the Corner' units have been designed to address the public realm on corners throughout the site.
- Passive surveillance to all areas has been considered and secluded public areas have been minimised.
- Public open spaces are such that they are evenly distributed across the site and within a short walk of each dwelling.
- All public realm areas will be landscaped to a high standard considering both hard and soft landscaping

As noted earlier in the design statement, careful consideration has been given to the natural surroundings of the development in terms of layout, creating a layout which responds to the context by looking out wards to the sites existing sylvan setting. This approach is conceived by placing the main access route through the centre of the site and a wide pedestrian route along the wood lands areas. This layout considers existing mature indigenous trees and plant species on site, and provides an appropriate setting for the housing units.

Figure 44. Palette of Materials used throughout all house types

Figure 45. House types 'D' elevations

Figure 46. Elevational sketches and development

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4.2 Distinctiveness - How do the proposals Create a sense of place?

Apartment/ Commercial Materials

The apartment/commercial building has a similar material pallet as the dwellings - Wet dash and nap render, similar coloured fenestration and stone plinth. The stone plinth forms an undulating datum to the base of the building anchoring it to the site. Dark rainscreen cladding sets back the upper floor reducing the scale and impact of this building.

A corner tower element bookends the building and the scheme to the Rosshill Stud Farm Road junction entrance. A raised parapet accentuates this corner element. The stone base and wet dash render along with its scale and proportions reference Galway tower houses found through out the city & county. The closest being Merlin Castle located in Coillte Mhuirlinne housing estate, 3 .5km travel distance away.

Balconies are sheltered within the building line creating more usable external space suited to the west of Ireland climate.

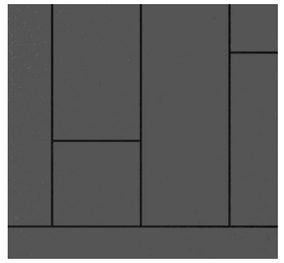
The Commercial/ Apartment Building and Crèche are all related together forming a public pocket plaza linked to the linear park & the village area on one side and the main entrance and strong street edge to Rosshill Stud Farm Road on the other.

Ancillary buildings such as the bins stores and covered bicycle stands have integrated into the ground floor plan of the apartment building.

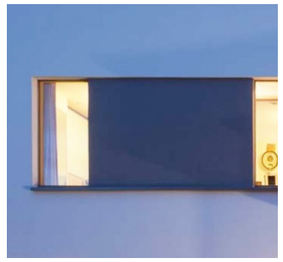
'Wet Dash' Rough cast render

Smooth Cement Render

Stainless steel railing



Fibre Cement Cladding



Example of Window & recess panel

Natural stone

Figure 47. Palette of Materials used throughout all Apartment /Commercial Building

Figure 48. Apartment Building East Elevations

Figure 49. Apartment Building South Elevation

Figure 50. Apartment Building—Undulating stone plinth

Figure 51. Tower house reference element to the entrance corner forming a gateway

Figure 52. Merlin Castel—a Tower house 3.5km from the site to the north.

4.2 Distinctiveness - How do the proposals Create a sense of place?

Creche Materials

The Creche building utilises the same material pallets as discussed before. However the larger window propositions and use of dark spandrel/ render panels reference closely to the fenestration of the apartment building while the clipped verge pitch roof reflected the dwellings. The clipped pitch roof and larger fenestration to the main creche element is reflective of a traditional school house in a contemporary idiom, thus a signifier to its community significance.

Again a stone plinth with a varying datum grounds the building. Dark Upvc/Aluclad windows & rain water goods will work harmoniously with dark concrete tiles to the pitched roofs.

A large powder coated metal canopy to the entrance provides well needed shelter during the dropoff/ pick up periods. The creche is envisaged as a ‘school house’ site within a village green which is appropriately landscaped.

The Commercial/ Apartment building & Crèche are all related together forming the village area with the main entrance connections to the Rosshill road and adjoining public open spaces.

Figure 55. Creche Building Elevations

‘Wet Dash’ Rough cast render

Smooth Cement Render

Natural stone

Dark pitched roof

Example of Window & recess panel

Metal Canopy

Figure 53. Palette of Materials for Creche

Figure 54. 3D image of creche entrance

Section 04 - Design Statement - Site

4.2 Distinctiveness - How do the proposals Create a sense of place?

CHARACTER AREAS

To enhance the distinctiveness and way finding through the site, two Character areas are proposed, hard-landscaped areas, shared surfaces and green open spaces.

These areas are defined through landscape topology, fenestration, building forms, uses and architecture found in each area. Each character area joins and melds into the next with paths and linkages with a coherent design style across the whole scheme.

The proposal moved away from the traditional character area ploy of a change of material or colour of primary facades. It was felt that this results in the appearance of a disjointed scheme with areas juxtaposed across a street etc. Often adjoining character areas with this method appear to have a hierarchy of social and/or amenity value.

Character Area 01 - Village.

This area contains larger buildings forming the entrance and community focus to the scheme providing amenities and services to passers by as well as to the inhabitants of the proposed scheme. Uses & services proposed are a creche, local shop, apartment units and housing to cell one. The materials and forms are reminiscent of those found traditional rural settlements: Pitched roofs, clipped verges, 'wet dash' rough cast render, nap render and stone plinths which ground the buildings.

Character Area 02 - Meadow Clusters

The topography to this area is generally flat to where housing cells are proposed. The ground then falls way to the west where an integrated parkland amenity is to be provided. Buildings are pulled back from but facing the northern boundary to provide a passive surveillance to a landscaped 3m wide pedestrian path and wider landscaped route. This path links the commercial / retail village area though to the wooded areas. Existing tree groups 6 and 7 are to be maintained and where possible so are existing stone walls to aid in maintaining the existing site character. Materially, nap render and 'wet dash' rough cast external finishes are proposed with accents to more vertical fenestration patterns differentiating it from Character area 01.

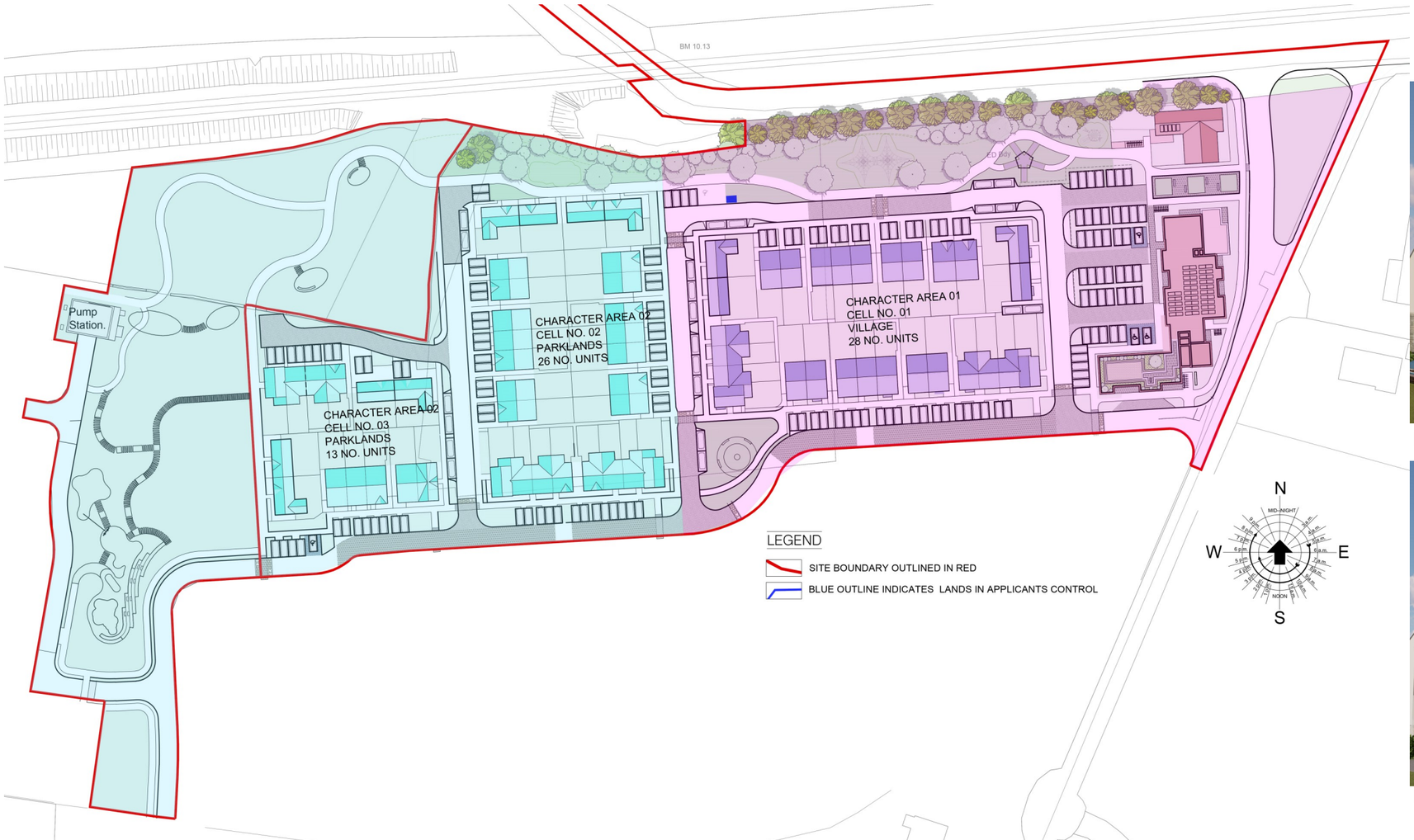


Figure 58. Character Areas

Figure 56. 'D' House types—Character area 01

Figure 57. 'G' House types—Character area 02

Section 04 - Design Statement - Site

4.3 Layout - How does the proposal create people friendly streets & spaces?

The concepts & principles that aided and drove the development of the layout are described in section 2.10. where the importance of the masterplan and its connections are laid out.

A number of key principles are employed to enhance pedestrian connectivity and safety. At key junctions raised tables are uses as traffic calming devices and crossing point by rebalancing the hierarchy towards pedestrians. Minimum of 1.8m wide footpaths ar provided through the entire proposal. The proposal is designed working with the typography and all roads and adjoining footpaths have a fall of less than 1:20.

Turn the corner units have 2 primary elevations into habitable rooms to ensure passive supervision overall junctions and public spaces. The Apartment building and creche have primary elevation on all 4 sides. Gardens have been organised in a back to back arrangement so there is clear definition between public and private spaces.

Other principles in the site layout development include:

- Housing clusters are carefully considered and respond to their context. The house facades overlook, supervise and define the edges of streets and public landscaped areas.
- Where possible rear gardens back onto rear gardens of new houses, clearly defining passively supervised public and private realm.
- To provide a strong entrance gateway with the apartment building a taller tower element has been created. A corner retail space is provided also in this location.
- Existing attractive site characteristics have been retained where possible. Existing stone walling around tree groups 6 is to be retained and supplemented.

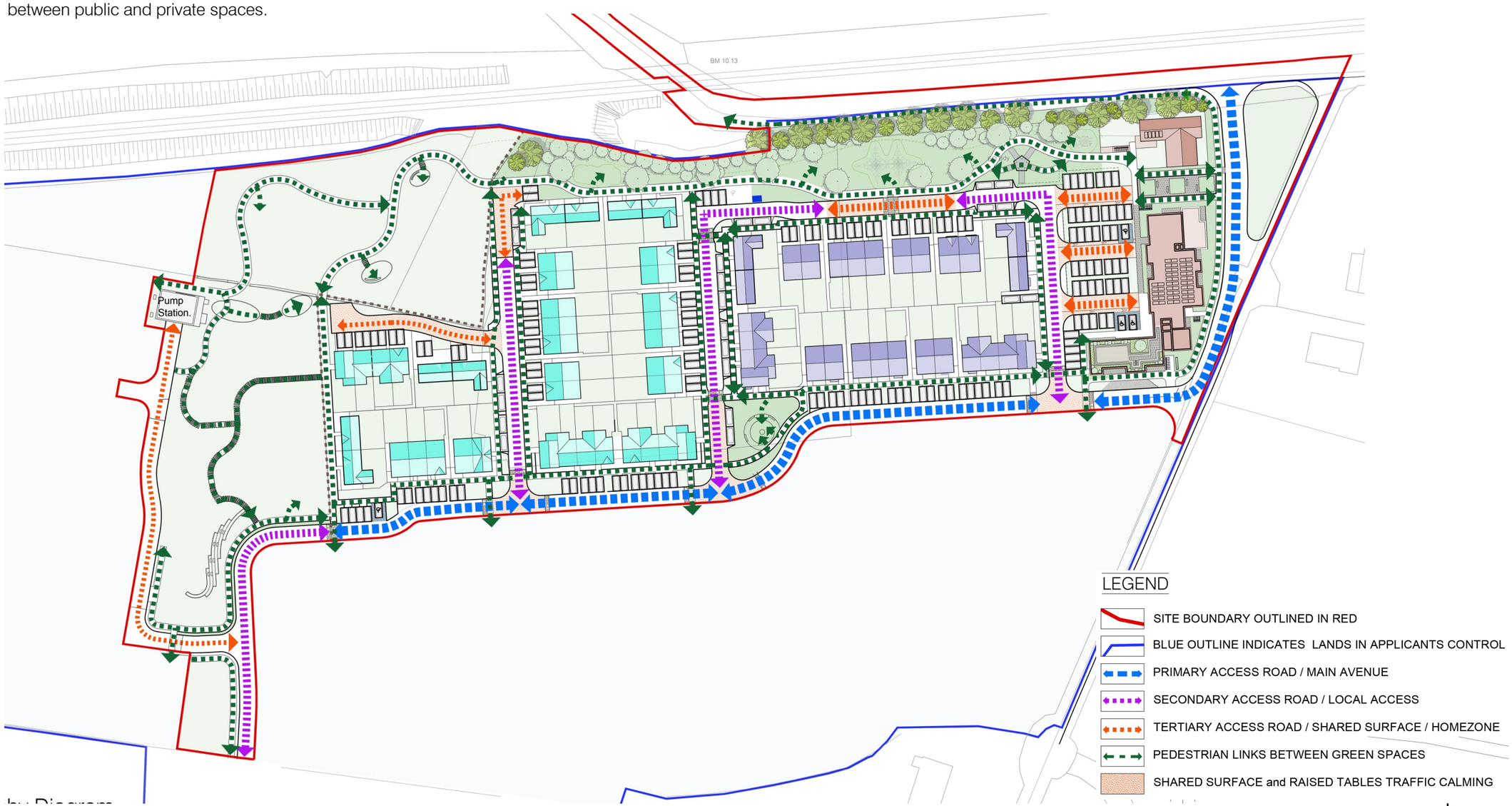


Figure 59. Site Connections showing raised tables and pedestrian linkages.

4.4 Public Realm - How safe, secure and enjoyable are the public areas?

Given the site context, the concept design and the layout considering the topography the landscape architectural design and concept was an integral part of the design process.
Please see enclosed Cunnane Stratton Reynolds Landscape Architects (CSR) drawings and reports for the landscape proposals.

Fundamental to the layout of open spaces of the applicant lands was to ensure any future development would respect the nature of the setting and coherent linkages and strategy's are both relevant to the current proposal as well to future development. The surveyed existing tree groups have been prioritised. These groups are to be maintained and sublimated where possible. The overall masterplan development area is retreated from the west and north boundaries where the significant trees and groups are located. Existing stone walling is to be maintained & sublimated. Both these moves are to maintain the character of the location.

The initial masterplan open space proposal exercise sought to demonstrate how connections will be achieved between the proposed and future open spaces .

Figure 60. Tree survey drawing extract

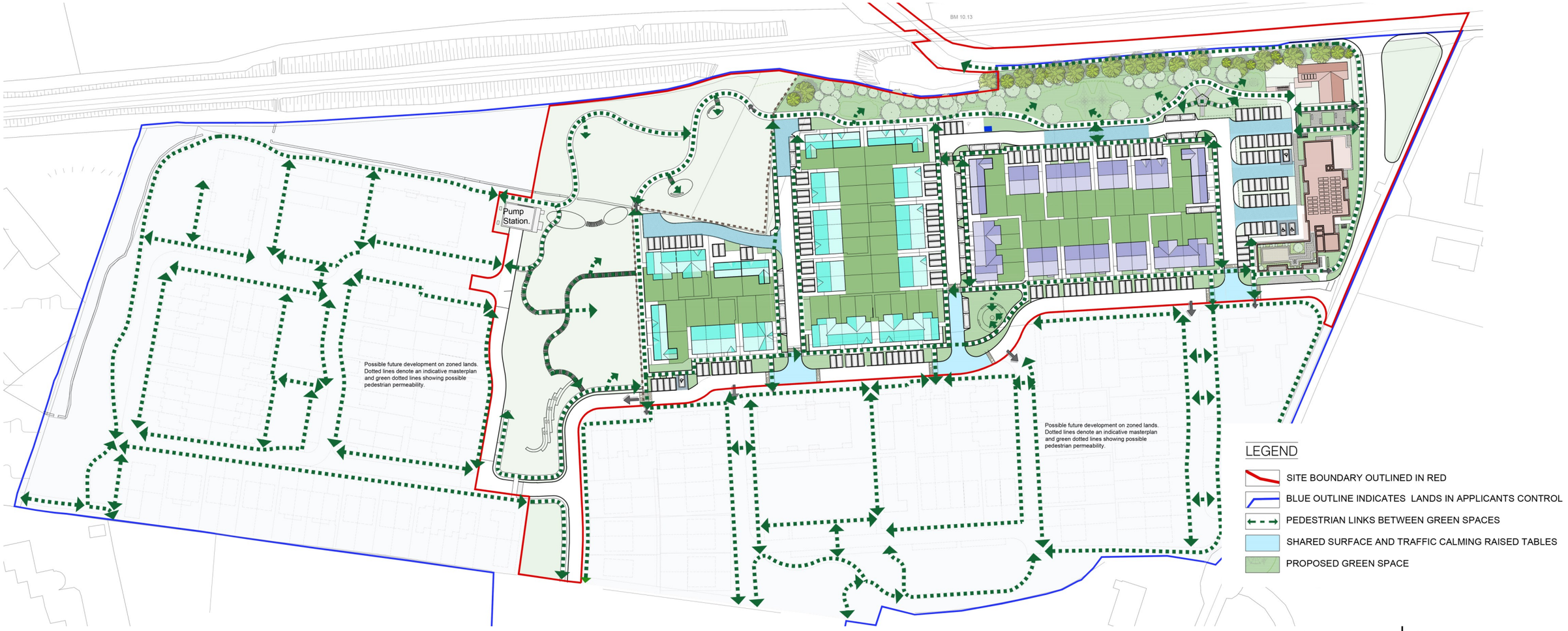


Figure 61. Masterplan open spaces and connections

Section 04 - Design Statement - Site

4.4 Public Realm - How safe, secure and enjoyable are the public areas?

Planning application proposal:
Land marking and progression through the development public realm is defined by hard and soft landscaping. To the realigned Rosshilll Stud Farm Road the creche and apartment building form a formal street edge. Between these two building is a formal landscaped plaza offers a separate pedestrian access to the development. The plaza is close to the creche entrance and links with the linear park to the north.

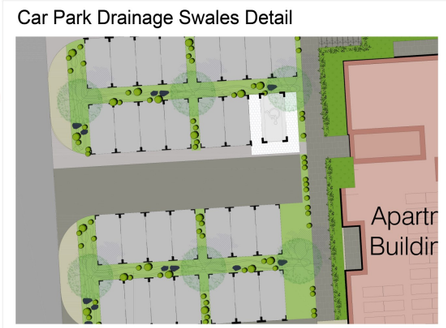
The linear park to the north ranges from 12m to 24m in width and offers strong pedestrian & cycle connections via a 3m wide path thorough the whole application site. The linear park will contain play equipment of differing forms and for differing age groups. As suggested in the masterplan diagrams the 3m path and linear park in future proposals would continue down the northern boundary to join with the mature beech trees along its western boundary connecting with the future greenway to the southwest.

To the centre and south of the application site is a central green. It is proposed this space will have an identifier art piece and act as an orientation point. The green acts as a traffic calming measure of the main access road and as green space along the main street.

To the west of the site is a large green area which incorporates tree groups 6 & 7 and the difference in topographical level. This is shown as the dotted purple line below. This space although included in this application was not considered in provision of our 15% open space calculation or as developable area. This western area was carefully considered to introduce tiered seating and woodland paths. Given the location of this area it was important to work with the topography to create something significant and of high amenity. Please note that the application does provide 15% of its developable area independent of this area. Areas making up the 15% public open space are outlined in dotted orange below.

All public areas proposed are clearly defined and looked upon by primary facades, providing clarity between public and private realms, ensuring full passive surveillance and safe environments for residents. The use of screen walls have been minimised with the use of turn the corner and side entrance units.

Figure 62. Site Landscape plan highlighting significant landscaped areas and treatments.




Carpark swale


Ornamental stone and planting

Figure 63. Swale details to carparking areas

Figure 64. Proposed play equipment for the linear park.

Section 05 - Design Statement - Home

5.1 Adaptability - How will the buildings cope with change?

All house & apartment types are designed to meet the requirements 'Quality Housing for Sustainable Communities' (2007) and 'Sustainable Urban Housing: Design Standards for New Apartments' (2018) and in many instances more generous internal spaces are proposed to increase the quality of the unit types. Please refer to house and apartment drawings. Please refer to appendix 02 & 03 for Apartment & housing quality assessments.

The mix of residential units from 1 bed apartments to 4 bed semi detached houses would allow an inhabitant to up and down scale within the development as required.

The buildings will be constructed of traditional construction, heavily insulated with internal layouts that can be easily adapted in the future. There is also potential for future expansion into the roof spaces of certain dwellings (which is noted on appendix 03) or into the rear gardens which have been generously sized in most cases (please refer to Appendix 04 for garden areas.)

The typical formation of the semi-detached house layouts mean that the structure is typically carried from the external walls to party walls internally. Walls are often non load -bearing, especially on upper floors. This means internal walls can be altered, removed and erected (with the correct structural advice) with minimal fuss.

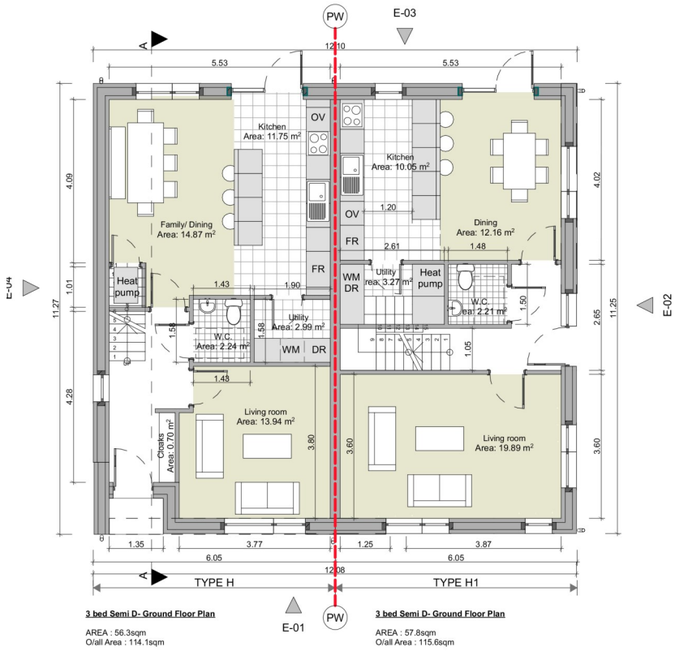
All houses and apartments will be constructed to current building regulation standards delivering at least an A2 building energy rating. Current Building regulations standards for heat retention are colloquially known as nZEB - near Zero Energy Buildings. Buildings will now be required to decrease their fabric energy loss, Increase their proportion of energy from renewables, increase airtightness and overall improve the buildings construction. This will mean warmer, better built homes using much less energy.

Each dwelling unit proposed in this scheme is served by an exclusive area of private open space in accordance with the Galway city development plan 2017 – 2023. A requirement of 50% of the overall dwelling area is to be provided as private open space and is met and exceeded in most cases.
Please refer to appendix. 04. In many cases dwellings can be extended into rear gardens while still maintaining good quality private open space.

Formal planting are provided to the front of the dwellings proposed creating a defensible space between the public road and the built edge. This also reduces the visual recognition of the car parking spaces.

Separation distances have been maintained in accordance with best proposed practice to avoid overlooking and all houses will be designed to have good levels sound performance, comfort and daylight.

Internal storage is provided in accordance with the 'Quality Housing for Sustainable Communities' (2007) and 'Sustainable Urban Housing: Design Standards for New Apartments' (2018).



GROUND - H + H1 1:

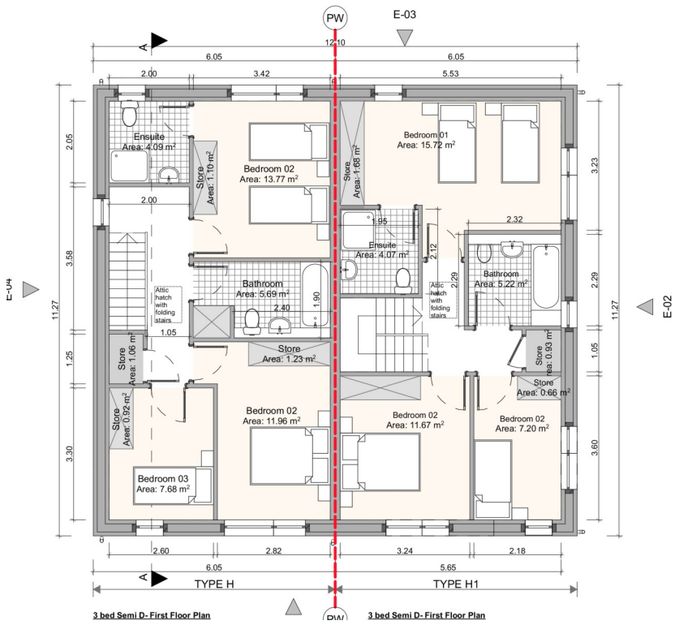


Figure 65. House type 'H' plans

Section 05 - Design Statement - Home

5.2 Privacy & Amenity - How does the scheme provide a decent standard of amenity?

The Apartment Building has been designed to be located along the access road, beside communal Plaza space forming an important arrival nodal point and the gateway into the development. This building forms a bookend arrival point to the scheme with a tower corner element referencing the tradition Galway tower house.

The immediate amenities availed of around the apartment building include Bike store, bin stores and carpark spaces to each apartment and a retail space. Please refer to appendix 5 and 6 with regard to the Carparking, Bin and cycle store provision.

Light from the glazed entrance lobby penetrates into the centre of the apartment building plan to provide logical route finding. Balconies generally are within the building line or sheltered on one side to create shelter and usability in a west of Ireland temperate climate.

North of the building is the start of the pedestrian route that runs the length of the scheme linking public open spaces, sylvan areas, adult exercise equipment and is proposed to extend length of the zoned residential lands if future development were to occur. A creche sits across from the apartment building separated by a landscaped plaza which links pedestrians to the linear park to the north.

All Apartment balconies are accessed directly from the living spaces of apartments on level access. All Balconies have a minimum depth of 1.5m and are in excess of the minimum area requirements set out in Sustainable Urban Housing: Design Standards for New Apartments' (2018) Appendix 01.

Apartment no. 1 on the ground floor is the only ground floor apartment who's living area overlooks the Apartment carpark. A landscaped green buffer has been increased in this location by removing 2 number car parks spaces to increase the amenity to this apartment.

Figure 67. Apartment 3D View

Figure 66. Apartment Building Ground floor

5.2 Privacy & Amenity - How does the scheme provide a decent standard of amenity?

A Crèche is proposed offering the inhabitants childcare facilities with in the scheme.

The Crèche design has been carefully considered to create an important arrival point and urban edge to the entrance of the scheme but also provides security amenity areas and safety for the crèche users.

This building is located on the corner of the Rosshill Road and the realigned Rosshill Stud Farm Road. It provided a focal communal point with a familiar and traditional form but with contemporary detailing. All the play areas are sheltered with 1.8m railing which is supplemented with a hedgerow.

The buildings form is reminiscent of a traditional school house building but through a contemporary idiom. It's form, scale and position denote the buildings important position and function with in the community. It is a welcome arrival point to the scheme.

The Creche design itself has incorporated passive safety measures of arrival and control so all public arrival is by a covered main access which the reception and staff rooms over look. The reception and staff areas have to be passed to reach the childcare class rooms.

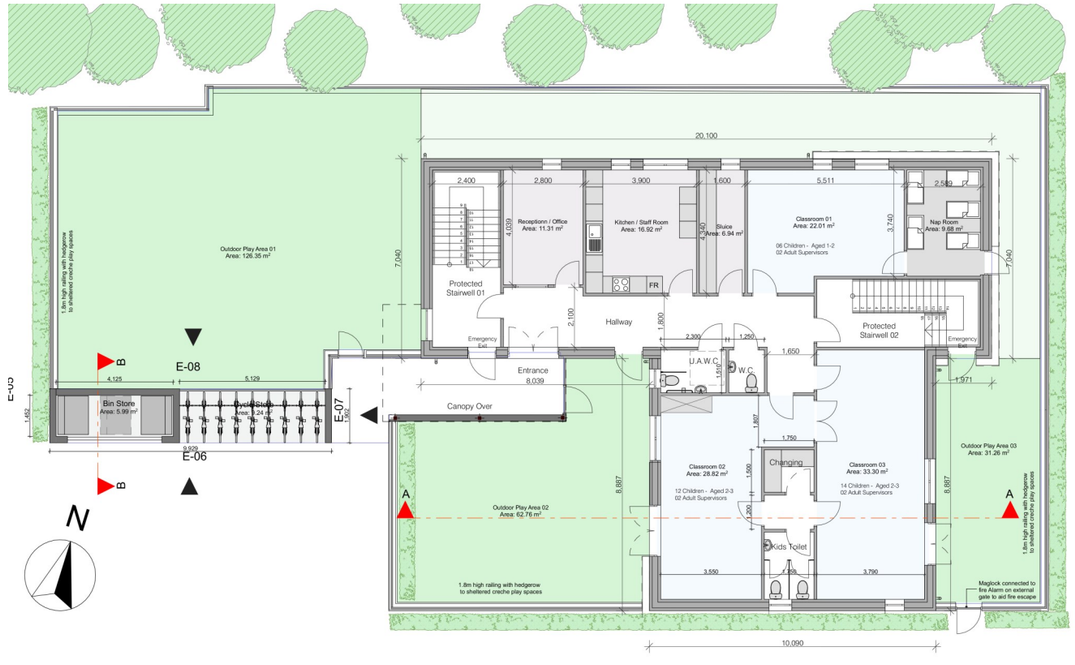


Figure 68. Creche Ground floor plan

Figure 69. Creche - 3D

Section 05 - Design Statement - Home

5.3 Parking - How will the parking be safe & secure?

All housing units are provided with a mix of grouped and on curtilage car parking spaces . Grouped car parking is provide to the main access route with the footpath between the houses and parking spaces. This buffers the pedestrian from the street edge and also enhances the street animation by removing long private front gardens.

Bicycle parking is possible in the rear gardens of all dwelling units. Apartments have been provided with a rate of 1 Bike space per bedroom and 1 visitor bike space per 2 apartments as per 'Sustainable Urban Housing: Design Standards for New Apartments' (2018) section 4.17. It is proposed that 08 no. Galway '*Coke Cola'* Bike share stations are provided close the Retail unit.

Apartments are to be provided with 1 car parking space each and a visitor space per every 4 apartments, this is in line with the 'Sustainable Urban Housing: Design Standards for New Apartments' (2018) section 4.22. These spaces will be grouped and paved and closely landscaped to reduce the visual intrusion of the car-parking.

3 no. '*GoCar*' Car share spaces are proposed close to the retail unit. There is a shortfall in the required carparking to the retail and creche. As many apartment spaces will be vacated during offices hours we submit the shortfall can be made up with Apartment visitor and regular spaces.

The landscape architectural design implements swales, hedgerows, bush and tree planning as a buffer to communal parking areas to reduce the visual impact of car parking areas.

Please refer to landscape architects drawings and appendix 05 for Car & Bike space provision.

Figure 69. Carparking Site drawing

Section 05 - Design Statement - Home

5.4 Detailed Design - How well thought through is the building & landscape design?

The proposed houses & apartments are to be built of traditional construction and forms through a contemporary idiom. There is a mix of elevation treatments to create visual interest within the development. The housing layout proposed ensures that dwellings relate appropriately to each other in terms of scale, materials, access and detailed design.

As with the public realm areas, the proposed houses will be finished to a high standard in materials suitable for the context/location of the scheme.

Walls will be finished in selected natural stone, wet dash render and nap render to public areas and clipped eaves with traditional tiled pitched roofs. The materials chosen have been picked for appropriateness to the location, robustness and longevity as well as aesthetic. The colour palette chosen will be sympathetic to the existing residential properties adjacent the development.

Car parking forms an integral part of the public realm and will be understated so as not to dominate as previously mentioned with landscaping design to reduce its visual impact.

There is no requirement for bin stores to dwellings. Bins will be placed in private gardens to dwellings. Care has been taken to integrate bin runs to the terrace housing. This will ensure ease of access to every homeowner in the scheme to their rear garden.

The Apartment building will have a dedicated bin store building which will be appropriately ventilated and maintained by a management company. Please refer to appendix 06.

We refer the Planning Authority to the accompanying architectural plans and site plan that illustrate the general relationship between Apartment buildings, houses, accessibility, design quality of street and footpaths, permeability between amenities and passive surveillance of the public realm.

Figure 71. 3D. View of housing cell 01

Figure 70. Apartment Sketch

Section 06 - Conclusion

6.1 Conclusion

In conclusion we submit that the proposal as described in this design statement and detailed in the enclosed architectural, engineering and landscape drawings as well as associated reports, respects the sylvan character of the area and is appropriate to the sequential growth of Galway City. It is demonstrated that the scheme abides by ministerial, local authority and development standards which are met and exceeded in many cases and the proposal will be ecologically and socially sustainable.

In developing and concluding the scheme design, comments and feedback from a range of parties was considered and integrated. Feedback from Galway County Council and An Bord Pleanala has been taken into account in developing the proposals.

A large proportion of the site is to be maintained as usable green open and amenity space. Although not included within our 15% open space a large swade of green space to the west of the site is included and proposed within the application boundary. This area will provide required open space for future phases however the applicant is willing to provide this space at this stage for all to use. We submit that the proposed scheme will create an inclusive community with a sense of place and will provide appropriate amenities to the community as well as the wider locality.

Figure 72. 3D view of central open space between Housing Cells 1 & 2

Appendices

Appendix 01	- Overall development statistics	
Appendix 02	- Apartment Quality Assessment	page 01
Appendix 02	- Apartment Quality Assessment	page 02
Appendix 03	- Housing Quality Assessment	page 01
Appendix 03	- Housing Quality Assessment	page 02
Appendix 04	- Private Garden Areas	
Appendix 05	- Car & Bike parking provision	
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Appendix 07	- Social Provision	page 01
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Appendix 08	- Note on 4 bedroom 6 person homes	
Appendix 09	- Shadow analysis report	
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Appendix 01

Proposed Residential Development Statistics - Rosshill, Galway - 102 UNITS

18.06.2021

PHASE 01 Overall Site Area:	4.7042	HA	11.624	ACRES
Undevelopable area: Old Dublin Road & Rosshill Road	0.6894		1.704	ACRES
Undevelopable area: Parkland areas and Pumping stataion access	1.1706		2.893	ACRES
Developable Site Area:	2.8442	HA	7.028	ACRES
Proposed Communal Open Space (see site & landscape drawings):	4,437	Actual (m2)	4266.3	Required (m2)
Proposed Communal Open Space:	15.60%	Actual (%)	15%	Required (m2)
Density: Overall (Proposed and Granted): Units per	14.51	Acre	35.86	Hectare
Site Coverage: Develop Area only	c.17	%		
Plot Ratio: Developable Area only	0.41	Actual	0.46	Max

Proposed Apartment & Commercial units:	**No. of Unit Type**	**Floor Area (m2)**	**Floor Area (ft2)**	**Total Flr. Area (m2**	**Total Flr. Area (ft2)**	**% of Total:**
Apartment Type '1A' - 1 bed 2 person (1 Storey)	4	50.17	540	200.7	2160	3.92%
Apartment Type '1B' - 1 bed 2 person (1 Storey)	4	56	603	224.0	2411	3.92%
Apartment Type '1C' - 1 bed 2 person (1 Storey)	3	51	549	153.0	1647	2.94%
Apartment Type '2A' - 2 bed 4 person (1 Storey)	11	77.64	836	854.0	9193	10.78%
Apartment Type '2B' - 2 bed 4 person (1 Storey)	4	79.51	856	318.0	3423	3.92%
Apartment Type '2C' - 2 bed 4 person (1 Storey)	3	85.8	924	257.4	2771	2.94%
Apartment Type '2D' - 2 bed 4 person (1 Storey)	3	80.3	864	240.9	2593	2.94%
Apartment Type '2E' - 2 bed 3 person (1 Storey)	3	70.2	756	210.6	2267	2.94%
Commercial/ Retail	1	188.56	2152	188.56	2152	
Total Apartment units	**35**			**2647.2**	**28616**	**34.3%**
	Inc. Common areas/ Stairs/ external bin stores etc.			**3448.2**	**37116**	
Creche	1	399	4295	**399.0**	**4295**	

Conventional House types	**No. of Unit Type**	**Floor Area (m2)**	**Floor Area (ft2)**	**Total Flr. Area (m2**	**Total Flr. Area (ft2)**	**% of Total:**
House Type 'A/A1' - 4 Bed Semi Detached	2	134.90	1452	270	2904	1.96%
House Type 'B' - 3 Bed semi detached	4	113.90	1226	456	4904	3.92%
House Type 'B1' - 3 Bed semi detached	4	117.70	1267	471	5068	3.92%
House Type 'C/C2' - 3 Bed End of Terrace	4	113.90	1226	456	4904	3.92%
House Type 'C1' - 3 Bed Mid Terrace	2	117.70	1267	235	2534	1.96%
House Type 'D' - 2 storey town house - end of terrace - 3 bed	2	106.20	1143	212	2286	1.96%
House Type 'D1/D3' - 2 storey town house - mid terrace - 3 bed	4	103.10	1110	412	4439	3.92%
House Type 'D2' - 3 storey town house - end of terrace - 4 bed	2	146.40	1576	293	3152	1.96%
House Type 'E' - 3 bed Long Semi-Detached	2	108.00	1163	216	2325	1.96%
House Type 'F' - 4 bed Long Semi-Detached	2	130.00	1399	260	2799	1.96%
House Type 'G' - 2 storey town house - end of terrace - 3 bed	3	106.30	1144	319	3433	2.94%
House Type 'G1' - 2 storey town house - mid terrace - 3 bed	6	103.10	1110	619	6659	5.88%
House Type 'G2' - 3 storey town house - end of terrace - 4 bed	3	146.40	1576	439	4728	2.94%
House Type 'H' - 3 Bed semi detached	1	114.10	1228	114	1228	0.98%
House Type 'H1' - 3 Bed semi detached - Double front	1	115.60	1244	116	1244	0.98%
House Type 'J' - 3 Bed semi detached	4	114.00	1227	456	4908	3.92%
House Type 'J1' - 3 Bed semi detached	4	114.20	1229	457	4917	3.92%
House Type 'K' - 3 bed Long Semi-Detached	4	107.80	1160	431	4641	3.92%
House Type 'L' - 4 bed Long Semi-Detached	4	129.80	1397	519	5589	3.92%
House Type 'M' - 3 Bed End of Terrace	3	113.90	1226	342	3678	2.94%
House Type 'M1' - 3 Bed End of Terrace	3	113.90	1226	342	3678	2.94%
House Type 'M2' - 3 Bed Mid Terrace	3	114.10	1228	342	3684	2.94%
Total housing	**67**			**7776**	**83701**	**65.7%**

Total Proposed No of Units on Site	**102**		**10423**	**112318**	**100%**
	Inc. Common areas etc.		**11623.3**	**120817**	

Overall Site MIX/ UNIT TYPES		%			%
1 bedroom	11	10.8	Terraced	35	34.3
2 bedroom	24	23.5	Semi - Detached	32	31.4
3 bedroom	54	52.9	Detached	0	0.0
4 bedroom	13	12.7	Apartment	35	34.3
TOTAL	102	100.0	TOTAL	102	100.0

Please Refer to Appendix 02 to 06 for Housing/ Apartment quality assessments, Parking provision, Private amenity space and Bin storage provision

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APPENDIX 2 - Page 01 Apartment quality assessment by unit type

APARTMENT QUALITY ASSESSMENT - Rosshill, Galway City

Overall Site Area (developabale area): 2.844 HA 7.03 ACRES

Unit no.	Apartment Types	No. of Units	% of all Units (102)	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Total Bed Spaces	Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bed 2 (sqm)	Bed 3 (sqm)	Bed 4 (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)	Private open Space Terrace or Balcony	Total Private open space (Sqm)	Aspect
	Apartment type 1A (1 bed - 2Person)	4	3.92	50.17	1	2	8	23.95	3.86	11.54	0	0	0	11.54	3.13	5.13 min (B)/(T)	5.13 min	Single
	Apartment type 1B (1 bed - 2 Person)	4	3.92	56.00	1	2	8	28.59	4.693	11.48	0	0	0	11.48	3.01	5.17min (B)/(T)	5.17min	Dual
	Apartment Type 1C (1 Bed - 2 Person)	3	2.94	51	1	2	6	23.46	3.35	11.49	0	0	0	11.49	3.10	5.21 (B)	5.21	Single
	Apartment type 2A (2 bed - 4 Person)	11	10.78	77.64	1	4	44	30.43	4.93	11.40	13.18	0	0	24.58	6.28	7.16 min(T)(B)	7.12min	Dual
	Apartment type 2B (2 bed - 4 Person)	4	3.92	79.51	1	4	16	30.24	4.257	11.47	13.36	0	0	24.83	6.07	8.41 (T)(B)	8.41	Dual
	Apartment type 2C (2 bed - 4 Person)	3	2.94	85.8	1	4	12	37.03	5.46	11.47	13.02	0	0	24.49	6.51	7.08min (T)(B)	7.08min	Dual
	Apartment type 2D (2 bed - 4 Person)	3	2.94	80.3	1	4	12	30.11	4.416	11.41	13.05	0	0	24.46	6.06	7.02(B)	7.02	Dual
	Apartment type 2E (2 bed - 3 Person)	3	2.94	70.2	1	3	9	28.23	3.65	13.17	8.40	0	0	21.57	5.02	9.77 (B)	9.77	Dual
		35	34.3															

Department of the Enviroment, Community & Local Goverment Standard - *Sustainable Urban Housing: Design standards for new apartments guidelines for planning Authorities (2018)*

House Types	Floor Area (sqm)	No. of Floors	No. of Beds spaces		Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bed 2 (sqm)	Bed 3 (sqm)	Bed 4 (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)		Private open Space (sqm)	
1 Bed/ 2 person unit	45	n/a	2		23	3.3	11.4	0	0	0	11.4	3		5	
2 Bed/ 3 person unit	63	n/a	3		28	3.6	13	7.1	0	0	20.1	5		6	
2 Bed/ 4 person unit	73	n/a	4		30	3.6	11.4	13	0	0	24.4	6		7	
3 Bed/5 person unit	90	n/a	5		34	3.8	11.4	13	7.1	0	31.5	9		9	

Note: Where Balconies (B) & Terraces (T) are described as a min. this is the smallest size provied for that type of units. There are whoever larger balconies provied to the same unit type in different locations. Please refer to Apartment plans and Appendix 02 page 02

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APPENDIX 2 - PAGE 02 - By Apartment number

APARTMENT QUALITY ASSESSMENT - Rosshill, Galway City 29.01.2021

Overall Site Area (developabale area): 2.844 HA 7.03 ACRES

Unit no.	Apartment Types	No. of Units	% of all Units (102)	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Total Bed Spaces	Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bed 2 (sqm)	Bed 3 (sqm)	Bed 4 (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)	Private open Space T (terrace) B (balcony)	Total Private open space (Sqm)	Aspect
	APARTMENT BUILDING AND COMMERCIAL																	
	Ground floor																	
1	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.16(T)	7.16	Single
2	Apartment type 2B (2 bed - 4 Person)	1	0.98	79.51	1	4	4	30.24	4.257	11.47	13.36	0	0	24.83	6.07	8.18(T)	8.18	Dual
3	Apartment type 2C (2 bed - 4 Person)	1	0.98	85.8	1	4	4	37.03	5.46	11.47	13.07	0	0	24.54	6.51	7.25(T)	7.25	Dual
4	Apartment type 1A (1 bed - 2Person)	1	0.98	50.17	1	2	2	23.95	3.86	11.54	0	0	0	11.54	3.13	5.13 (T)	5.13	Single
5	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.22(T)	7.22	Dual
6	Apartment type 1B (1 bed - 2 Person)	1	0.98	56	1	2	2	28.59	4.693	11.48	0	0	0	11.48	3.01	5.17(T)	5.17	Dual
	First Floor																	
7	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.12(B)	7.12	Single
8	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.24 (B)	7.24	Single
9	Apartment type 2B (2 bed - 4 Person)	1	0.98	79.51	1	4	4	30.24	4.257	11.47	13.36	0	0	24.83	6.07	8.41 (B)	8.41	Dual
10	Apartment type 2C (2 bed - 4 Person)	1	0.98	85.8	1	4	4	37.41	5.46	11.47	13.02	0	0	24.49	6.51	7.08 (B)	7.08	Dual
11	Apartment type 1A (1 bed - 2 Person)	1	0.98	50.17	1	2	2	23.95	3.86	11.54	0	0	0	11.54	3.13	5.13 (B)	5.13	Single
12	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.17 (B)	7.17	Dual
13	Apartment type 1B (1 bed - 2 Person)	1	0.98	56	1	2	2	28.59	4.693	11.48	0	0	0	11.48	3.01	5.30 (B)	5.3	Dual
14	Apartment type 2E (2 bed - 3 Person)	1	0.98	70.2	1	3	3	28.23	3.65	13.17	8.40	0	0	21.57	5.02	9.77 (B)	9.77	Dual
15	Apartment Type 1C (1 Bed - 2 Person)	1	0.98	51	1	2	2	23.46	3.35	11.49	0	0	0	11.49	3.10	5.21 (B)	5.21	Single
16	Apartment type 2D (2 bed - 4 Person)	1	0.98	80.3	1	4	4	30.11	4.416	11.41	13.05	0	0	24.46	6.06	7.02(B)	7.02	Triple
	Second Floor																	
17	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.12 (B)	7.12	Single
18	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.12 (B)	7.12	Single
19	Apartment type 2B (2 bed - 4 Person)	1	0.98	79.51	1	4	4	30.24	4.257	11.47	13.36	0	0	24.83	6.07	8.41 (B)	8.41	Dual
20	Apartment type 2C (2 bed - 4 Person)	1	0.98	85.8	1	4	4	37.41	5.46	11.47	13.02	0	0	24.49	6.51	7.08 (B)	7.08	Dual
21	Apartment type 1A (1 bed - 2Person)	1	0.98	50.17	1	2	2	23.95	3.86	11.54	0	0	0	11.54	3.13	5.28 (B)	5.28	Single
22	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.17 (B)	7.17	Dual
23	Apartment type 1B (1 bed - 2 Person)	1	0.98	56	1	2	2	28.59	4.693	11.48	0	0	0	11.48	3.01	5.28(B)	5.28	Dual
24	Apartment type 2E (2 bed - 3 Person)	1	0.98	70.2	1	3	3	28.23	3.65	13.17	8.40	0	0	21.57	5.02	9.77 (B)	9.77	Dual
25	Apartment Type 1C (1 Bed - 2 Person)	1	0.98	51	1	2	2	23.46	3.35	11.49	0	0	0	11.49	3.10	5.21 (B)	5.21	Single
26	Apartment type 2D (2 bed - 4 Person)	1	0.98	80.3	1	4	4	30.11	4.416	11.41	13.05	0	0	24.46	6.06	7.02(B)	7.02	Triple
	Third Floor																	
27	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.12 (B)	7.12	Single
28	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.37 (B)	7.37	Single
29	Apartment type 2B (2 bed - 4 Person)	1	0.98	79.51	1	4	4	30.24	4.257	11.47	13.36	0	0	24.83	6.07	55.39 (B)	55.39	Triple
30	Apartment type 1A (1 bed - 2Person)	1	0.98	50.17	1	2	2	23.95	3.86	11.54	0	0	0	11.54	3.13	5.13 (B)	5.13	Single
31	Apartment type 2A (2 bed - 4 Person)	1	0.98	77.64	1	4	4	30.43	4.93	11.4	13.18	0	0	24.58	6.28	7.17 (B)	7.17	Dual
32	Apartment type 1B (1 bed - 2 Person)	1	0.98	56	1	2	2	28.59	4.693	11.48	0	0	0	11.48	3.01	5.30(B)	5.3	Dual
33	Apartment type 2E (2 bed - 3 Person)	1	0.98	70.2	1	3	3	28.23	3.65	13.17	8.40	0	0	21.57	5.02	9.77 (B)	9.77	Dual
34	Apartment Type 1C (1 Bed - 2 Person)	1	0.98	51	1	2	2	23.46	3.35	11.49	0	0	0	11.49	3.10	5.21 (B)	5.21	Single
35	Apartment type 2D (2 bed - 4 Person)	1	0.98	80.3	1	4	4	30.11	4.416	11.41	13.05	0	0	24.46	6.06	7.02(B)	7.02	Triple

Dual aspect: 21 no. (60.0%)

Department of the Enviroment, Community & Local Goverment Standard - *Sustainable Urban Housing: Design standards for new apartments guidelines for planning Authorities (2018)*

House Types	Floor Area (sqm)	No. of Floors	No. of Beds spaces		Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bed 2 (sqm)	Bed 3 (sqm)	Bed 4 (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)		Private open Space (sqm)	
1 Bed/ 2 person unit	45	n/a	2		23	3.3	11.4	0	0	0	11.4	3		5	
2 Bed/ 3 person unit	63	n/a	3		28	3.6	13	7.1	0	0	20.1	5		6	
2 Bed/ 4 person unit	73	n/a	4		30	3.6	11.4	13	0	0	24.4	6		7	
3 Bed/5 person unit	90	n/a	5		34	3.8	11.4	13	7.1	0	31.5	9		9	

Please refer to Apartment plans - Drawings numbers 3200 to 3203 where all Room widths are clearly shown

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APPENDIX 3 - Page 01 Housing Quality Assessment by unit type

HQA - Rosshill, Galway

29.06.2021

Developable Site Area:	2.844	HA	7.03 ACRES

House Types	No. of Units	% of all Units (102)	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Total Bed Spaces	Agg. Living Area (sqm)	Living Space Width (m)	Bed 1 (sqm)	Bedroom 1 Width (sqm)	Bed 2 (sqm)	Bedroom 2 Width (sqm)	Bed 3 (sqm)	Bedroom 3 Width (sqm)	Bed 4 (sqm)	Bedroom 4 Width (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)	Private open Space (sqm)	Aspect	Attic Extension Possible
House Type 'A/A1' - 4 Bed Semi Detached	2	1.96	134.9	2	6	12	48.96	4	14.28	2.8	11.83	3.46	8.6	2.52	8.77	2.58	43.48	11.78	Various	Dual	Yes
House Type 'B' - 3 Bed semi detached	4	3.92	113.9	2	5	20	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
House Type 'B1' - 3 Bed semi detached	4	3.92	117.7	2	5	20	42.75	3.87	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
House Type 'C/C2' - 3 Bed End of Terrace	4	3.92	113.9	2	5	20	40.69	4.09	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
House Type 'C1' - 3 Bed Mid Terrace	2	1.96	117.7	2	5	10	42.65	4.09	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
House Type 'D' - 2 storey town house - end of terrace - 3 bed	2	1.96	106.2	2	5	10	36.81	3.93	13.18	3.52	12.86	2.92	7.54	2.6	0	0	33.58	6	Various	Dual	Yes
House Type 'D1/D3' - 2 storey town house - mid terrace - 3 bed	4	3.92	103.1	2	5	20	35.25	3.93	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
House Type 'D2' - 3 storey town house - end of terrace - 4 bed	2	1.96	146.4	3	8	16	40.05	3.98	15.69	3	11.47	3	12.75	3	13.94	3.58	53.85	10.78	Various	Dual	Yes
House Type 'E' - 3 bed Long Semi-Detached	2	1.96	108	2	5	10	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
House Type 'F' - 4 bed Long Semi-Detached	2	1.96	130	2	6	12	49.89	3.8	12.61	3.17	11.41	3.22	10.07	3.23	7.13	2.55	34.09	6.31	Various	Triple	no
House Type 'G' - 2 storey town house - end of terrace - 3 bed	3	2.94	106.3	2	5	15	36.95	3.85	13.18	3.52	12.93	2.92	7.54	2.6	0	0	33.65	6	Various	Dual	Yes
House Type 'G1' - 2 storey town house - mid terrace - 3 bed	6	5.88	103.1	2	5	30	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
House Type 'G2' - 3 storey town house - end of terrace - 4 bed	3	2.94	146.4	3	8	24	40.05	3.9	15.69	3	11.47	3	13.94	3.58	12.75	3	53.85	11.13	Various	Dual	Yes
House Type 'H' - 3 Bed semi detached	1	0.98	114.1	2	5	5	40.56	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
House Type 'H1' - 3 Bed semi detached - Double front	1	0.98	115.6	2	5	5	42.1	4.02	15.72	3.23	11.67	3.24	7.2	2.18	0	0	34.59	5.61	Various	Dual	Yes
House Type 'J' - 3 Bed semi detached	4	3.92	114	2	5	20	40.7	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
House Type 'J1' - 3 Bed semi detached	4	3.92	114.2	2	5	20	40.83	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
House Type 'K' - 3 bed Long Semi-Detached	4	3.92	107.8	2	5	20	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
House Type 'L' - 4 bed Long Semi-Detached	4	3.92	129.8	2	6	24	49.89	3.8	13.09	3.35	11.41	3.22	9.61	3.23	7.13	2.55	41.24	6.31	Various	Triple	no
House Type 'M' - 3 Bed End of Terrace	3	2.94	113.9	2	5	15	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
House Type 'M1' - 3 Bed End of Terrace	3	2.94	114.1	2	5	15	40.82	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
House Type 'M2' - 3 Bed Mid Terrace	3	2.94	113.9	2	5	15	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
TOTAL	67	65.69				220															

Note: Heat pump locations and not included in storage area calculations

Please refer to Appendix 03 page 02 and to Appendix 04 for private open spaces provided to each unit.

Department of the Enviroment, Community & Local Goverment Standard - *Quality Housing for Sustainable communities 2007*

House Types	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Main living Area (sqm)	Agg. Living Area (sqm)	Living space Width (m)	Bed 1 (sqm)	Bedroom 1 Width (sqm)	Bed 2 (sqm)	Bedroom 2 Width (sqm)	Bed 3 (sqm)	Bedroom 3 Width (sqm)	Bed 4 (sqm)	Bedroom 4 Width (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)
2 Bed/ 4 person dwelling (2 Storey)	80	2	4	13	30	3.6	13	2.8	11.4	2.8	0	2.1	0	0	25	4
3 Bed/ 5 person dwelling (2 Storey)	92	2	5	13	34	3.8	13	2.8	11.4	2.8	7.1	2.1	0	0	32	5
3 Bed / 6 person dwelling (2 Storey)	100	2	6	15	37	3.8	13	2.8	11.4	2.8	7.1	2.1	7.1	2.1	36	6
4 Bed/ 7 person dwelling (2 Storey)	110	2	7	15	40	3.8	13	2.8	11.4	2.8	11.4	2.8	7.1	2.1	43	6
4 Bed/ 7 person dwelling (3 Storey)	120	2	7	15	40	3.8	13	2.8	11.4	2.8	11.4	2.8	7.1	2.1	43	6

APPENDIX 3 - Page 02 Housing Quality Assessment by unit number

HQA - Rosshill, Galway

29.06.2021

Developable Site Area:	2.844 HA	7.03 ACRES

House No.	House Types	% of all Units (102)	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Total Bed Spaces	Agg. Living Area (sqm)	Living space Width (m)	Bed 1 (sqm)	Bedroom 1 Width (m)	Bed 2 (sqm)	Bedroom 2 Width (m)	Bed 3 (sqm)	Bedroom 3 Width (m)	Bed 4 (sqm)	Bedroom 4 Width (m)	Agg. Beds Area (sqm)	Total Storage (sqm)	Private open Space (sqm)	Aspect	Attic Extension Possible
CELL 01																					
36	House Type 'D2' - 3 storey town house - end of terrace - 4 bed	0.98	146.4	3	8	8	40.05	3.98	15.69	3	11.47	3	12.75	3	13.94	3.58	53.85	10.78	Various	Dual	Yes
37	House Type 'D3' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.93	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
38	House Type 'D1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.93	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
39	House Type 'D' - 2 storey town house - end of terrace - 3 bed	0.98	106.2	2	5	5	36.81	3.93	13.18	3.52	12.86	2.92	7.54	2.6	0	0	33.58	6	Various	Dual	Yes
40	House Type 'B1' - 3 Bed semi detached	0.98	117.7	2	5	5	42.75	3.87	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
41	House Type 'B' - 3 Bed semi detached	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
42	House Type 'C1' - 3 Bed Mid Terrace	0.98	117.7	2	5	5	42.65	4.09	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
43	House Type 'C2' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.69	4.09	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
44	House Type 'C' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.69	4.09	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
45	House Type 'B1' - 3 Bed semi detached	0.98	117.7	2	5	5	42.75	3.87	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
46	House Type 'B' - 3 Bed semi detached	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
47	House Type 'D2' - 3 storey town house - end of terrace - 4 bed	0.98	146.4	3	8	8	40.05	3.98	15.69	3	11.47	3	12.75	3	13.94	3.58	53.85	10.78	Various	Dual	Yes
48	House Type 'D3' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.93	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
49	House Type 'D1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.93	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
50	House Type 'D' - 2 storey town house - end of terrace - 3 bed	0.98	106.2	2	5	5	36.81	3.93	13.18	3.52	12.86	2.92	7.54	2.6	0	0	33.58	6	Various	Dual	Yes
51	House Type 'E' - 3 bed Long Semi-Detached	0.98	108	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
52	House Type 'F' - 4 bed Long Semi-Detached	0.98	130	2	6	6	49.89	3.8	12.61	3.17	11.41	3.22	10.07	3.23	7.13	2.55	34.09	6.31	Various	Triple	no
53	House Type 'B1' - 3 Bed semi detached	0.98	117.7	2	5	5	42.75	3.87	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
54	House Type 'B' - 3 Bed semi detached	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
55	House Type 'C1' - 3 Bed Mid Terrace	0.98	117.7	2	5	5	42.65	4.09	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
56	House Type 'C2' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.69	4.09	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
57	House Type 'C' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.69	4.09	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
58	House Type 'B1' - 3 Bed semi detached	0.98	117.7	2	5	5	42.75	3.87	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	Various	Dual	Yes
59	House Type 'B' - 3 Bed semi detached	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
3	House Type 'A1' - 4 Bed Semi Detached	0.98	134.9	2	6	6	48.96	4	14.28	2.8	11.83	3.46	8.6	2.52	8.77	2.58	43.48	11.78	Various	Dual	Yes
61	House Type 'A' - 4 Bed Semi Detached	0.98	134.9	2	6	6	48.96	4	14.28	2.8	11.83	3.46	8.6	2.52	8.77	2.58	43.48	11.78	Various	Dual	Yes
62	House Type 'E' - 3 bed Long Semi-Detached	0.98	108	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
63	House Type 'F' - 4 bed Long Semi-Detached	0.98	130	2	6	6	49.89	3.8	12.61	3.17	11.41	3.22	10.07	3.23	7.13	2.55	34.09	6.31	Various	Triple	no
CELL 02																					
64	House Type 'G2' - 3 storey town house - end of terrace - 4 bed	0.98	146.4	3	8	8	40.05	3.9	15.69	3	11.47	3	13.94	3.58	12.75	3	53.85	11.13	Various	Dual	Yes
65	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
66	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
67	House Type 'G' - 2 storey town house - end of terrace - 3 bed	0.98	106.3	2	5	5	36.95	3.85	13.18	3.52	12.93	2.92	7.54	2.6	0	0	33.65	6	Various	Dual	Yes
68	House Type 'J' - 3 Bed semi detached	0.98	114	2	5	5	40.7	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
69	House Type 'J1' - 3 Bed semi detached	0.98	114.2	2	5	5	40.83	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
70	House Type 'M1' - 3 Bed End of Terrace	0.98	114.1	2	5	5	40.82	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
71	House Type 'M2' - 3 Bed Mid Terrace	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
72	House Type 'M' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
73	House Type 'J' - 3 Bed semi detached	0.98	114	2	5	5	40.7	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
74	House Type 'J1' - 3 Bed semi detached	0.98	114.2	2	5	5	40.83	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
75	House Type 'L' - 4 bed Long Semi-Detached	0.98	129.8	2	6	6	49.89	3.8	13.09	3.35	11.41	3.22	9.61	3.23	7.13	2.55	41.24	6.31	Various	Triple	no
76	House Type 'K' - 3 bed Long Semi-Detached	0.98	107.8	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
77	House Type 'K' - 3 bed Long Semi-Detached	0.98	107.8	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
78	House Type 'L' - 4 bed Long Semi-Detached	0.98	129.8	2	6	6	49.89	3.8	13.09	3.35	11.41	3.22	9.61	3.23	7.13	2.55	41.24	6.31	Various	Triple	no
79	House Type 'J' - 3 Bed semi detached	0.98	114	2	5	5	40.7	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
80	House Type 'J1' - 3 Bed semi detached	0.98	114.2	2	5	5	40.83	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
81	House Type 'M1' - 3 Bed End of Terrace	0.98	114.1	2	5	5	40.82	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
82	House Type 'M2' - 3 Bed Mid Terrace	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
83	House Type 'M' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
84	House Type 'J' - 3 Bed semi detached	0.98	114	2	5	5	40.7	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
85	House Type 'J1' - 3 Bed semi detached	0.98	114.2	2	5	5	40.83	3.88	13.77	3.43	11.96	2.82	7.68	2.61	0	0	33.41	8	Various	Dual	Yes
86	House Type 'G' - 2 storey town house - end of terrace - 3 bed	0.98	106.3	2	5	5	36.95	3.85	13.18	3.52	12.93	2.92	7.54	2.6	0	0	33.65	6	Various	Dual	Yes
87	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
88	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
89	House Type 'G2' - 3 storey town house - end of terrace - 4 bed	0.98	146.4	3	8	8	40.05	3.9	15.69	3	11.47	3	13.94	3.58	12.75	3	53.85	11.13	Various	Dual	Yes
CELL 03																					
90	House Type 'H1' - 3 Bed semi detached - Double front	0.98	115.6	2	5	5	42.1	4.02	15.72	3.23	11.67	3.24	7.2	2.18	0	0	34.59	5.61	Various	Dual	Yes
91	House Type 'H' - 3 Bed semi detached	0.98	114.1	2	5	5	40.56	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
92	House Type 'M' - 3 Bed End of Terrace	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
93	House Type 'M2' - 3 Bed Mid Terrace	0.98	113.9	2	5	5	40.42	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
94	House Type 'M1' - 3 Bed End of Terrace	0.98	114.1	2	5	5	40.82	3.8	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	Various	Dual	Yes
95	House Type 'L' - 4 bed Long Semi-Detached	0.98	129.8	2	6	6	49.89	3.8	13.09	3.35	11.41	3.22	9.61	3.23	7.13	2.55	41.24	6.31	Various	Triple	no
96	House Type 'K' - 3 bed Long Semi-Detached	0.98	107.8	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
97	House Type 'G2' - 3 storey town house - end of terrace - 4 bed	0.98	146.4	3	8	8	40.05	3.9	15.69	3	11.47	3	13.94	3.58	12.75	3	53.85	11.13	Various	Dual	Yes
98	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
99	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	0.98	103.1	2	5	5	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	Various	Dual	Yes
100	House Type 'G' - 2 storey town house - end of terrace - 3 bed	0.98	106.3	2	5	5	36.95	3.85	13.18	3.52	12.93	2.92	7.54	2.6	0	0	33.65	6	Various	Dual	Yes
101	House Type 'K' - 3 bed Long Semi-Detached	0.98	107.8	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	Various	Dual	no
102	House Type 'L' - 4 bed Long Semi-Detached	0.98	129.8	2	6	6	49.89	3.8	13.09	3.35	11.41	3.22	9.61	3.23	7.13	2.55	41.24	6.31	Various	Triple	no

Department of the Enviroment, Community & Local Goverment Standard - *Quality Housing for Sustainable communities 2007*

House Types	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Main living Area (sqm)	Agg. Living Area (sqm)	Living space Width (m)	Bed 1 (sqm)	Bedroom 1 Width (m)	Bed 2 (sqm)	Bedroom 2 Width (m)	Bed 3 (sqm)	Bedroom 3 Width (m)	Bed 4 (sqm)	Bedroom 4 Width (m)	Agg. Beds Area (sqm)	Total Storage (sqm)
2 Bed/ 4 person dwelling (2 Storey)	80	2	4	13	30	3.6	13	2.8	11.4	2.8	0	2.1	0	0	25	4
3 Bed/ 5 person dwelling (2 Storey)	92	2	5	13	34	3.8	13	2.8	11.4	2.8	7.1	2.1	0	0	32	5
3 Bed / 6 person dwelling (2 Storey)	100	2	6	15	37	3.8	13	2.8	11.4	2.8	7.1	2.1	7.1	2.1	36	6
4 Bed/ 7 person dwelling (2 Storey)	110	2	7	15	40	3.8	13	2.8	11.4	2.8	11.4	2.8	7.1	2.1	43	6
4 Bed/ 7 person dwelling (3 Storey)	120	2	7	15	40	3.8	13	2.8	11.4	2.8	11.4	2.8	7.1	2.1	43	6

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APPENDIX 4

PRIVATE OPEN SPACE ASSESSMENT - Rosshill , Galway

24.06.2021

Galway City dvelopment plan 2017-2023 Requirements: Section 11.3.1 (C) Requirement : Not less than 50% of Gross floor area of residential unit

Unit No.	No. of Beds	House Type	Requirement	Garden Area (Sqm)
36	4 bed	D2	73.2sqm	75.6sqm
37	3 Bed	D3	51.55sqm	61.4sqm
38	3 Bed	D1	51.55sqm	65.9sqm
39	3 Bed	D	53.1sqm	69.6sqm
40	3 Bed	B1	58.85 sqm	83sqm
41	3 Bed	B	56.95 sqm	83sqm
42	3 Bed	C1	58.85 sqm	64.7sqm
43	3 Bed	C2	56.95 sqm	63.5sqm
44	3 Bed	C	56.95 sqm	82.6sqm
45	3 Bed	B1	58.85 sqm	82.8sqm
46	4 Bed	B	56.95 sqm	83sqm
47	3 Bed	D2	73.2 sqm	73.4sqm
48	3 Bed	D1	51.55sqm	52.3sqm
49	3 Bed	D1	51.55sqm	52 sqm
50	3 Bed	D	53.1sqm	53.1sqm
51	3 Bed	E	54 sqm	107sqm
52	4 Bed	F	65 sqm	83sqm
53	3 Bed	B1	58.85sqm	68.8sqm
54	3 Bed	B	56.95sqm	83sqm
55	3 Bed	C1	58.85sqm	65.2 sqm
56	3 Bed	C2	56.95sqm	62.1sqm
57	3 Bed	C	56.95 sqm	83.7sqm
58	3 Bed	B1	58.85 sqm	83sqm
59	3 Bed	B	56.95 sqm	83sqm
60	4 Bed	A1	67.45 sqm	81.7sqm
61	4 Bed	A1	67.45sqm	81.7sqm
62	4 Bed	E	54 sqm	102sqm
63	3 Bed	F	65sqm	78.9sqm
64	4 Bed	G2	73.2 sqm	73.2sqm
65	3 Bed	G1	51.55 sqm	52.6sqm
66	3 Bed	G1	51.55 sqm	56sqm
67	3 Bed	G	53.1 sqm	58.5sqm
68	3 Bed	J	57 sqm	83sqm
69	3 Bed	J1	57.1 sqm	83sqm

Unit No.	No. of Beds	House Type	Requirement	Garden Area (Sqm)
70	3 Bed	M	57.05 sqm	83.7sqm
71	3 Bed	M2	56.95 sqm	62sqm
72	3 Bed	M1	56.95 sqm	65sqm
73	3 Bed	J	57 sqm	83.1sqm
74	3 Bed	J1	57.1 sqm	83sqm
75	4 Bed	L	64.9 sqm	82.7sqm
76	3 Bed	K	53.9 sqm	100.7sqm
77	3 Bed	K	53.9 sqm	100.7sqm
78	4 Bed	L	64.9 sqm	83.5sqm
79	3 Bed	J	57 sqm	83.1sqm
80	3 Bed	J1	57.1 sqm	83.2sqm
81	3 Bed	M1	57.05 sqm	83.6sqm
82	3 Bed	M2	56.95 sqm	62sqm
83	3 Bed	M	56.95 sqm	65sqm
84	3 Bed	J	57 sqm	83sqm
85	3 Bed	J1	57.1 sqm	83sqm
86	3 Bed	G	53.1 sqm	62sqm
87	3 Bed	G1	51.55 sqm	52.3sqm
88	3 Bed	G1	51.55 sqm	51.7sqm
89	4 Bed	G2	73.2 sqm	73.3sqm
90	3 Bed	H1	57.8 sqm	83.1sqm
91	3 Bed	H1	57.05 sqm	83sqm
92	3 Bed	M	56.95 sqm	64.7sqm
93	3 Bed	M2	56.95 sqm	63.3sqm
94	3 Bed	M1	57.05 sqm	83sqm
95	4 Bed	L	64.9 sqm	79sqm
96	3 Bed	K	53.9 sqm	100.7sqm
97	4 Bed	G2	73.2 sqm	73.4sqm
98	3 Bed	G1	51.55 sqm	53.4sqm
99	3 Bed	G1	51.55 sqm	53.4sqm
100	3 Bed	G	53.1 sqm	53.3sqm
101	3 Bed	K	53.9 sqm	101sqm
102	4 Bed	L	64.9 sqm	80sqm

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APPENDIX 5 - Car & Cycle parking provision

Rosshill, Galway

30.06.2021

Developable Site Area:	2.844	HA	7.03 ACRES

CAR PARKING PROVISION					
Commercial/ Retail	**Retail - 1 space per 15sqm required as stated Galway City Council Development plan 2017-2023 Section 11.10.1 Table 11.5**				
	Retail space : 188.56 sqm	13	spaces required	3	Provided
	Note: Shortfall to commercial spaces to be covered by some apartment spaces which will typically be vacated during business hours.				
	Note : 3 no. Go Car (car share) spaces are placed close to retail.				
Apartments Block 01 adjoining Retail - 35 no. Apartments	1 space per apartment and 1 visitor space per every 4 apartments required as stated in DHPLG's Sustainable Urban Housing: Design Standards for new Apartments section 4.22.				
	35 no. Apts	44	spaces required	43	Provided
	35 no. spaces are provided for each apartment. 8 number spaces are visitor spaces through the scheme.				
	Note : 2 no. Go Car (car share) spaces are placed close to entrance are included in the visitor spaces.				
	3 disabled access spaces are included in the provided number above (1 visitor and 2 apartment spaces).				
	07 no. Creche & 03 no. Retail spaces will normally be vacated outside office hours and can be used as visitor spaces				
Creche Parking requirements	1 space per 20sqm operation space as stated Galway City Council Development plan 2017-2023 Section 11.10.1 Table 11.5				
	Overall Creche Area: 398.8 sqm		Creche operational space: 288.37sqm		
		14	spaces required	7	Provided
	Note : 7 spaces are dedicated staff spaces. The remainder 7 of required spaces is made up of Apartment spaces which will typically be vacated during business hours.				
Houses - Detached / Semi -Detached/ Terraced	2 on curtilage spaces proposed per dwelling or 1.5 grouped sapces + 1 per 3 dwellings visitor as stated Galway City Council Development plan 2017-2023 Section 11.10.1 Table 11.5				
	30 Houses - On curtilage	60+10 visitor	spaces required	60	Provided
	37 Houses - Grouped parking	55.5+12.3visitor	spaces required	70	Provided
	Required: 37 houses are grouped parking = 49.5 + 11 = 60.5.				
	Provided : 30 number houses are on curtilage = 68 spaces. 34 are grouped parking = 61				
	Note: 3 no. of the Grouped visitor spaces are provided as Disabled access apaces.				
DISABLED ACCESS SPACES.	Requirement of 1:20 of grouped carparking spaces to be disable access spaces.				
	Total of 115 no. grouped & visitor spaces across the site. 1:20 or 5% requirement is 5.75 spaces. **6 no. spaces provided.**				
Electric Vehicular Charge points	Two spaces provided to the Apartments Carparking. All grouped & dwelling spaces will be ducted to allow future connection to provide electrical charge points.				
TOTAL CAR PARKING SPACES		**208.8 required**		**183**	**Provided**

BICYCLE PARKING PROVISION					
Houses - Detached / Semi -Detached/ Terraced	At least 2 spaces provided in rear gardens. All gardens are provided with direct access.				
	67 no. Houses	134	spaces required	134	Provided
Creche	No stated requirement in the Galway City Council Development plan 2017-2023				
		0	spaces required	9	Provided
Commercial Retail/ Public areas	1 cycle stand (5 spaces) per 20 carpark spaces as stated Galway City Council Development plan 2017-2023 Section 11.10.3				
	50 no . Car park spaces close to apts	12.5	spaces required	20	Provided
	08 stands - Galway 'Coke' Bike share spaces are proposed close to the retail entrance are included in this.				
Apartment Building - 35 no. apartments	1 space per bedroom and 1 visitor space per every 2 apartments required as stated in DHPLG's Sustainable Urban Housing: Design Standards for new Apartments section 4.17.				
	35 no. Apts	76.5	spaces required	77	Provided
	52 bike space will be secure and covered within the apartment building serving the apartments, the remainder secure and covered 25 spaces are provided as visitor bike spaces beside the main apartment entrance.				
TOTAL BICYCLE PARKING SPACES		**223 required**		**240**	**Provided**

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APPENDIX 6 - Bin store provision

Rosshill, Galway

29.06.2021

Developable Site Area:	2.844	HA	7.03 ACRES

BIN STORE PROVISION					
Commercial / Retail	Note: all Bins to commercial units and apartment bin storeage areas are 1100 litre bins				
Integrated within Building- Commercial bins 11.57m2	No Specific development plan objective / standard .. However the following had been provided				
refer to drawing 3200	Retail space : 188.56sqm	N/A		5	Provided
Apartments Building - 35 no. Units	Set of 3 no. 1100 litre bins for a block of 10 apartments as per Galway City Council Development plan 2017-2023				
Residential Bin store - 30.51 sqm	Section 11.3.1 (i) Bin storage standards				
refer to drawings 3200	35 no. Apts	10.5	Bins required	11	Provided
Creche	Note: all Bins to commercial units and apartement bin storeage areas are 1100 litre bins				
Bin Store - 5.99sqm	No Specific development plan objective / standard .. However the following had been provided				
refer to drawings 3270		N/A	Bins required	3	Provided
Houses - Detached / Semi -Detached/ Terraced	All houses have access to rear gardens where 3 no. 240 litre bins can be stored as per Galway City Council Development				
Integrated into rear gardens	plan 2017-2023, Section 11.3.1 (i) Bin storage standards				
refer to site layout plans 3001, 3003 & 3004 for rear access	67 no. Houses	201	Bins required	201	Provided
TOTAL No of BINS PROVIDED		**212**	**required**	**220**	**Provided**

APPENDIX 07 - Page 01

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INDICATIVE SOCIAL PROVISION

Proposed Residential Development Statistics - Rosshill, Galway - 102 UNITS 28.06.2021

PHASE 01 Overall Site Area:	4.7042	HA	11.624	ACRES
Undevelopable area: Old Dublin Road & Rosshill Road	0.6894		1.704	ACRES
Undevelopable area: Parkland areas and Pumping stataion access	1.1706		2.893	ACRES
Developable Site Area:	2.8442	HA	7.028	ACRES
Requirement: 10% of 102 no units	10.20	required	10.0	Proposed
10% of overall Residential (10,235 sqm)	1023.5	sqm required	1024.29	sqm proposed

Proposed Apartment & Commercial units:	**No. of Unit Type**	**Floor Area (m2)**	**Floor Area (ft2)**	**Total Flr. Area (m2)**	**Total Flr. Area (ft2)**	**% of Total:**
Apartment Type '1A' - 1 bed 2 person (1 Storey)	1	50.17	540	50.2	540	10.00%
Apartment Type '1B' - 1 bed 2 person (1 Storey)	0	56	603	0.0	0	0.00%
Apartment Type '1C' - 1 bed 2 person (1 Storey)	0	51	549	0.0	0	0.00%
Apartment Type '2A' - 2 bed 4 person (1 Storey)	0	77.64	836	0.0	0	0.00%
Apartment Type '2B' - 2 bed 4 person (1 Storey)	1	79.51	856	79.5	856	10.00%
Apartment Type '2C' - 2 bed 4 person (1 Storey)	1	85.8	924	85.8	924	10.00%
Apartment Type '2D' - 2 bed 4 person (1 Storey)	0	80.3	864	0.0	0	0.00%
Apartment Type '2E' - 2 bed 3 person (1 Storey)	0	70.2	756	0.0	0	0.00%
Total Apartment units	**3**			**215.5**	**2319**	**30.0%**

Conventional House types	**No. of Unit Type**	**Floor Area (m2)**	**Floor Area (ft2)**	**Total Flr. Area (m2)**	**Total Flr. Area (ft2)**	**% of Total:**
House Type 'A/A1' - 4 Bed Semi Detached	0	134.90	1452	0	0	0.00%
House Type 'B' - 3 Bed semi detached	0	113.90	1226	0	0	0.00%
House Type 'B1' - 3 Bed semi detached	0	117.70	1267	0	0	0.00%
House Type 'C/C1' - 3 Bed End of Terrace	2	113.90	1226	228	2452	20.00%
House Type 'C2' - 3 Bed Mid Terrace	1	117.70	1267	118	1267	10.00%
House Type 'D' - 2 storey town house - end of terrace - 3 bed	0	106.20	1143	0	0	0.00%
House Type 'D1' - 2 storey town house - mid terrace - 3 bed	0	103.10	1110	0	0	0.00%
House Type 'D2' - 3 storey town house - end of terrace - 4 bed	0	146.40	1576	0	0	0.00%
House Type 'E' - 3 bed Long Semi-Detached	0	108.00	1163	0	0	0.00%
House Type 'F' - 4 bed Long Semi-Detached	0	130.00	1399	0	0	0.00%
House Type 'G' - 2 storey town house - end of terrace - 3 bed	0	106.30	1144	0	0	0.00%
House Type 'G1' - 2 storey town house - mid terrace - 3 bed	2	103.10	1110	206	2220	20.00%
House Type 'G2' - 3 storey town house - end of terrace - 4 bed	0	146.40	1576	0	0	0.00%
House Type 'H' - 3 Bed semi detached	0	114.10	1228	0	0	0.00%
House Type 'H1' - 3 Bed semi detached - Double front	0	115.60	1244	0	0	0.00%
House Type 'J' - 3 Bed semi detached	0	114.00	1227	0	0	0.00%
House Type 'J1' - 3 Bed semi detached- Double front	0	114.20	1229	0	0	0.00%
House Type 'K' - 3 bed Long Semi-Detached	1	107.80	1160	108	1160	10.00%
House Type 'L' - 4 bed Long Semi-Detached	1	129.80	1397	130	1397	10.00%
House Type 'M' - 3 Bed End of Terrace	0	113.90	1226	0	0	0.00%
House Type 'M1' - 3 Bed End of Terrace	0	113.90	1226	0	0	0.00%
House Type 'M2' - 3 Bed Mid Terrace	0	114.10	1228	0	0	0.00%
Total housing	**7**			**789**	**8496**	**70.0%**

Total Proposed No of Units on Site		**10**			**1004.78**	**10815**	**100%**

Overall Site MIX/ UNIT TYPES		%			%
1 bedroom	1	10.0	Terraced	5	50.0
2 bedroom	2	20.0	Semi - Detached	2	20.0
3 bedroom	6	60.0	Detached	0	0.0
4 bedroom	1	10.0	Apartment	3	30.0
TOTAL	10	100.0	TOTAL	10	100.0

Please Refer to Appendix 07 Page 02 for Housing/ Apartment quality assessments for further analysis of areas to be provided upon agreement.

The above unit mix has be agreed in principle with Galway City Council and this proposal is amended from a previous submitted version at Galway City Councils request.
It is acknowledged that there is a shortfall 18.72 sqm from being 10% of the overall residential area with this mix of units.
Galway City Council responded on this noting: 'Although if the overall percentage provided of the agreed units is in excess or a shortfall of the required 10%,
an additional discount or reduction in the Equivalent Net Monetary Value is applied'.

O'Neill | O'Malley

Architecture + Project Management

APPENDIX 7 - Page 02 Quality assessment by unit type

Indicative social provision (PART V) - Rosshill, Galway City

Overall Site Area (developabale area): 2.8442 HA 7.03 ACRES

Unit no.	Apartment Types	No. of Units	% of all Units (102)	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Total Bed Spaces	Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bed 2 (sqm)	Bed 3 (sqm)	Bed 4 (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)	Private open Space Terrace or Balcony	Total Private open space (Sqm)	Aspect
2	Apartment type 1A (1 bed - 2Person)	1	0.98	50.17	1	2	2	23.95	3.86	11.54	0	0	0	11.54	3.13	5.13 (T)	5.13	Single
3	Apartment type 2B (2 bed - 4 Person)	1	0.98	79.51	1	4	4	30.24	4.257	11.47	13.36	0	0	24.83	6.07	8.41(T)	8.41	Dual
4	Apartment type 2C (2 bed - 4 Person)	1	0.98	85.80	1	4	4	37.03	5.46	11.47	13.02	0	0	24.49	6.51	7.08(T)	7.08	Dual
		3	2.9															

Department of the Enviroment, Community & Local Goverment Standard - *Sustainable Urban Housing: Design standards for new apartments guidelines for planning Authorities (2018)*

Apartment Types	Floor Area (sqm)	No. of Floors	No. of Beds spaces		Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bed 2 (sqm)	Bed 3 (sqm)	Bed 4 (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)		Private open Space (sqm)	
1 Bed/ 2 person unit	45	n/a	2		23	3.3	11.4	0	0	0	11.4	3		5	
2 Bed/ 3 person unit	63	n/a	3		28	3.6	13	7.1	0	0	20.1	5		6	
2 Bed/ 4 person unit	73	n/a	4		30	3.6	11.4	13	0	0	24.4	6		7	

Unit no.	House Types	No. of Units	% of all Units (102)	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Total Bed Spaces	Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bedroom 1 Width (sqm)	Bed 2 (sqm)	Bedroom 2 Width (sqm)	Bed 3 (sqm)	Bedroom 3 Width (sqm)	Bed 4 (sqm)	Bedroom 4 Width (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)	Private open Space (sqm)	Aspect	Attic Extension Possible
56 & 57	House Type 'C/C2' - 3 Bed End of Terrace	2	1.96	113.90	2	5	10	40.69	4.09	13.77	3.42	11.96	2.82	7.68	2.6	0	0	33.41	8	62.1 & 83.7	Dual	Yes
55	House Type 'C2' - 3 Bed Mid Terrace	1	0.98	117.70	2	5	5	42.65	4.09	13.77	3.42	13.58	2.82	7.68	2.6	0	0	35.03	8	65.2	Dual	Yes
98 & 99	House Type 'G1' - 2 storey town house - mid terrace - 3 bed	2	1.96	103.10	2	5	10	35.25	3.85	13.18	3.52	11.44	2.92	7.54	2.6	0	0	32.16	5.59	53.4 & 53.4	Dual	Yes
76	House Type 'K' - 3 bed Long Semi-Detached	1	0.98	107.80	2	5	5	38.89	3.8	13.09	3.35	11.46	3.34	7.4	2.55	0	0	31.95	5.44	100.7	Triple	no
75	House Type 'L' - 4 bed Long Semi-Detached	1	0.98	129.80	2	6	6	49.89	3.8	13.09	3.35	11.41	3.22	9.61	3.225	7.13	2.55	41.24	6.31	82.7	Triple	no
TOTAL		7	6.9				21															
TOTAL PART V - Social Provision Proposal		**10**	**10**	**1004.78**			46															

Department of the Enviroment, Community & Local Goverment Standard - *Quality Housing for Sustainable communities 2007*

House Types	Floor Area (sqm)	No. of Floors	No. of Beds spaces	Main living Area (sqm)	Agg. Living Area (sqm)	Living room Width (m)	Bed 1 (sqm)	Bedroom 1 Width (sqm)	Bed 2 (sqm)	Bedroom 2 Width (sqm)	Bed 3 (sqm)	Bedroom 3 Width (sqm)	Bed 4 (sqm)	Bedroom 4 Width (sqm)	Agg. Beds Area (sqm)	Total Storage (sqm)
2 Bed/ 4 person dwelling (2 Storey)	80	2	4	13	30	3.6	13	2.8	11.4	2.8	0	2.1	0	0	25	4
3 Bed/ 5 person dwelling (2 Storey)	92	2	5	13	34	3.8	13	2.8	11.4	2.8	7.1	2.1	0	0	32	5
3 Bed / 6 person dwelling (2 Storey)	100	2	6	15	37	3.8	13	2.8	11.4	2.8	7.1	2.1	7.1	2.1	36	6
4 Bed/ 7 person dwelling (2 Storey)	110	2	7	15	40	3.8	13	2.8	11.4	2.8	11.4	2.8	7.1	2.1	43	6

The above unit mix has be agreed in principle with Galway City Council and this proposal is amended from a previous submitted version at Galway City Councils request. It is acknowledged that there is a shortfall 18.72 sqm from being 10% of the overall residential area with this mix of units.
Galway City Council responded on this noting: 'Although if the overall percentage provided of the agreed units is in excess or a shortfall of the required 10%, an additional discount or reduction in the Equivalent Net Monetary Value is applied'.

APPENDIX 8

4 bedroom 6 Person Homes- Dept of Housing - Rosshill , Galway

30.06.2021

Upon review of the '*Quality Housing for sustainable communities – Best practice guidelines for delivering homes sustaining communities published by the Department of the Environment, Heritage and local Government'*, the design team noted that a under table 5.1 (see figure 02) a dwelling type of 4 bedrooms and 6 persons was not tabled. The application scheme proposes 4 bedroom/ 6 person units amongst a variety of others. O'Neill O'Malley contacted the Department of Housing, Planning & Local Government to ensure that there was no reason that 4 bedroom/ 6 person home would not be acceptable.

O'Neill O'Malley received a reply email (see figure 03) from the Department of Housing, Planning & Local Government on the 18.07.19 stating that '*by it's nature* (the 'Quality Housing for sustainable communities' guidelines*) is somewhat general in the approach, as it is not usual to specifically design for a particular household'* and that '*There are for instance no two storey apartments or four storey houses, or indeed 4 bedroom 6 person houses, but this does not preclude such being provided in a private dwelling, or where a local authority has identified a particular need which would justify this type for a particular social housing household.'*
The proposed 4 bedroom dwellings comply with all relevant guidance within the 'Quality Housing for sustainable communities' guidelines (please refer to Appendix 03). We submit this clearly indicates that a 4bedroom/ 6 person home is acceptable.

Figure 01

Table 5.1: Space provision and room sizes for typical dwellings

DWELLING TYPE	TARGET GROSS FLOOR AREA	MINIMUM - MAIN LIVING ROOM	AGGREGATE LIVING AREA	AGGREGATE BEDROOM AREA	STORAGE
	(m^2)	(m^2)	(m^2)	(m^2)	(m^2)
Family Dwellings - 3 or more persons					
4BED/7P House (3 storey)	120	15	40	43	6
4BED/7P House (2 storey)	110	15	40	43	6
4BED/7P House (1 storey)	100	15	40	43	6
4BED/7P Apartment	105	15	40	43	11
3BED/6P House (3 storey)	110	15	37	36	6
3BED/6P House (2 storey)	100	15	37	36	6
3BED/6P House (1 storey)	90	15	37	36	6
3BED/6P Apartment	94	15	37	36	10
3BED/5P House (3 storey)	102	13	34	32	5
3BED/5P House (2 storey)	92	13	34	32	5
3BED/5P House (1 storey)	82	13	34	32	5
3BED/5P Apartment	86	13	34	32	9
3BED/4P House (2 storey)	83	13	30	28	4
3BED/4P House (1 storey)	73	13	30	28	4
3BED/4P Apartment	76	13	30	28	7
2BED/4P House (2 storey)	80	13	30	25	4
2BED/4P House (1 storey)	70	13	30	25	4
2BED/4P Apartment	73	13	30	25	7
2BED/3P House (2 storey)	70	13	28	20	3
2BED/3P House (1 storey)	60	13	28	20	3
2BED/3P Apartment	63	13	28	20	5
1BED/2P House (1 storey)	44	11	23	11	2
1BED/2P Apartment	45	11	23	11	3

Figure 02

Shane O'Rourke

From: Niall McEntee <Niall.McEntee@housing.gov.ie>
Sent: Thursday 18 July 2019 15:19
To: Shane O'Rourke
Cc: qcsofficer
Subject: Question on 4 bedroom 6 person homes
Attachments: ATT00001.txt; ATT00002.htm

Dear Mr. O'Rourke,

Quality Housing for Sustainable Communities is intended to give guidance to Local Authorities on the design of Social Housing.

It includes the recommended floor areas for various social house and apartment types, and by its nature is somewhat general in the approach, as it is not usual to specifically design for a particular household, as such is not normally identified at design stage.

The Department only supports a certain range of Social Housing types which from experience are the most commonly sought to meet social housing needs. There are for instance no two storey apartments or four storey houses, or indeed 4 bedroom 6 person houses, but this does not preclude such being provided in a private dwelling, or where a local authority has identified a particular need which would justify this type for a particular social housing household.

Best Regards,

Paul

Paul Altman
Senior Advisor,
Urbanism & Architecture,
Built Environment Advisory,
Department of Housing, Planning & Local Government

+353 (0) 1 8882349

Figure 03

Appendix 09

O'NEILL O'MALLEY ARCHITECTURE

PROPOSED DEVELOPMENT AT ROSSHILL, CO. GALWAY

SHADOW ANALYSIS

To be read in conjunction with Planning Application Drawings 3031, 3032, 3033 3034

1.0 Introduction:

1.1 The purpose of this shadow analysis document is to evaluate whether the proposed development on lands at Rosshill, Galway causes undue shadow impacts on the subject lands and the surrounding context including; building façades, private and public outdoor amenity and open spaces, public parkland, footpaths and other parts of the public realm.

1.2 The proposed development consists of a Childcare facility, a commercial retail space and 102 residential units comprising of 67 houses and 35 apartments..

Also proposed is provision of public realm landscaping including shared public open space and play areas, public art, public lighting, resident and visitor parking including car rental bays, electric vehicle charging points and bike rental spaces along with pedestrian, cyclist and vehicular links throughout the development. *

** Note that the shadow impact of accessory structures is generally not included in typical evaluations as their impact is minimal.*

1.3 The site is located to the east of Galway City and is bound by Merlin Park Hospital and the old Dublin road (the R338) to the south and the Rosshill Road and the Galway Dublin rail line to the North.

Surrounding the site are the following uses:

NORTH: The Galway to Dublin/ Limerick railway line and a housing development of 16 houses under construction currently.

EAST: A local access road (Rosshill Stud Farm Road) and agricultural/ high amenity land including the Murrough Local Area Plan lands. An industrial unit (Biocell Water) and a two storey dwelling located at the junction of the Rosshill Road and the Old Dublin Road are the closest existing structures to the proposed development. The industrial unit is over **50m** from the Nearest building on site and the side gable of the dwelling is over **37m** from the nearest building on site. A small apartment block adjoins the site **124m** to the south east (measured from the site boundary).

SOUTH: An undeveloped, zoned low density residential land bank. These lands are backed onto by ribbon development of one off houses and a small stud farm.

WEST: Residential zoned and high amenity zoned lands

2.0 Methodology:

In undertaking and evaluating potential shadows on the site and surrounding areas, this report applied the following methodology and approach:

2.1 Shadow Study Criteria
The testing time-frames used for this report are based on a schedule of 3 hour increments which allow for a rigorous assessment of shadow impact throughout the day. The testing dates and evaluation method allow for the ability to quantify the shadow impact as it moves across the proposed site.

Together, the testing times and evaluation method are appropriate and comprehensive for the evaluation of shadow impact.

2.2 Testing Times
The evaluation of acceptable solar access will rely on 3 hour increments between the time-frame of 09.00 and 18.00.

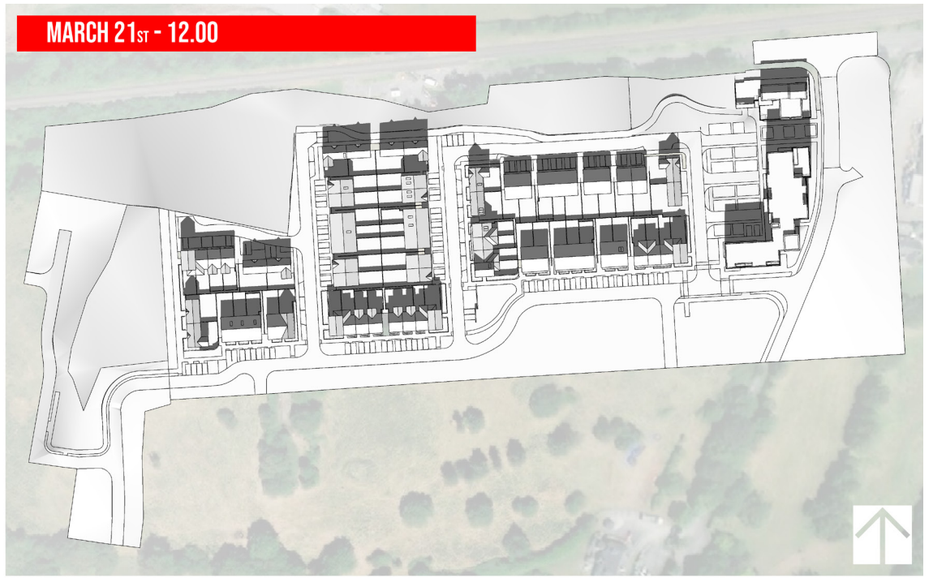
This time-frames is applied equally to the following dates:

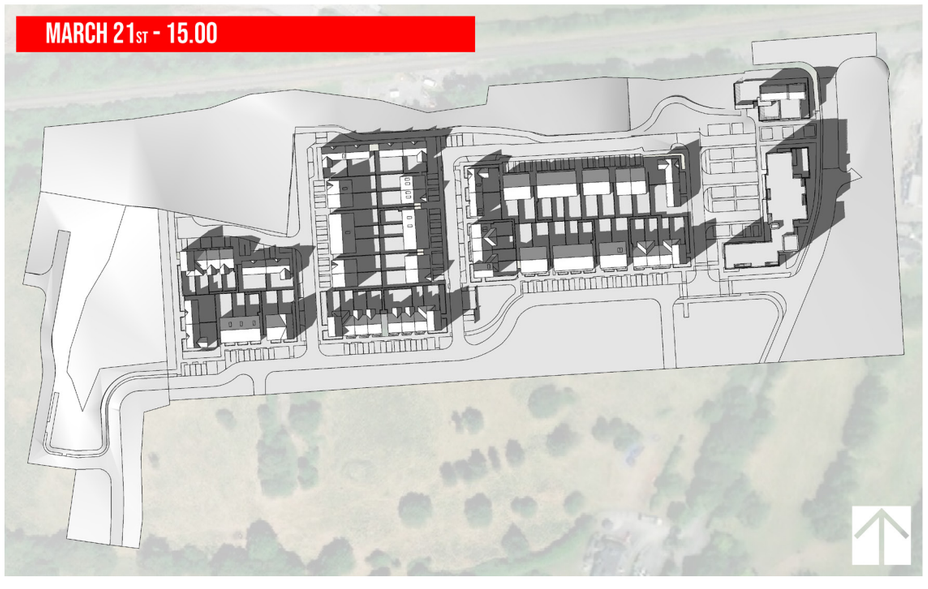
- June 21st (Summer Solstice)
- December 21st (Winter Solstice)
- March/September 21st (Spring/ Vernal and Autumnal Equinoxes)

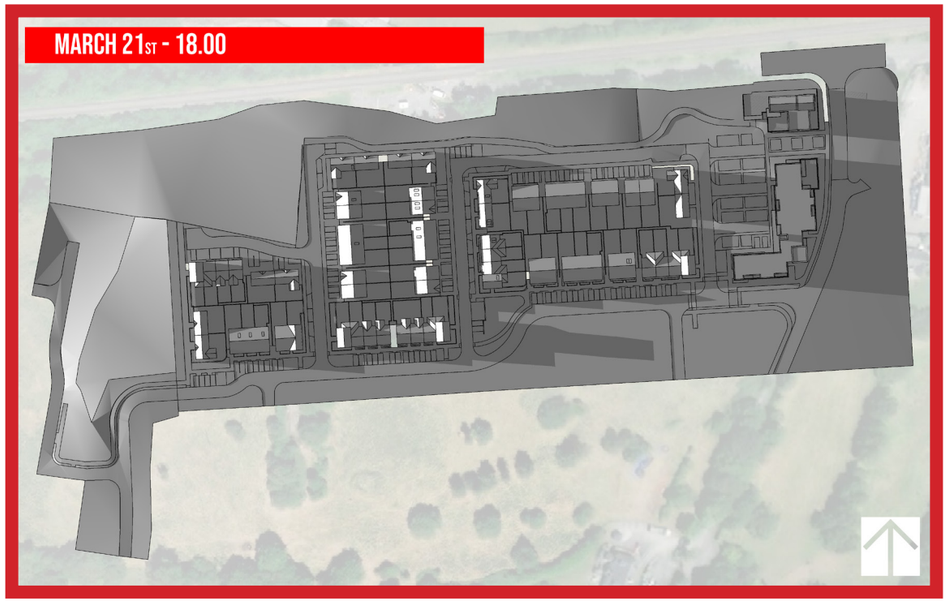
2.3 Evaluation of Potential Impacts
The evaluation of the Shadow Analysis will determine whether acceptable sun-shadow levels are available on sensitive uses, specifically, the surrounding low density housing.

2.4 Building Massing
This Shadow Study is based on the massing model prepared at the time of submission. This provides a clear assessment of the proposed building heights, massing and orientations.

O'NEILL O'MALLEY
ARCHITECTURE







O'NEILL O'MALLEY ARCHITECTURE

3.1 Spring/ Vernal Equinox

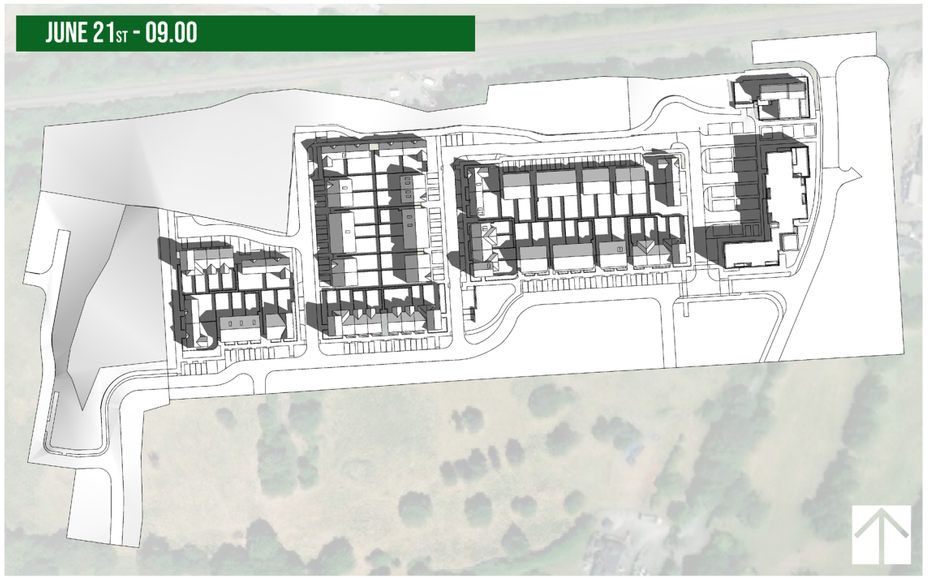
Equinox occurs twice a year and happens when the sun rises due east and sets due west and day and night are approximately equal in length. In the Northern Hemisphere the vernal equinox falls about March 20 or 21, as the Sun crosses the celestial equator going north.

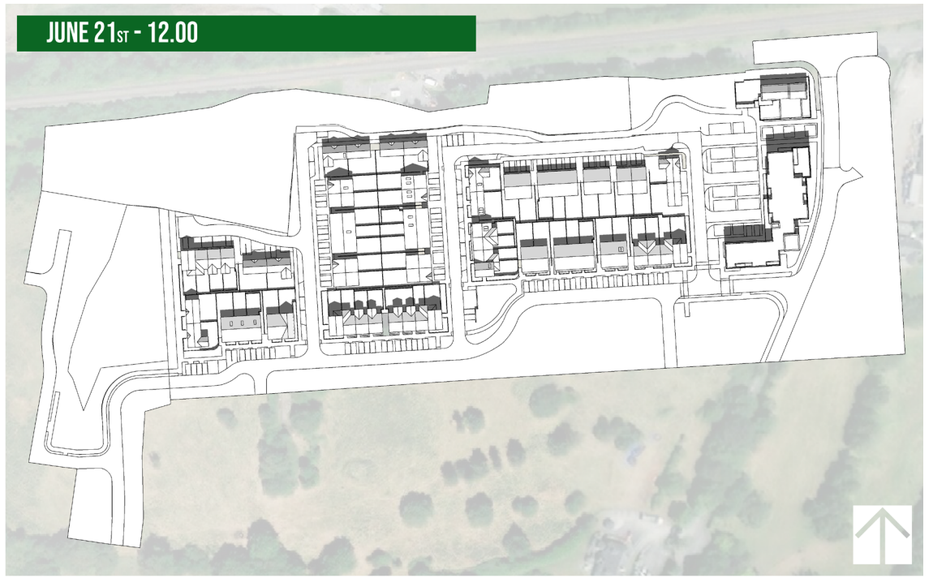
The images outlined in red shows the furthest extent of shadow in the late evening.

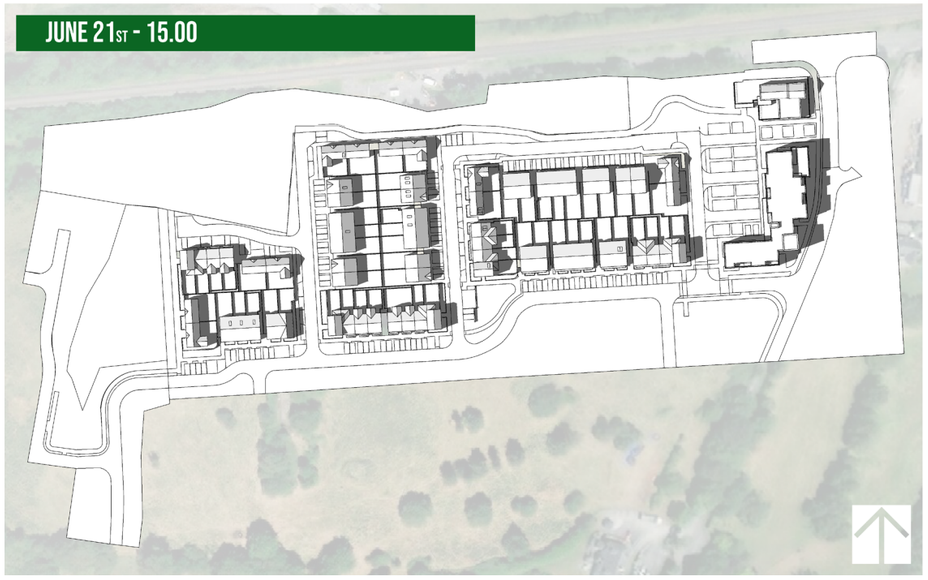
The analysis of shadow impact during the Spring/ Vernal Equinox will mirror the impacts of the Autumnal Equinox.

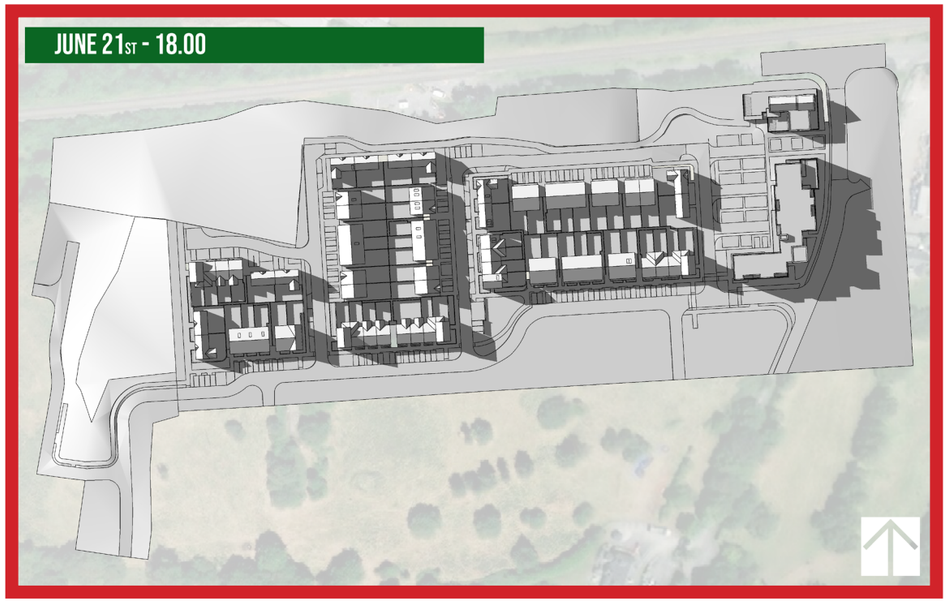
This shadow studies show that the proposed development is designed to minimise overshadowing of buildings within the scheme and the designated open spaces between them at Spring/ Vernal Equinox.

Ref.: Planning Application Drawing 3031









O'NEILL O'MALLEY
ARCHITECTURE

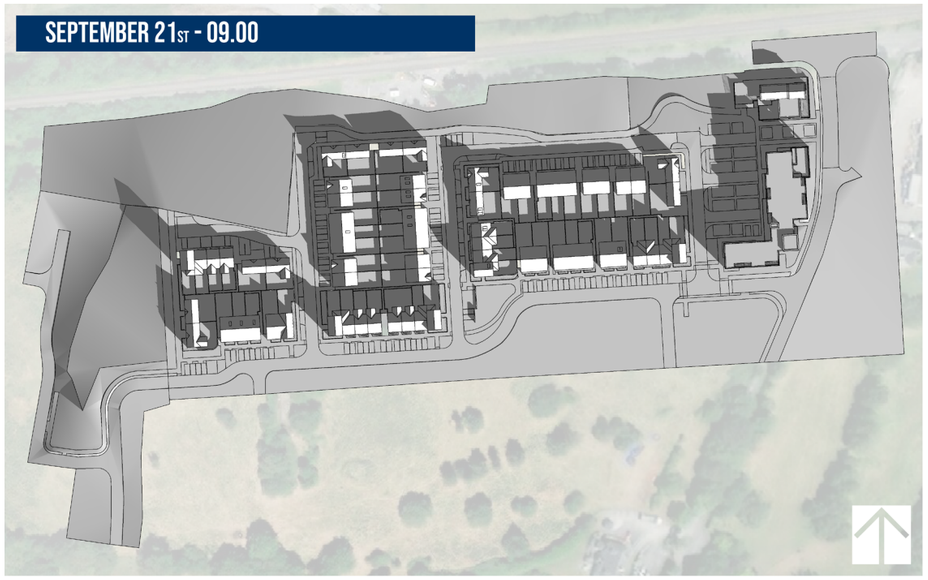
3.2 Summer Solstice

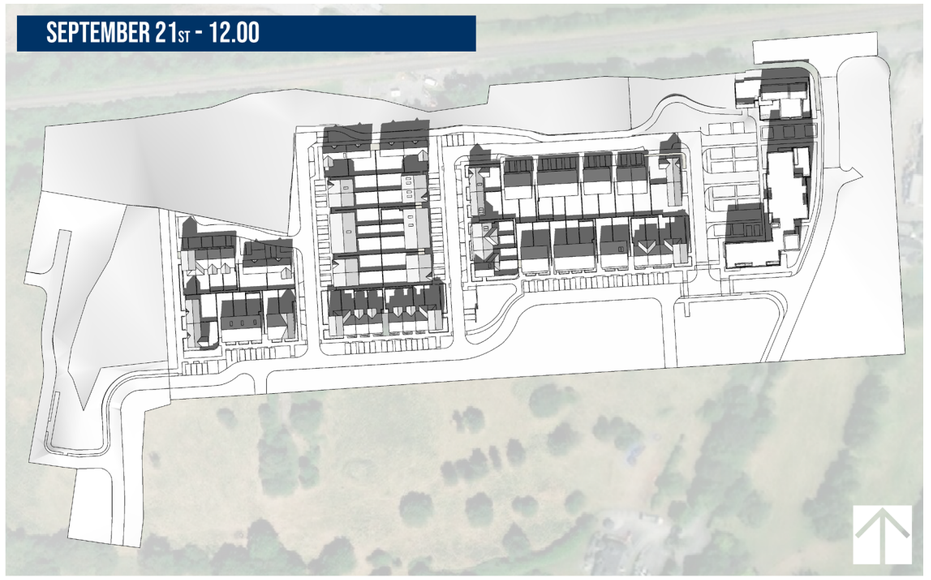
Summer Solstice occurs when the sun reaches its highest daily maximum elevation in the sky and is the day with the longest period of daylight and shortest night of the year.

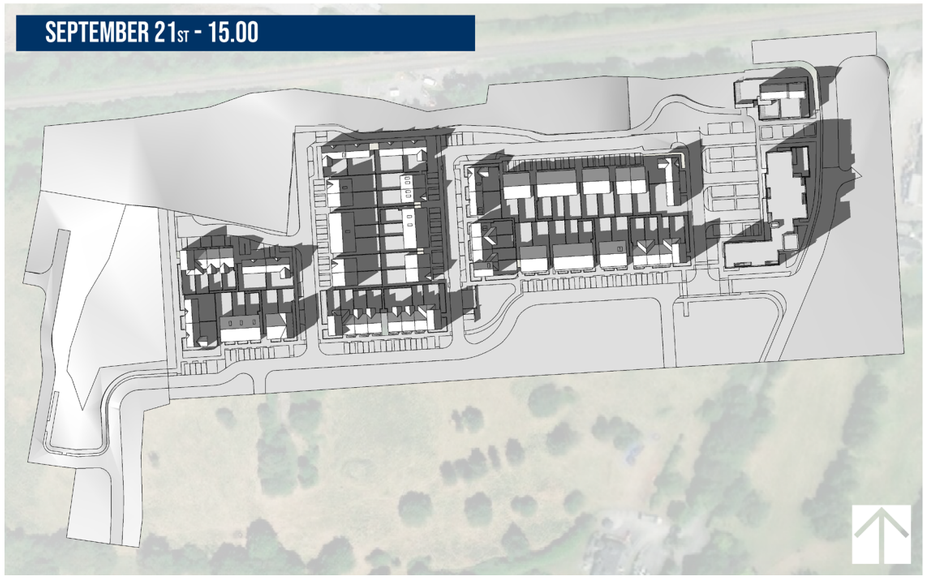
The images outlined in red shows the furthest extent of shadow in the late evening.

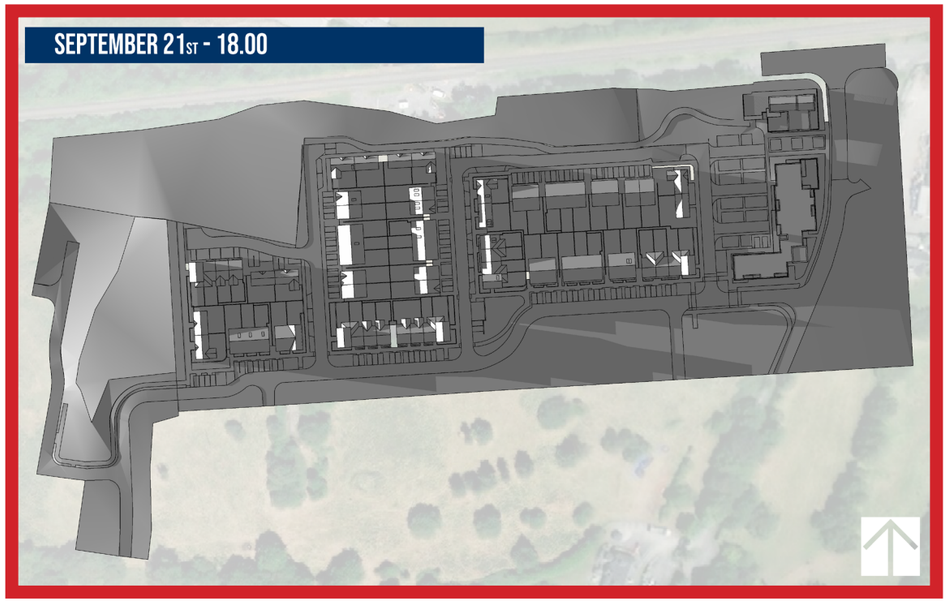
This shadow studies show that the proposed development is designed to minimise overshadowing of buildings at within the scheme and the designated open spaces between them at Summer Solstice.

Ref.: Planning Application Drawing 3032









O'NEILL O'MALLEY
ARCHITECTURE

3.3 Autumnal Equinox

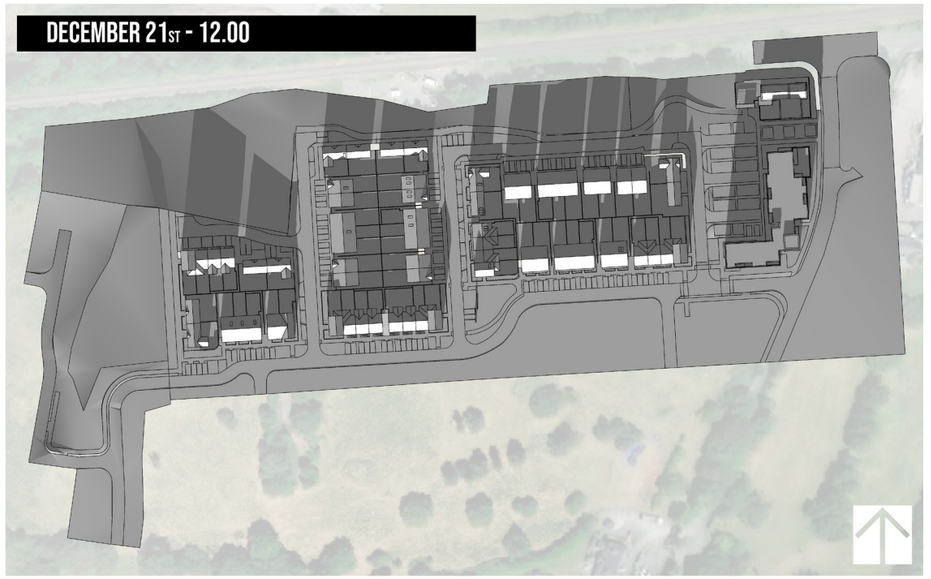
Equinox occurs twice a year and happens when the sun rises due east and sets due west and day and night are approximately equal in length. In the Northern Hemisphere the Autumnal equinox falls about September 21st, as the Sun crosses the celestial equator going south.

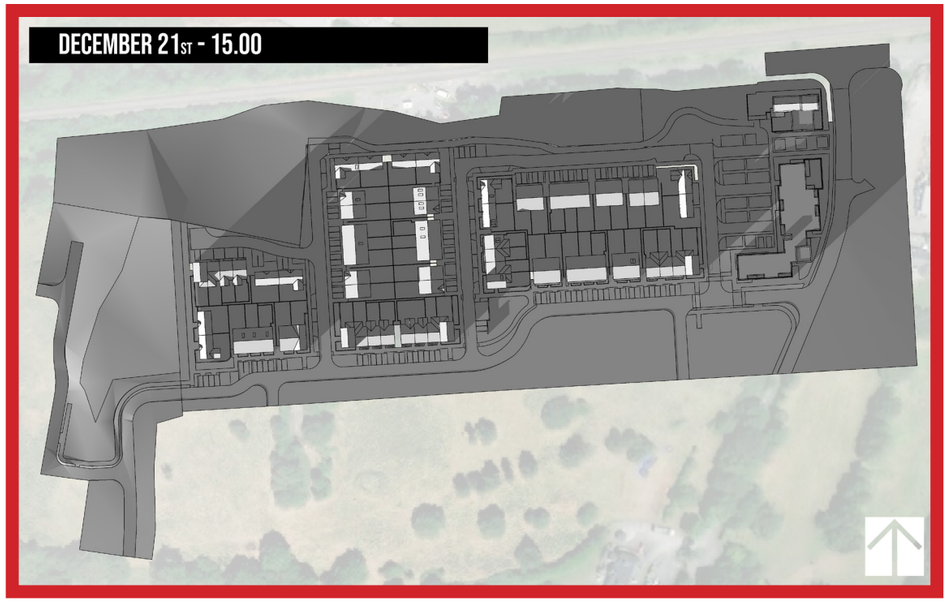
The images outlined in red shows the furthest extent of shadow in the late evening.

The analysis of shadow impact during the Autumnal Equinox will mirror the impacts of the Spring/ Vernal Equinox.

This shadow studies show that the proposed development is designed to minimise overshadowing of buildings within the scheme and the designated open spaces between them at the Autumnal Equinox.

Ref.: Planning Application Drawing 3033





O'NEILL O'MALLEY
ARCHITECTURE

3.4 Winter Solstice

Winter Solstice occurs when the sun reaches its lowest daily maximum elevation in the sky and is the day with the shortest period of daylight and longest night of the year.

The images outlined in red shows the furthest extent of shadow in the late evening.

This shadow studies show that the proposed development is designed to minimise overshadowing of buildings at within the scheme and the designated open spaces between them at Winter Solstice.

Ref.: Planning Application Drawing 3034

O'NEILL O'MALLEY ARCHITECTURE

4.0 Evaluation

It is our opinion that with no adjoining residential buildings in the immediate vicinity to the north, east, south or west there is no possibility of the proposal inhibiting a neighbouring buildings solar access and that acceptable solar access has been maintained for the public realm.

As has been illustrated, these structures will have unobstructed solar access save for short periods in the late evenings of the Winter and Summer Solstices and Spring/ Vernal and Autumn Equinoxes.

The building orientations, heights and massing have been carefully calibrated to maximizes compatibility with the surrounding area to mitigate shadow impact.

BUILDING LIFE CYCLE REPORT

Appendix 10

Proposed Mixed Use Residential Development at

Rosshill, Co.Galway

On Behalf of

Alber Developments Ltd.

30th June 2021

O'Neill | O'Malley

Architecture + Project Management

London • Galway

Contents:

1.0 Introduction & Overview	3
2.0 Assessment of Long Term Running & Maintenance Costs	4
3.0 Measures to manage and reduce Costs for Residents Benefits	5 - 11
Appendix A	12
Appendix B	13
Appendix C	14

1.0 INTRODUCTION AND OVERVIEW

1.1 Planning Policy Context

The Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities were published in March 2018. These Guidelines introduced a requirement to include details on the management and maintenance of apartment schemes. This is set out in Section 6.11 to 6.14 – "Operation & Management of Apartment Developments", specifically Section 6.13. This Building Lifecycle Report sets out to address the requirements of Section 6.13 of the Apartment Guidelines 2018.

Section 6.13 of the Apartment Guidelines 2018 requires that apartment applications shall: "include a Building Lifecycle Report, which in turn includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application."

"demonstrate what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents."

1.2 Site Location

The site is located to the east of Galway city and south of Merlin Park University Hospital and old Dublin road (the R338). The site is 5km by car from the Eyre square, the perceived centre of Galway City and 3.8km by car from Main street, Oranmore. The development site is accessed from the Rosshill Road just south of the existing railway bridge. The Rosshill Road can be accessed from the Old Dublin Road (R338) via a junction close to Galway Irish Crystal to the north and from the Coast Road serving Oranmore from the east.

The overall site measures approximately 4.704 hectares of which approximately 2.844 hectares are considered developable. The Galway to Dublin/ Limerick railway line bounds the site to the north. North of this Railway line a housing development of 16 houses is currently under construction (Galway City Pl reg.ref. 16/228). To the east of the site is Agricultural/ high amenity lands and beyond this are the Murrough Local Area Plan lands. To the west is what appears to be a family business unit and some one-off houses following a typical ribbon development.

The South of the site is bounded mainly by undeveloped zoned low-density residential land. These lands are backed onto by ribbon development of one-off houses. To the southeast, close to the site is an orthogonal stone walled folly (Recorded monument GAO94-070). Adjoining this is a large dwelling which had been converted to apartment. The site was previously a par 3 pitch & putt course. The newer landscaping and typography including bunkers and hillocks show evidence of this. Close to the south west of the site boundary is an old farmstead in ruins. Vegetation has taken to allot of the farmstead ruins. To the north part of the farmstead a modern concrete apron which the site boundary impinges by 40sqm. The typology is generally flat except for falls in level forming a ridge generally running north to south, located to the west of the site. A triangular copse of trees is located to the northeast. It is proposed to maintain & enhance the best quality existing trees where possible.

1.3 Description for Proposed Development

The development will consist of 102 residential units comprising of 67 no. houses and 35 no. apartments broken down to:

· 08 no. 4-bedroom 2 storey semi-detached dwellings

· 24 no. 3-bedroom 2 storey semi-detached dwellings

· 05 no. 4-bedroom 3 storey terraced dwellings

· 30 no. 3-bedroom 2 storey terraced dwellings

· 24 no. 2-bedroom apartments and

· 11 no. 1-bedroom apartments

The proposed development also includes a ground-floor retail unit. A two-storey childcare facility is also proposed within close proximity of the apartment building. The provision of public realm landscaping including shared public open space and play areas, public art, public lighting, resident and visitor parking including car rental bays, electric vehicle charging points and bike rental spaces. Pedestrian, cyclist and vehicular links throughout the development. Access road and junction improvements at Rosshill Road/Old Dublin Road. Provision of all associated surface water and foul drainage services and connections including pumping station. All associated site works and ancillary services. A Natura Impact Statement ('NIS') and Environmental Impact Assessment Report ('EIAR') have been prepared and accompany the application. The application is also accompanied by a Statement of Material Contravention of the Development Plan.

2.0 Assessment of Long-Term Running & Maintenance Costs

2.1 Owners Management Company and Property Management Company

The Owners Management Company will engage a suitably qualified Property Management Company at an early stage of the development to ensure that all property management functions are dealt with for the development and that the maintenance and running costs of the development's common areas are kept within agreed budgets. The Property Management Company will enter into a contract directly within the Owners Management Company (OMC) for the ongoing management of the completed development. The Property Management Company will use best practice policies and procedures to oversee the management of the entire development. The operation of a highly visible management regime is one of the key objectives of the development and is in line with good estate management practices. The Estate Director will be responsible for the overall management of the development and their key responsibilities will be; team management, health and safety, risk management, mobility management, implementation of estate policies and procedures, tenant management, security, cleaning and maintenance.

2.2 Property Management of Common Areas

The proposed development has been designed and configured to provide the occupants, residents and neighbors with generous communal facilities and social spaces within the development. The following is proposed:

- Landscaped communal central open spaces
- Secure internal bike spaces
- Visitor bike spaces
- Pedestrian routes through the proposal
- Commercial and residential refuse storage.

It is proposed that the maintenance of the development will be managed by a suitably qualified Maintenance Manager who will ensure that all maintenance works are undertaken in accordance with servicing requirements. It will be the responsibility of the Property Management company to ensure all maintenance works are undertaken when required and to the required standard.

2.3 Property Management Company (PMC)

The long-term running costs for residents and maintenance costs has been considered for the operators from the commencement of the design process, with the aim to manage and minimise potential unnecessarily high running costs for expenditure on a per residential unit basis. This exercise is a result of learning from previously undertaken residential projects and the application of changes in the standards arising from the new apartment guidelines. In this regard it is advised that when granting permission for such developments planning authorities attach appropriate planning conditions that require:

- Establishment of an Owners Management Company (OMC) and:
- Establishment and ongoing maintenance of a sinking fund commensurate with the facilities in a development that require ongoing maintenance and renewal.

Planning authorities should provide planning conditions for such developments which ensure the provision of appropriate management and maintenance structures.

2.4 Service Charge Budget

The property management company (PMC) has several key responsibilities for the development for agreement with the development owners. There would typically be a service charge budget in multi-unit developments to cover items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security, property management fee, etc, to the development common areas.

2.5 Sinking Fund

It is expected that a sinking fund allowance will account for future major maintenance and upgrade costs. A 10 year Planned Preventative Maintenance (PPM) strategy will determine the level of sinking fund required.

3.0 Measures to Manage & Reduce Costs for Residents Benefit

MEASURES SPECIFICALLY CONSIDERED BY THE PROPOSER TO EFFECTIVELY MANAGE REDUCE / COSTS FOR THE BENEFIT OFRESIDENTS

Energy and Carbon Emissions

The following are low energy technologies that are being considered for the development and during the design stage of the development the specific combination from the list below will be decided on and then implemented to achieve a minimum of A2 BER Rating

<table>
<tr><th>Measure</th><th colspan="2">Description</th><th>Benefit</th></tr>
<tr><td>BER Certificates</td><td colspan="2">A Building Energy Rating (BER) certificate will be provided for each dwelling Apartment unit in the proposed development which will provide detail of the energy performance of the dwellings. A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target an A2 rating for the apartments this will equate to the following emissions.

A2 – 25-50 kwh/m2/yr with CO2 emissions circa 10kgCO2/m2 year</td><td>Higher BER ratings reduce energy consumption and running costs.</td></tr>
<tr><td>Fabric Energy Efficiency</td><td>The U-values being investigated will be in line with the requirements set out by the current regulatory requirements of the Technical Guidance Documents Part L, titled “Conservation of Fuel and Energy Buildings other than Dwellings”.

Thermal bridging at junctions between construction elements and at other locations will be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L. See below Table 1 of Part L, Building Regulations.</td><td>
<table>
<tr><th colspan="3">Table 1 Maximum elemental U-value (W/m²K)[1,2]</th></tr>
<tr><th>Column 1
Fabric Elements</th><th>Column 2
Area-weighted Average Elemental U-Value (Um)</th><th>Column 3
Average Elemental U-value – individual element or section of element</th></tr>
<tr><td>Roofs

Pitched roof
- Insulation at ceiling
- Insulation on slope

Flat roof</td><td>

0.16
0.16

0.20</td><td>

0.3</td></tr>
<tr><td>Walls</td><td>0.21</td><td>0.6</td></tr>
<tr><td>Ground floors[3]</td><td>0.21</td><td>0.6</td></tr>
<tr><td>Other exposed floors</td><td>0.21</td><td>0.6</td></tr>
<tr><td>External doors, windows and rooflights</td><td>1.6[4]</td><td>3.0</td></tr>
<tr><td colspan="3">Notes:
1. The U-value includes the effect of unheated voids or other spaces.
2. For alternative method of showing compliance see paragraph 1.3.2.3.
3. For insulation of ground floors and exposed floors incorporating underfloor heating, see paragraph 1.3.2.2.
4. Windows, doors and rooflights should have a maximum U-value of 1.6 W/m²K when their combined area is 25% of floor area. However areas and U-values may be varied as set out in Table 2.</td></tr>
</table>
</td><td>Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric and lead to lower energy consumption, thus minimising carbon emissions to the environment.</td></tr>
</table>

<table>
<tr><th>Measure</th><th>Description</th><th>Benefit</th></tr>
<tr><td>NZEB and TGD Part L</td><td>The NZEB “Nearly Zero Energy Buildings” directive in conjunction with the TGD Part L document sets out clearly that all new dwellings built in Ireland will comply with the following:
• A Maximum Permitted Energy Performance Coefficient (MPEPC) of no greater than 0.3

• A Maximum Permitted Carbon Performance Coefficient (MPCPC) of no greater than 0.35
These changes apply to works, or buildings in which material alteration or change of use or major renovation takes place and came into effect on 1st April 2019.

<table><tr><th>GD Part L - Dwellings</th><th>2005</th><th>2008</th><th>2011</th><th>2020</th></tr><tr><td>% Improvement</td><td>Baseline</td><td>40%</td><td>60%</td><td>NZEB 25%</td></tr><tr><td>Primary Energy Consumption (kWh/m^2/yr)</td><td>150</td><td>90</td><td>60</td><td>45</td></tr><tr><td>Maximum Permitted Energy Performance Co-efficient (MPEPC)</td><td></td><td>0.6</td><td>0.4</td><td>0.30</td></tr><tr><td>Maximum Permitted Carbon Performance Co-efficient (MPCPC)</td><td></td><td>0.69</td><td>0.46</td><td>0.35</td></tr><tr><td>BER</td><td>B3</td><td>B1</td><td>A3</td><td>A2/A3</td></tr></table></td><td>Increased use of renewable energy sources such as heat pumps and PV panels will reduce the CO2 emissions associated with fossil fuel combustion.</td></tr>
<tr><td>External Lighting</td><td>The proposed lighting scheme within the development consists of pole mounted fittings as indicated on the drawings. The luminaire selected is the Mircoplus 50w Led with 2700k colour temperature fitting, this fitting was selected for the following reasons;
• Low level lighting
• Minimal upward light spill
• Low voltage LED lamps
•Each light fitting shall be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile.</td><td>The site lighting has been designed to provide a safe environment for pedestrians, cyclists and moving vehicles, to deter anti-social behaviour and to limit the environmental impact of artificial lighting on existing flora and fauna in the area.
Having PECU allows for the optimum operation of lighting which minimizes costs.</td></tr>
<tr><td>Energy Labelled White Goods</td><td>High standard white goods with high energy efficiency ratings will be supplied to all units. It is expected to install appliances of the following ratings:
Oven – A+
Fridge Freezer – A+
Dishwasher – AAA
Washer / Dryer – B</td><td>High energy rated appliances reduce the amount of electricity required for occupants</td></tr>
</table>

Low-energy Technologies considered:

The following are Low energy technologies that are being considered for the development and during the design stage of the development the specific combination from the list below will be decided on and then implemented to achieve the A2 BER Rating and NZEB compliance

Measure	Description	Benefit
Natural Ventilation	Natural ventilation is being evaluated as a ventilation strategy to minimise energy usage and noise levels.	The main advantages of natural ventilation are: • Low noise impact for occupants and adjacent units. • Completely passive therefore no energy required with associated. • Minimal maintenance required. • Reduced environmental impact as minimal equipment disposal over life cycle. • Full fresh air resulting in healthier indoor environment.
Mechanical Ventilation Heat Recovery	Mechanical heat recovery ventilation will be considered to provide ventilation with low energy usage.	Mechanical Heat Recovery Ventilation provides ventilation with low energy usage. The MVHR reduces overall energy and ensures a continuous fresh clean air supply.
Air to water Heat Pumps	An air to water heat pump is being considered to provide space heating and domestic hot water. An air source heat pump is a system which transfers heat from outside to inside a building.	The air to water heat pump can absorbs heat from outside air and releases it inside the building, via radiators, underfloor heating and/or domestic hot water supply. Air source heat pumps use electrical energy from the grid to drive the refrigerant cycle but do so extremely efficiently. Modern heat pumps will typically provide 4 to 5 times more heat energy to the dwelling than the electrical energy they consume.
Exhaust Air Heat Pumps	For the Apartment building, an exhaust air heat pump is being considered to provide mechanical ventilation, space heating and domestic hot water. An exhaust air heat pump (EAHP) extracts heat from the building and transfers the heat to the supply air, domestic hot water and/or space heating system (underfloor heating / radiators).	Exhaust Air Heat Pumps allows you reuse energy already available in the property.
PV Solar Panels	PV Solar Panels are being considered which converts the electricity produced by the PV system (which is DC) into AC electricity. The panels are typically placed on the South facing side of the building for maximum heat gain and in some instances, can also be used to assist the heating system.	PV Solar Panels offer the benefit of reducing fossil fuel consumption and carbon emissions to the environment. They also reduce the overall requirement to purchase electricity from the grid.
Combined Heat and Power	Combined Heat and Power, (CHP), is a technology being evaluated an maybe suitable for the apartment building. This technology generates electricity and captures the waste heat from the generation unit that can be used within the development.	CHP can achieve energy efficiencies by reusing waste heat from the unit to generate heat required for space heating and domestic hot water services in the apartment developments. As electricity from CHP is both generated and consumed onsite, this also eliminates energy losses from transmission of the electricity
ECAR Charging Points	Provision for the installation of a fully functional electric vehicle charging points will be provided in the apartment blocks as agreed with the management company. As a future proofing measure ducting for future to all houses is being considered.	Providing the option of E-car charging points will allow occupants to avail of the ever-improving efficient electric car technologies.

Materials:

Building Design

Implementation of the Design and Material principles to the design of building position, internal layouts, facades and detailing has informed the materiality of the proposed development. The proposed envelope of the buildings is brick and render, with aluminium double-glazed windows. Based on comparison with similar schemes developed, the proposed materials are durable and would not require regular replacement or maintenance. To improve on building standards there has been an increase in the expected build cost. Materials have been selected with a view to longevity, durability and low maintenance. Consideration has been given to Building Regulations and includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'.

It is expected that a sinking fund allowance will account for future major maintenance and upgrade costs. A 10 year Planned Preventative Maintenance (PPM) strategy will determine the level of sinking fund required. All proposed buildings are designed in accordance with the Building Regulations, in particular Part D 'Materials and Workmanship', which includes all elements of the construction. The Design Principles and Specification are applied to both the apartment units and the common parts of the building and specific measures taken include:

Measure Description	Benefit
Daylighting to units	Where possible, as outlined in 'Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (March 2018)' to have regard for quantitative performance approaches to daylight provisions 'outlined in guides like the BRE guide 'Site Layout Planning for Daylight and Sunlight' (2nd edition) or BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting' when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision'. This Reduces the requirement for continuous daylighting, thus reducing the expense of artificial lighting.
Openable window sections are provided to all stair cores within the development providing natural daylight to circulation areas.	Avoids the requirement for continuous artificial lighting
Openable window sections are provided to all stair cores within the development providing Natural/Passive ventilation to common circulation areas.	Openable window sections are provided to all stair cores within the development providing natural daylight and ventilation throughout all common areas. Avoids costly mechanical ventilation systems and associated maintenance and future replacement.
External paved and landscaped areas	All these require low / minimal maintenance

Material Specification

Measure Description	Benefit
Consideration is given to the requirements of the Building Regulations and includes reference to BS 7543:2015, 'Guide to Durability of Buildings and Building elements, Products and Components', which provides guidance on the durability, design life and predicted service life of buildings and their parts. All common parts of the proposed Apartment building and, the durability and performance of these are designed and specified in accordance with Figure 4; Phases of the Life Cycle of BS7543; 2015. (Please see Appendix B for this figure). The common parts are designed to incorporate the guidance, best practice principles and mitigations of Annexes of BS 7543: 2015 including: Annex A Climatic Agents affecting Durability Annex B Guidance on materials and durability Annex C Examples of UK material or component failures Annex D Design Life Data sheets	Ensures that the long-term durability and maintenance of Materials is an integral part of the Design and Specification of the proposed development.

Measure Description		Benefit
The architectural approach to the scheme proposed the extensive use of robust materials of render treatments and some stone detailing to the building envelope. Use of Natural Stone, fibre cement cladding/ Metal and sand / cement render systems to the apartment envelope.	  	These robust traditional materials will require minimal on-going maintenance and have a long life-cycle expectancy.

Measure Description	Benefit
Use of factory finished uPVC / Alu-clad windows and doors, and powder coated steel balconies	Requires no on-going maintenance.
Factory Finished Balcony balustrades and railings to be powder coated	Requires minimal maintenance and does not require regular replacement

Landscape

Measure	Description	Benefit
Site Planning	The landscape strategy aims to integrate the proposed residential development with the existing landscape and create a network of attractive and useable open spaces while contributing to local biodiversity. Open spaces offer the opportunity for meeting, walking and formal and informal play. Pedestrian circulation routes are provided & prioritized throughout the site.	Well-designed path networks support long term maintenance of lawn, wildflower and planting areas by reducing desire lines and man-made tracks
Retaining Existing Landscape	Existing native hedgerow and trees of good health and importance to green infrastructure links are to be retained. The proposal has been designed to have minimal impact to existing tree groups which are to be maintained.	Provides the scheme with high quality and robust landscape features. Improves local biodiversity which helps growth of new planting.

Materials	Use of low maintenance surface materials such as in situ concrete. Feature paving limited to seating areas, robust and durable paving used. Similarly, robust street furniture used throughout open spaces. A preference for natural play equipment where possible.	Robust materials provide more durability and longevity to the open spaces, while the appearance of the space is more harmonious with a landscape.
Planting details	Woodland planting and wildflower used along edges and boundaries. Open lawn areas provided. Planting selected to be suited to Irish climatic and specific site conditions.	Woodland and wildflower reduce maintenance operations. Areas of open lawn provide natural attenuation areas. Correct planting procedures ensure longevity to planting scheme.

Waste Management

The following measures illustrate the intentions for the management of Waste

Measure	Description	Benefit
Construction and Demolition Waste Management Plan	The final application will be accompanied by a Construction and Demolition Waste Management Plan.	Will demonstrate how construction & demolition waste will be managed to maximise recycling and reuse rates, while minimising waste for disposal to landfill.
Operational Waste Management Plan	The final application will be accompanied by an Operational Waste Management Plan	Will demonstrate how construction & demolition waste will be managed to maximise recycling and reuse rates, while minimising waste for disposal to landfill.
Storage of Non-Recyclable Waste and Recyclable Household Waste	Domestic waste management strategy: 1) Grey, Brown and Green bin distinction 2) Competitive tender for waste management collection	Helps reduce potential waste charges.
Composting	Brown Bins	Helps reduce potential waste charges.

Human Health & Well Being

The following measures illustrate the intentions for the management of Human Health and well being.

Measure	Description	Benefit
Natural / Day Light	The design, separation distances and layout of the apartment blocks have been designed to optimize the ingress of natural daylight/ sunlight to the proposed dwellings to provide good levels of natural light.	Reduces reliance on artificial lighting thereby reducing costs. Positive psychological affects of natural light.
Accessibility	All units will comply with the requirements of Part M/K.	Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances.
Security	Passive surveillance is incorporated into the design	Help to reduce potential security/management costs. Personal feeling of safety
Natural Amenity	Provision of both public & communal amenity space in excess of local authority requirements	Facilitates community interaction, socialising and play – resulting in improved wellbeing
Private Open Space	Provision of private open space	Facilitates interaction with outdoors

Transport & Accessibility

Transport considerations for increasing the update of the use of public transport, cycling and walking and reducing the ownership of private cars and reducing oil dependency:

Measure	Description	Benefit
Access to Public Transport	BUS ROUTES 404 & 409 1.1 km distance from the proposed development (12min.walk time)	Availability, proximity to quality bus routes reduces the reliance on private motor
Pedestrian Permeability	Provision of dedicated pedestrian infrastructure within the site. A 3m shared pedestrian & Cycle path is proposed to the linear park to the north.	Ensures long term attractiveness of walking, and cycling to a range of local facilities
Bicycle Storage	231 no. bicycle parking spaces are provided throughout the Proposal. This is in excess of the new apartment guidelines requirements and promotes sustainable transport modes.	Accommodates the uptake of cycling and reduces the reliance on the private motor vehicle

Bike storage management

There is a large provision of 231 for bicycle storage spaces within the scheme. The management of how these are stored is key to maximising the use of bicycles and the safe storage of these. There will be a combination of storage types ranging from publicly available Sheffield stand types to more secure bicycle storage buildings. Each system will be carefully chosen and set out through consultation between the design team members to ensure the best system is used in the best and most practical locations.

Appendix A

ITEMS INCLUDED IN A TYPICAL BUILDING INVESTMENT FUND (SINKING FUND)

The BIF Table below illustrates what would be incorporated for the calculation of a Sinking Fund

	Building Investment Fund (Sinking Fund)	
Ref	Element	Life Expectancy (Years)
1.00	Roofs	
1.01	Replacement felt roof covering incl. insulation to main roofs	18
1.02	Replacement parapet, fascia details	18
1.03	Replace roof access hatches	25
1.04	Specialist Roof Systems Fall arrest	25
2.00	Elevations	
2.01	Repair of render areas	18
2.02	Replace rainwater goods	25
2.03	Recoat powder coated finishes to balconies	20
2.04	Periodic replacement and overhauling of external fixings	5
3.00	External Areas	
3.01	External handrails & guards	18
3.02	Surface finishes	18
3.03	Check drains for accumulation of debris and other sediments	6
3.04	Repaint parking spaces and numbering	7
4.00	M&E Services	
4.01	Central boilers	12
4.02	CHP Engine	12
4.03	Circulation pumps	15
4.04	HIU Apartment Heat Exchange	10
4.05	Exhaust Air Heat Pump	10
4.06	Replace internal light fittings	18
4.07	Replace smoke detectors	18
4.08	Replace manual break glass units	18
4.09	Replace fire alarm panel	18
4.10	Replace security access control installation	15
4.11	External mains water connection	20
4.12	Electrical mains and sub mains distribution	20
4.13	Emergency lighting	20
5.00	Stairwells & lobbies	
5.01	Decorate ceilings and walls	2
5.02	Decorate joinery	2
5.03	Replace fire doors	25
5.04	Replace floor finishes	10
5.05	Replace entrance mats	10
5.06	Replace nosing's	10
5.07	Replace ceramic door tiles	20
5.08	Fixed furniture & equipment	18

Appendix B

Table 1 Maximum elemental U-value [1] (W/m^2K)		
Column 1 Fabric Elements	Column 2 Area – weighted Average Elemental U-Value (U_m)	Column 3 Average Elemental U-value Individual element or section of element
Roofs[2] Pitched roof - Insulation at ceiling - Insulation on slope Flat roof	 0.16 0.16 0.20	 0.3
Walls[2]	0.21	0.6
Ground Floors[2,3]	0.21	0.6
Other exposed floors[2]	0.21	0.6
External personnel doors, windows[4] and rooflights[6]	1.6[5]	3.0
Curtain Walling	1.8	3.0
Vehicle access and similar large doors	1.5	3.0
High usage entrance door[7]	3.0	3.0
Swimming Pool Basin[8]	0.25	0.6

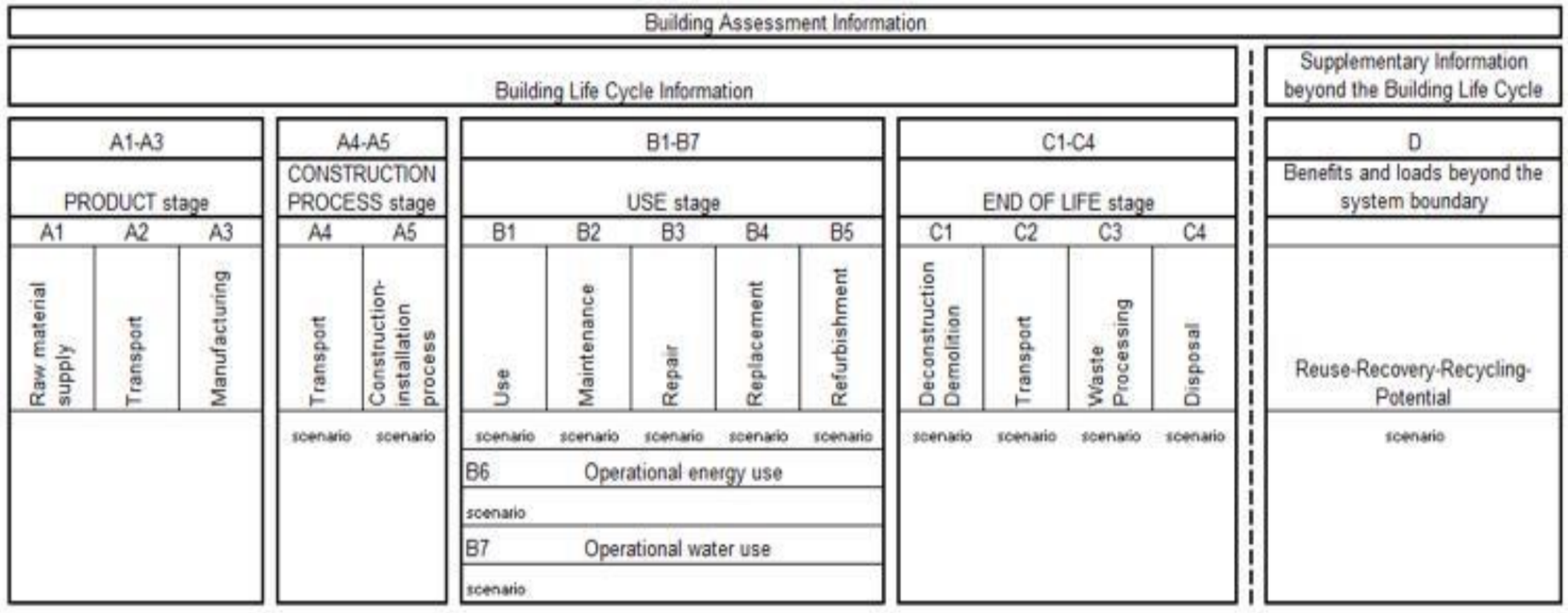
Notes:

1. The U-value includes the effect of unheated voids or other spaces.
2. Reasonable provision would also be achieved if the total heat loss through the roof, wall and floor elements did not exceed that which would be the case if each of the area weighted average U-value (Um) for these elements set out in Column 2 were achieved individually.
3. Where the source of space heating is underfloor heating, a floor U-value of 0.15 W/m^2K should generally be satisfactory.
4. Excludes display windows and similar glazing but their impact on overall performance must be taken into account in EPC and CPC calculation.
5. In buildings with high internal heat gains a less demanding area-weighted average U-Value for the glazing may be an appropriate way of reducing overall primary energy and CO_2 emissions. Where this can be shown then the average U-value for windows can be relaxed from the values given above. However values should be no worse than 2.2 W/m^2K.
6. This is the overall U-value including the frame and edge effects, and it relates to the performance of the unit in the vertical plane so, for roof-lights, it must be adjusted for the slope of the roof as described in Sect 11.1 of BR 443
7. High Usage Entrance door means a door to an entrance primarily for the use of people that is expected to experience larger volumes of traffic, and where robustness and/or powered operation is the main performance requirement. To qualify as a high-usage entrance door the door should be equipped with automatic closers and except where operational requirements preclude it, be protected by a lobby.
8. Where a swimming pool is constructed as part of a new building, reasonable provision should be made to limit heat loss from the pool basin by achieving a U Value no worse than 0.25 W/m^2K as calculated according to BS EN 13370

Figure 1- TGD Part L Conservation of Fuel & Energy – Buildings other than Dwellings 2017, Table 1

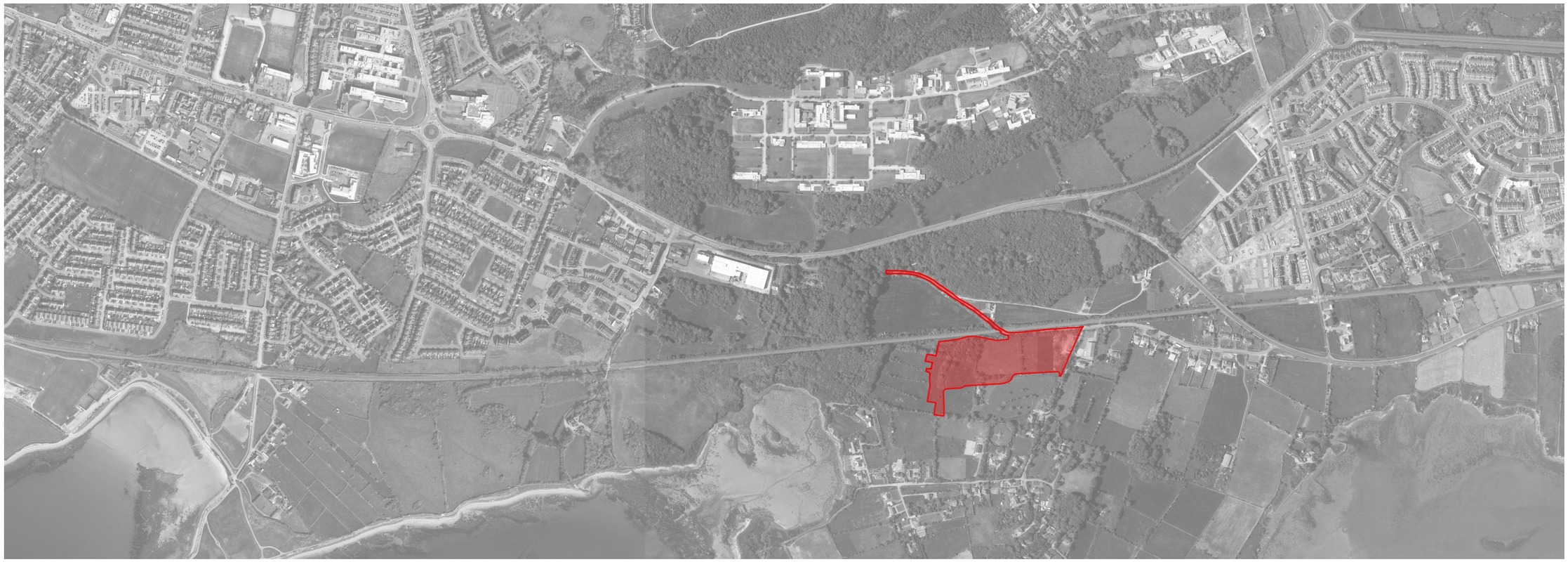
Appendix C

Phases of the Life Cycle of BS 7543 2015



Key

1. Highest severity of consequence of failure
2. Anticipated severity of consequence of failure
3. Lowest severity of consequence of failure
4. Minimum service life
5. Most likely service life
6. Maximum service life



Computer Generated Images

Development at Rosshill, Galway

On behalf of Alber Developments Limited

ALBER DEVELOPMENTS

O'Neill | O'Malley

Appendix 11 - July 2021

RIAI Practice Member 2021 | Practice Accredited in Conservation G3

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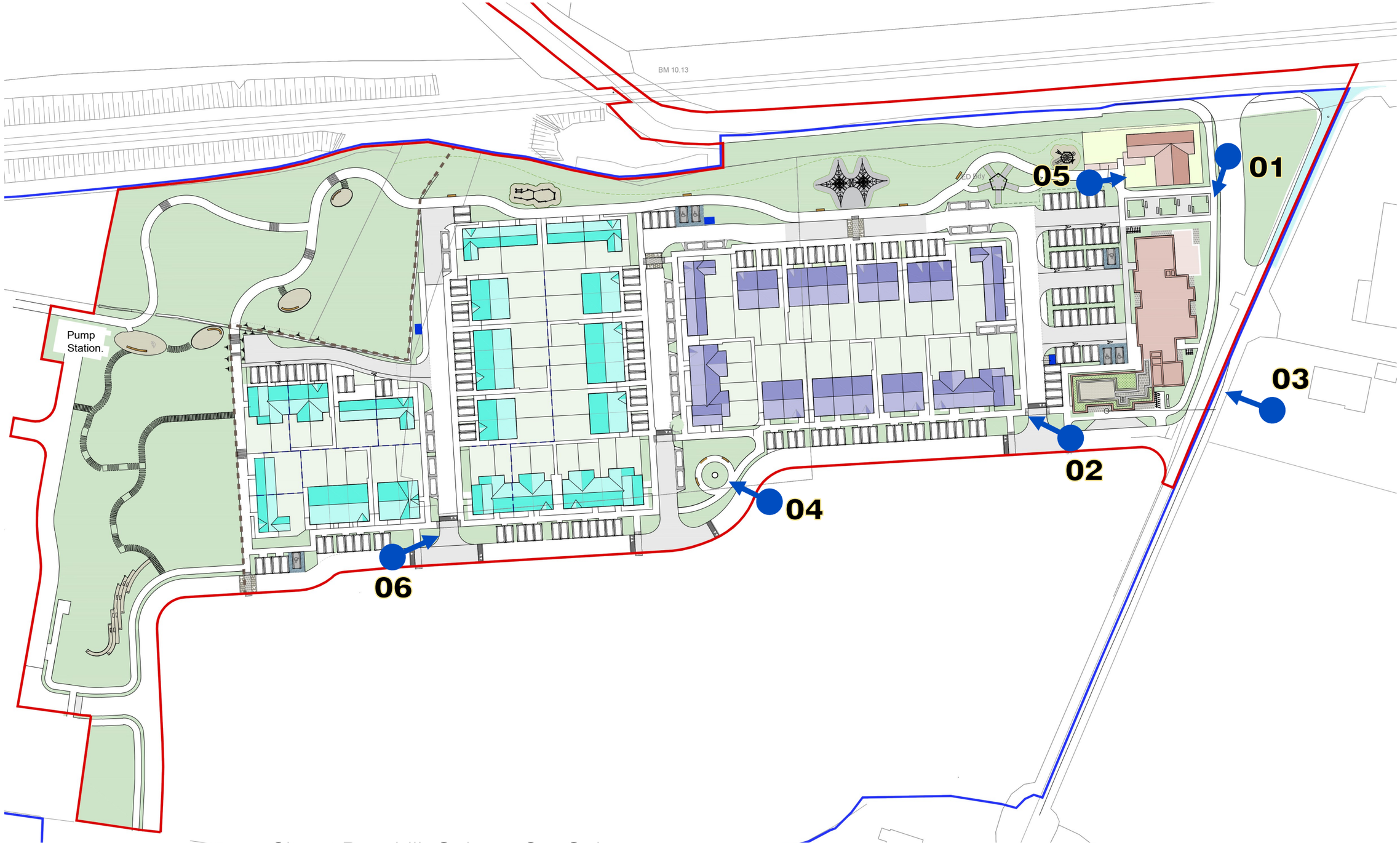

Site at Rosshill, Galway, Co. Galway
Locations of Computer generated images
July 2021

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Computer generated view 1
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Computer generated view 2
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Computer generated view 3
For information only

Computer generated view 4
For information only

Computer generated view 5
For information only

Computer generated view 6
For information only

Appendix 12

RESIDENTIAL DEVELOPMENT & CRECHE, ROSSHILL, GALWAY CITY STAGE 2 - FIRE STRATEGY REVIEW

FG/1016/tc/02onom
1st July 2021

INTRODUCTION

It is proposed to construct a new 4 storey apartment block and a 2 storey creche as part of a larger residential development at Rosshill, Galway. The site will be accessed from Rosshill Road. The apartment block will consist of 35 apartments, with a retail/commercial unit and ancillary storage areas at ground level. The upper floors of the building will be served by 2 no. escape stairs.

The creche will consist of 3 no. classrooms along with a nap/mat room, kitchen, laundry and office/reception at ground level. There will also be 2 outdoor areas provided. The 1st floor will comprise of 4 no. classrooms and will be served by 2 no. escape stairs.

The apartment block and the creche are two separate buildings, therefore Fire Safety Certificate applications will be required for both buildings.

The following is a review of the proposed fire strategy for the apartment block and creche outlining relevant Building Regulations Part B guidance and any potential fire engineering solutions for aspects of the design which do not comply with standard code guidance.

As part of our review, advice is given in relation to fire compartmentation, external fire spread and firefighting access requirements.

This review is based on the most recent information/drawings received on 16th June 2021 for the above development.

BUILDING REGULATIONS

The basis of compliance for fire safety within the various areas of the development will be the recommendations of the following code guidance documents: -

- Apartments - Building Regulations Technical Guidance Document B (TGD B) 2006 (AI 2020) and BS 5588 Part 1:1990.
- Ground floor retail/commercial unit - Building Regulations Technical Guidance Document B (TGD B) 2006 (AI 2020) and BS 5588: Part 11: 1997.
- Creche - Building Regulations Technical Guidance Document B:2020 (TGD B) and Fire Safety in Pre-Schools document (published in April 1999).

Building Regulations are functional, however, and there is no requirement to follow the standard guidance. Alternative fire engineering solutions are possible provided they are designed to achieve an equivalent standard of safety as that in the code. It should be noted, however, that any fire engineering solutions will need to be agreed with the local Fire Department and, therefore, carry an approvals risk.

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MEANS OF ESCAPE

Occupancy Levels

Apartments Block:

Ground

2 x 1 bed apartments = 4 persons

4 x 2 bed apartments = 16 persons

Retail Unit

200m² @ 4m² per person = 50 persons.

First

3 x 1 bed apartments = 6 persons

7 x 2 bed apartments = 28 persons

Second

3 x 1 bed apartments = 6 persons

7 x 2 bed apartments = 28 persons

Third

3 x 1 bed apartments = 6 persons

6 x 2 bed apartments = 24 persons

Ancillary areas within the apartments and retail unit have not been included in the overall occupancy of the building. Therefore, the total occupancy for the apartment block was calculated to be **168 persons**.

Creche Block:

Ground

Classroom 01 - 8 children + 3 adult supervisors = 11 persons

Classroom 02 - 12 children + 2 adult supervisors = 14 persons

Classroom 03 - 13 children + 2 adult supervisors = 15 persons

Office/Reception @ 7m²/person = 2 persons.

First

Classroom 04 - 17 children + 2 adult supervisors = 19 persons

Classroom 05 - 15 children + 2 adult supervisors = 17 persons

Classroom 06 - 12 children + 2 adult supervisors = 14 persons

Classroom 07 - 17 children + 2 adult supervisors = 19 persons

Ancillary areas, the kitchen, laundry room and the nap/mat room to the creche have not been included in the overall occupancy of the building. Therefore, the occupancy for the creche block was calculated to be **111 persons.**

Retail Unit

Storey Exits

Based on the calculated occupancy storey exits should be provided with a clear opening width of 1000mm to satisfy Part M requirements.

Direction of Opening of Doors

The doors serving the retail unit should be reversed to open in the direction of escape based on calculated occupancy of 50 persons.

Travel distances

Sufficient exits will be provided from the retail unit to satisfy the code recommended travel distances of 18m in a single direction and 45m in two directions.

Creche

Storey Exits

Based on the calculated occupancy storey exits should be provided with a minimum clear opening width of 800mm.

Travel distances

Sufficient exits will be provided from the creche to satisfy the following code recommended travel distances: -

- 18m in a single direction and 45m in two directions for active children
- 10m in a single direction and 20m in two directions for sleeping children/infants.

Escape Stairs

The stairs serving the creche block will achieve a minimum clear width of 1200mm to satisfy the requirements of TGD M 2010.

Both escape stairs serving the upper floor of the creche will discharge direct to outside at ground level.

Inner Rooms

The storeroom and WC within the retail unit are considered inner rooms. However, this is considered reasonable based on compliance with code guidance as follows: -

- Each inner rooms will have less than 50 occupants.
- The inner rooms are not bedrooms.
- Escape from the inner rooms does not pass through more than one access room.
- The distance from any point in the inner room to the nearest exit from the access room should not exceed the maximum recommended limit in a single direction.
- The access room should not be a place of special fire hazard.
- And either: -

    i. Access rooms should be fitted with suitable automatic fire detection and alarm to warn occupants of the inner room in the event of fire in the access room; or
    ii. A vision panel of not less than 0.1m^2 should be provided in the enclosure to the inner room so that a fire in the access room will be visible from the inner room at an early stage; or
    iii. The enclosures (walls or partitions) of the inner room should be stopped at least 500mm below the ceiling.

Any inner rooms formed as part of the detailed design development should comply with the above guidance.

Disabled Refuge

A disabled refuge will be provided in the enclosures to both protected stairs at first floor. These refuges will comply with BS 9999:2017 and will have a minimum dimension of 900mm x 1,400mm.

An Emergency Voice Communication (EVC) system will also be provided and will comply with BS 5839-9:2011.

Means of Escape from Apartment Block

Code Guidance Recommendations

The means of escape provisions from the apartments should comply with the recommendations of BS5588-1 and TGDB 2006 (AI 2020) as follows: -

- The entrance hallway of each apartment will be constructed as a protected corridor achieving 30 minutes fire resistance with 30-minute fire doors.
- Travel distance within the entrance hallway of each apartment, measured from the entrance door to the door of the furthest habitable room, should be within the code recommended limit of 9m.
- Travel distance within the common corridor/lobby area, measured from the apartment entrance door to the escape stair door for a dead-end route, should be within the code recommended limit of 7.5m.
- Where escape is provided in two directions within the common corridors, travel distances are limited to 30m as per Figure 13 of BS 5588 Part 1. Based on the current layouts travel distances would appear to be in accordance with code guidance limits.
- Where a choice of escape stairs/routes is available, a self-closing cross corridor fire doors should be provided to restrict smoke spread within the common area to protect against the potential for smoke spread to more than one stair. Vents should be provided within the common corridor elevations adjacent to the storey exits.

Code compliant layouts for multi-stair residential buildings are shown in Figure 1 below.

Apartment Block – Common Lobby/Corridor Smoke Venting

- Smoke venting of the common corridors at each upper floor will be provided via a 1.5m^2 AOV. The AOV's should be located on the external elevation or via a protected shaft, linked to smoke detectors in the common corridor. They will be located as close to the ceiling as possible.
- If the common circulation area does not have an external wall, it would need to be vented by means of a smoke shaft with an outlet at roof level. Smoke shafts should meet the following recommendations:
    - The smoke shaft should be fully open to the external air at the top and closed at the base.
    - The opening at the top of the smoke shaft should be located at least 0.5m above any surrounding structures that fall within a 2m radius on a horizontal place so that it is not subject to adverse wind effects (i.e. it should always have a negative wind pressure coefficient.)
    - The shaft should extend a minimum length of 2.5m above the ceiling of the highest storey which is served by the shaft.
    - The cross-sectional area of the smoke shaft should be at least 1.5m^2, with a minimum of 0.85m in any direction.
    - The lobby or corridor vent, the opening at the head of the shaft and all internal locations such as safety grilles within the shaft should have a free area of at least 1.0m^2.
    - The top of the lobby or corridor vent should be located as close to the ceiling level of the lobby or corridor vent should be located as close to the ceiling of the lobby or corridor as is practicable and should be at least as high as the top of the door connecting the lobby or corridor to the stairwell.
    - The lobby or corridor vent, in the closed partition, should have a minimum fire and smoke performance of at least 30 minutes integrity no greater than 360m3/h/m^2 when tested in accordance with BS EN 1366-2.

- The smoke shaft should be constructed either of non-combustible materials conforming to BS 476-11.
- No services other than those relating to the smoke shaft should be contained within the smoke shaft.
- The smoke shaft should be located at the remote end of the corridor away from the staircase.

- As the common corridor(s) serving the apartments along the southwest wing are located along an external elevation, venting of these corridors may be by way of a 1.5m^2 AOV to external (i.e. window).
- A 1m^2 AOV should be provided at the top of each escape stair. On detection of smoke in a common corridor, the AOV within the corridor on that floor and the AOV at the top of the stair will both operate.

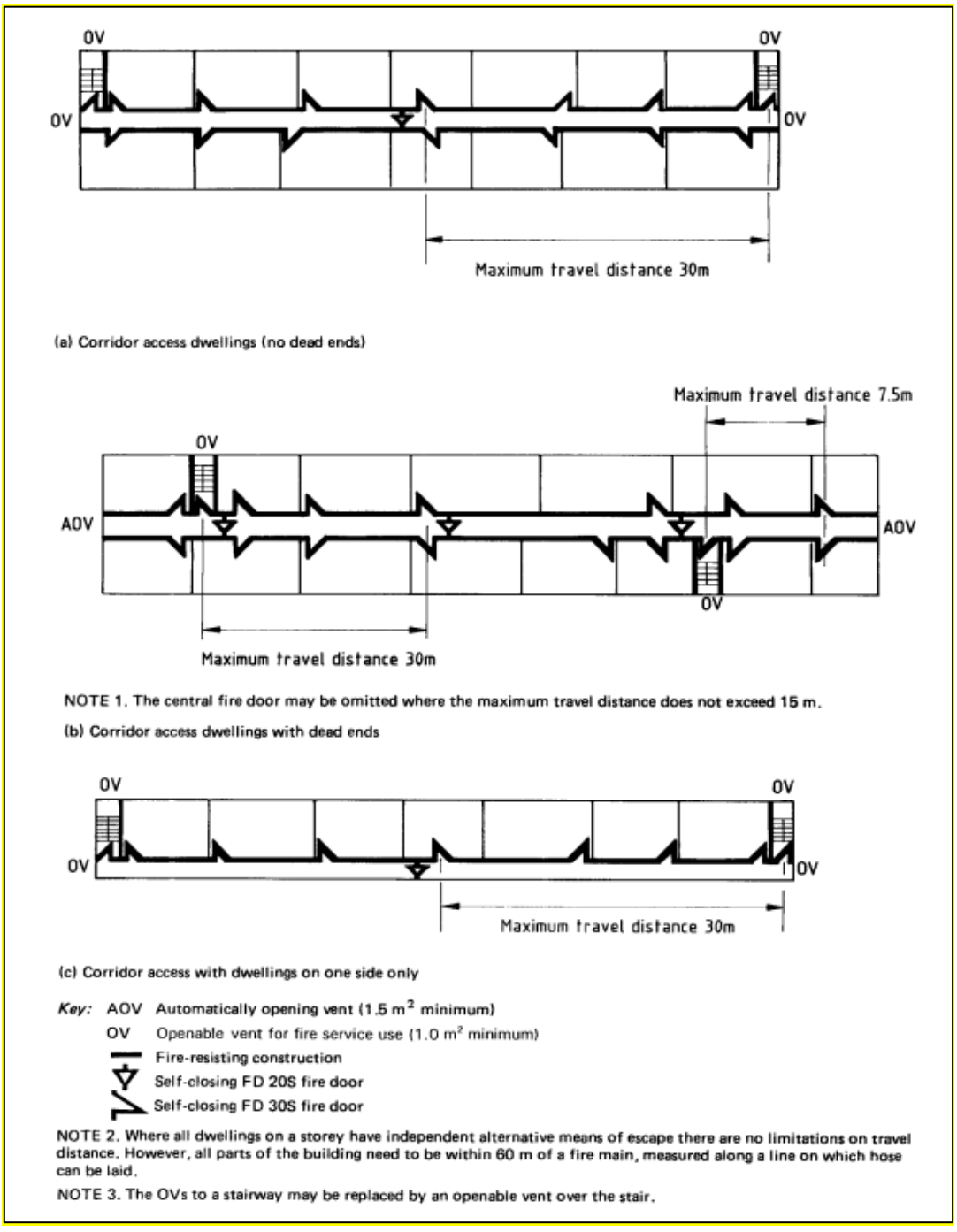

Figure 1: Common escape routes in multi-stair buildings

Southwest (Dead-End) Apartment Corridor at Upper Levels

Currently the 7.5m maximum travel distance from the common apartment corridor (dead end) serving the upper floor apartments long the southwest wing, is measured to the door into an additional large lobby space (containing the lift), and not to the storey exit door into the stair itself.

Code guidance recognises the risk to escaping occupants by the presence of heat and smoke in the internal lobby and corridor serving the apartments and recommends that the distance of travel in a single direction be limited to a place of safety i.e. into a sterile lobby via cross corridor fire doors.

Upon escaping the apartments, occupants will have reached a place of safety i.e. the sterile lobby containing no services, doors into apartments etc. within the code recommended travel distance limit of 7.5m, in accordance with Section 12 of BS 5588-1.

Furthermore, TGDB 2006 (2020 Amendments) also recommends that the maximum travel distance in a protected corridor serving the apartments should be measured *'from the furthest entrance door to a flat to the protected stair, or lobby door. The lobby should provide direct access to the stair and should not provide direct access to a flat or ancillary accommodation'*.

Therefore, the proposed means of escape provisions would comply with both BS588-1 and TGD B 2006 (AI 2020) recommendations.

However, Galway Fire Service have recently raised a concern regarding this approach (i.e. measuring travel distance to an enlarged lobby) on another apartment block with only 2 no. storeys above ground. Although It is proposed to provide additional smoke venting provisions within the large stair lobby (via a smoke shaft) as an additional fire safety measure – this approach is still subject to Fire Department approval.

Internal Apartment Layouts

Based on the provided drawings, each apartment in the apartment building is provided with a protected entrance hallway. Therefore, to comply with code guidance (as detailed above), the maximum travel distance from the apartment entrance door to the door of the furthest habitable room should not exceed 9m.

Based on the proposed layouts, travel distances within apartments entrance halls appear to be within the recommended limits. The entrance halls should form a protected enclosure achieving 30 minutes fire resistance with FD30 doors.

It is noted that the location of cooking appliances should be confirmed. These should be sited at least 1.8m from the door leading from the living/kitchen area into the protected entrance hall. This is also a consideration for balcony escape (see below).

Apartment Balconies (< 4.5m above ground)

Private balconies in apartments which are less than 4.5m above ground level (i.e. all apartments below second floor), should be positioned such that the ground beneath the balcony will be clear from obstructions (e.g. iron railings) and of suitable size and construction to support a ladder, i.e. to accommodate escape via the balcony.

Apartment Balconies (> 4.5m above ground)

Private balconies in apartments which are more than 4.5m above ground level (i.e. all apartments above first floor), should comply with the following recommendations: -

- The escape route from the balcony should not pass through more than one access room: and
- The interior of the access room should be provided by a fire detection and alarm system in accordance with IS 3218: 2013 + A1 2019; and
- Where the travel distance from the balcony access door to the furthest point on the balcony exceeds 7.5m, it should be provided with an alternative escape route without going via the same access room, or the access room should be provided with automatic smoke detection; and
- Any open cooking risk in the access room should be remote from the balcony and positioned in such a way that it does not prejudice the escape route through the access room. In addition, a fire detection alarm system in accordance with IS 3218: 2013 + A1 2019 should be provided to the access room, with an alarm system on the balcony.

Balconies over 4.5m above ground should be designed to comply with the above guidance, ensuring that cooking risks are located at least 1.8m away from route in which an occupant escapes (so that the escape route is not prejudiced).

Communal Space

The communal space located along the southwest wing at roof level has only access to a single storey exit i.e. into the escape stair, and therefore its capacity is limited to 50 persons.

Furthermore, the maximum permitted travel distance in a single direction is limited to 18m, travel distance from the communal space currently exceeds this limit – although a case may be made that escape from the communal space is open air, and therefore a slight extension in travel distance would be considered reasonable.

Based on the availability of a single escape route, the Fire Department may restrict the use of this communal space.

Storey Exits

Based on the calculated occupancy storey exits should be provided with a clear width of 800mm to satisfy Part M requirements.

Direction of Opening of Doors

All doors on escape routes serving more than 50 people should open in the direction of escape.

Escape Stairs

The stairs serving the apartments will achieve a minimum clear width of 1200mm to satisfy the requirements of TGD M 2010.

Both escape stairs serving the upper floors of the apartment block will discharge direct to outside at ground level, independent of the common corridors at ground floor.

Disabled Refuge

A disabled refuge will be provided in the enclosures to both protected stairs at each upper floor. These refuges will comply with BS 9999:2017 and will have a minimum dimension of 900mm x 1,400mm.

An Emergency Voice Communication (EVC) system will also be provided and will comply with BS 5839-9:2011.

Final Escape Routes

Stores or electricity cupboards should not be located within final escape routes.

Any post boxes located along the final escape routes should be constructed of non-combustible materials. It should be noted however that the Fire Officer may request any post boxes be enclosed in fire rated construction so that they form a separate fire resisting enclosure.

Ancillary Accommodation

Based on the latest plan drawings, there is no ancillary accommodation located within the common corridors/lobbies serving the apartments, except for the water tank room at ground floor.

No storage will be permitted within the water tank room.

ACTIVE FIRE SAFETY SYSTEMS

Fire Detection and Alarm System

Apartment Block & Retail Unit

Each individual apartment will be provided with a Grade D LD2 standard system in accordance with IS 3218: 2013 + A1 2019 Code of Practice for fire detection and alarm systems for buildings – system design, installation, and servicing.

In addition, a heat detector should also be provided in each protected apartment entrance hall, which is linked to the main Landlord fire detection and alarm system serving the common areas (i.e. corridors, lobbies, etc.).

The common areas (i.e. common corridors, stairs and ancillary accommodation) along with the ground floor retail unit should be provided with a Category L2/3MX fire detection and alarm system for the operation of smoke vents that complies with IS 3218: 2013 +A1:2019. This system should consist of: -

- A heat detector in each flat, located adjacent to the entrance door to the flat.
- A sounder in each flat, meeting the requirements of EN 54-3, located in the circulation area, not more than 5m from any bedroom door.
- Smoke detectors and sounders in all common escape routes, and
- Smoke or heat detectors (as appropriate) in ancillary accommodation.

Creche Block

The creche block should be provided with a Category L2/L3 fire detection and alarm system that complies with IS 3218: 2013. However due to the presence of sleeping children, the Fire Service may request a Category L1 standard of coverage throughout.

Emergency Lighting

Emergency lighting in accordance with to IS 3217: 2013 + A1 2017 and I.S. EN 1838: 2013 should be provided to adequately indicate and illuminate all escape routes not within dwellings and where required external escape lighting including common stairs, and so that all firefighting equipment and call points can be easily seen.

Photovoltaic (PV) Panels

The provision of a Photovoltaic System (PVS) should be designed and installed to current best practice and include measures to minimize the risk of electrocution to firefighters in the event of an incident. Fire Departments generally require that the installation will be designed incorporating the technical guidance contained in: -

- RC62: Recommendations for fire safety with photovoltaic panel installations, as published by the Fire Protection Association/RISC Authority; and
- NFPA 1 (Fire Code) Section 11.12 for PV Systems; and
- MCS/ECA's Guide to installation of PV Systems.

Furthermore, the Fire Department will also require the following: -

- The roof covering or decking under the arrays shall be of non-combustible materials.
- The building shall have adequate and appropriate warning signages for firefighters to inform them of the presence of a PV System in the building.
- Only solar cables suitable for outdoor applications and severe weather conditions and UV radiation are to be used.

CONSTRUCTION & COMPARTMENTATION

Construction

Based on a top storey height less than 18m above ground, load bearing elements of structure to both buildings will be required to achieve a minimum of 60 minutes fire resistance.

Compartmentation

The following will form separate fire compartments, enclosed in 60 minute fire resisting walls and floors: -

- Each apartment will form a separate compartment.
- Laundry room within the creche building.
- The ground floor retail/commercial space within the apartment building will form a separate compartment from the rest of the ground floor.

The Kitchen/staffroom within the creche building will be required to be further assessed upon confirmation of the types of appliances proposed within these rooms. Where the fire load within these rooms would be considered 'low risk' it would be considered reasonable to enclose the room in 30-minute fire rated construction. However, where there is a higher risk appliance provided this room should form a separate fire compartment i.e. enclosed in 60 minutes fire rated construction.

Fire Containment

Protected corridor / lobby enclosures and entrance halls within apartments should be enclosed in construction achieving a minimum of 30 minutes fire resistance.

Any areas which are designated as a place of special fire hazard under Building Regulations should be enclosed in a minimum of 30 minutes fire resistance.

Higher risk areas such as refuse stores, boiler rooms, fuel storage areas and high voltage transformer and switch rooms etc. should be enclosed in a minimum of 60 minutes fire resistance. Fire doors to higher risk areas such as refuse stores, boiler rooms, fuel storage areas and high voltage transformer and switch rooms etc. should achieve the same period of fire resistance as the walls they are located in.

There are storage areas located in Stair 2 of the creche building. These rooms should also be enclosed in construction achieving a minimum of 30 minutes fire resistance.

EXTERNAL ELEVATIONS

External Wall Construction

Considering the height of apartment and creche blocks is less than 18m in height and more than 1m from the relevant boundaries, Where the building is >1m from the nearest relevant site boundary and less than 18m in height, the external surfaces which are less than 10m or less above a roof or any other part of the building to which people have access, should be a Class C S3 d2 (European) or have an index performance (i) not more than 20 (National). Timber cladding at least 9mm thick is also acceptable.

As the building is less than 18m in height, current code guidance (TGD B 2020, etc.) does not restrict the use of non-combustible insulation within the external wall cavity.

However, in light of the Grenfell fire, the UK Government are considering a change in code guidance so that all residential buildings with a top storey height over 11m should have non-combustible materials in its external wall construction (including insulation).

If this recommendation is adopted in the UK, there is a possibility that Irish Local Authorities will follow suit and require the external elevations of all residential blocks with a building height >11m to consist of non-combustible materials.

Space Separation and Unprotected Areas

External fire spread calculations have not been conducted at this stage of the design development.
The extent of unprotected area (windows, etc.) to the elevations of the apartment block and creche will be limited to minimize the risk of fire spread between the apartment and creche buildings and from the apartments and creche buildings to adjacent properties.

A full analysis of the permitted extent of unprotected area to each elevation of the apartment building and creche will be undertaken and included in the Fire Safety Certificate application for the development.

ACCESS AND FACILITIES FOR THE FIRE SERVICE

Water Supplies

Fire Mains to Apartment Block

To ensure sufficient hose coverage to the apartment block i.e. all areas within each apartment are reachable within 45m of the fire mains outlet point at each floor level, a dry riser should be provided within the south stair core.

The design and construction of the dry riser within the building will be in compliance with BS 9990: 2015.

The dry riser inlet point, at the entrance to the south stair, will be within 18m of a fire tender parking position.

Fire Hydrants

Both the apartment block and creche are less than 1,000m^2 in ground floor area, therefore there is no provision for hydrants.

However, as it is proposed to provide a dry riser within the stair core to the apartment block, a hydrant should be provided.

The hydrant should comply with the requirements of BS 750: 2012 & EN 14339:2005 Specification for underground fire hydrants and surface box frames and covers. All hydrants will be conspicuously marked in accordance with BS 3251: 1976 Specification of indicator plates for fire hydrants and emergency water supplies.

The hydrants will be located such that: -

- The distance from the building is not less than 6m or more than 46m.
- The distance from a hydrant to a vehicle access roadway or hard standing for fire appliances is not more than 30m.
- They are on the same site as the building or are provided by the local authority on the road adjacent to the site.

Vehicle Access

Apartment Block & Retail

The top storey of the apartment block is less than 10m (9.9m) and the volume is between 7,000m^2 and 28,000m^3. Therefore, pump appliance access should be provided to 15% of the perimeter. Sufficient access is provided to south and east elevations of the apartment/retail block.

The dry riser inlet point, at the entrance to the south stair, will be within 18m of a fire tender parking position along the west elevation, where currently fire tender is not required to travel greater than 20m along the dead-end route to be within 18m of the dry riser inlet point.

Creche

The top storey of the creche is less than 10m (3.15m) and the volume is less than 7,000m^2. Therefore, pump appliance access should be provided at a rate of 2.4m for every 90m^2 of ground floor area i.e., 6m.

To ensure sufficient perimeter access the roadway along the south elevation should be a minimum width of 3.7m and have a carrying capacity of 12.5 tonnes for a pump appliance. The minimum width of any gate crossing should be 3.1m.

Smoke Venting of Escape Stairs

A 1m^2 AOV will be provided at the top of each escape stair within the apartment and creche blocks. The AOVs will also be remotely operable by fire fighters with the provision of a switch at the bottom of each stair.

Automatic smoke vent installations within the stairs/lobbies should comply with the relevant recommendations of BS EN 12101 for natural or mechanical smoke vent installations.