CHAPTER TWO PROJECT DESCRIPTION

2.1 INTRODUCTION

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

A description of the Masterplan Site and the proposed development site and its surroundings is presented. The design parameters of the development proposal are described in detail with proposals for the wider Masterplan provided, insofar as such details are available. This description sets the basis against which the specialist assessments presented in this EIAR have been undertaken.

The ambition of Limerick Twenty Thirty Strategic Development DAC (LTT) is to revitalise and transform the Cleeves site and surrounding area to deliver a World Class Waterfront development in Limerick's urban core. The transformative project seeks to achieve a number of primary objectives:

- supporting the growth of a strong local economy;
- encouraging and facilitating new business investment;
- retaining and integrating the historic buildings and site industrial heritage with contemporary buildings;
- accommodating a mix of uses anchored by a public realm that relates and links to the city core and the River Shannon, whilst implementing high-quality urban design, with sustainable and innovative design.

Once fully developed, the site has the potential to accommodate future population growth through residential unit provision and to further promote a strong local economy through the creation of employment and new local attractions, thereby encouraging and facilitating new business investment.

2.2 OVERALL MASTERPLAN

The Cleeves Masterplan, published in 2023 by LTT, was prepared in response to the requirements for a coordinated and holistic approach to development on the Cleeves Site (5.30 hectares) as acknowledged in the Limerick Development Plan 2022 – 2028[1]. The Masterplan was subject to public consultation and comprised the first step towards development on the site. It provides a broad framework for LTT's vision for the future and creative re-use of this strategic city centre site and its valuable assets, providing a flexible and phased approach to development. The Masterplan site is slightly larger than the site put forward in the application for approval as it includes the St. Michael's Rowing Club site adjoining the rivers edge. St. Michael's Rowing Club is excluded from the current development proposal and will form part of a subsequent phase of development (Phase IV).

[1] Section 3.4.3.2 Limerick Development Plan 2022 -2028

2.2.1 Masterplan Site

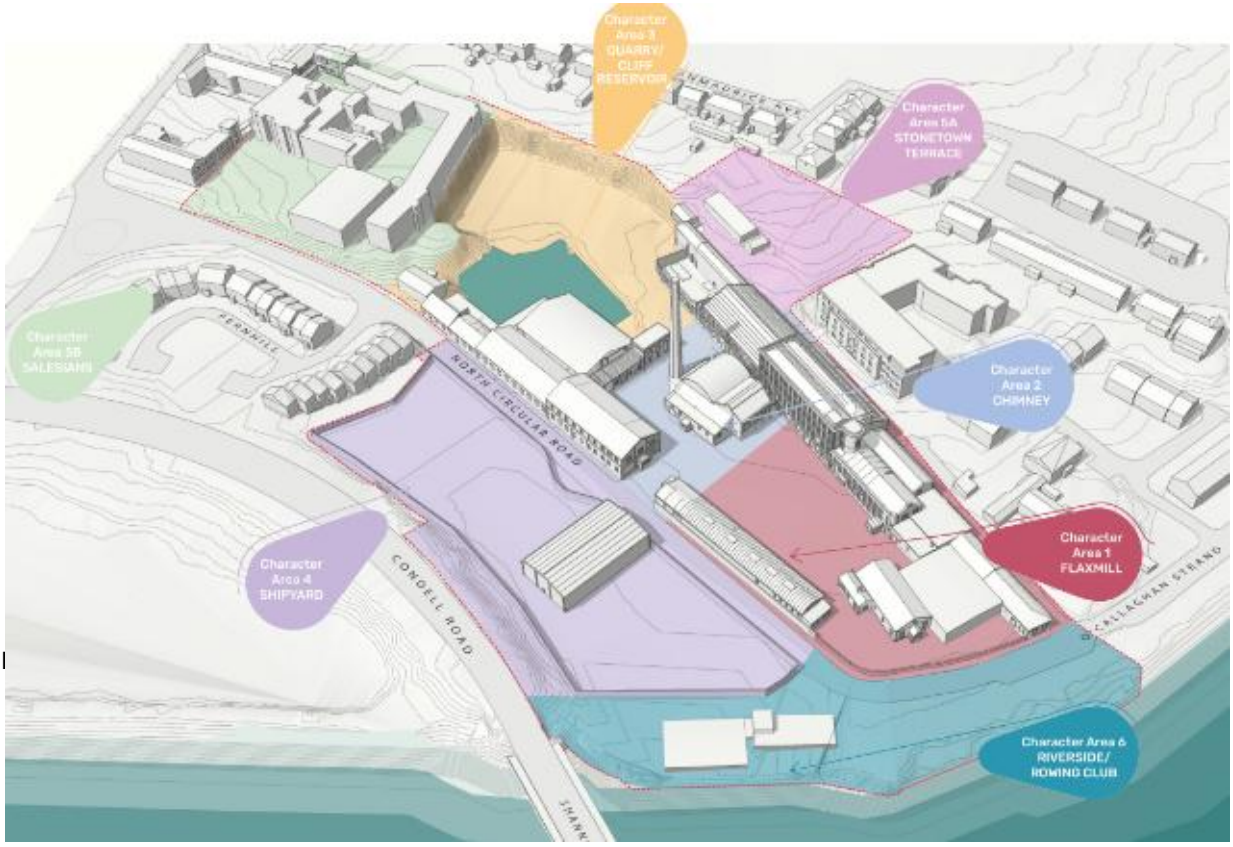
The Cleeves site has a unique location, situated to the north-west of the River Shannon, yet also being assigned part of the City Centre Area. The river visually separates the site from the main city which allows it to form a stronger relationship with the immediate context west of the river. The site's favourable location adjacent to the Shannon Bridge allows direct access across the river to the city centre. Condell Road to the south west of the site is a main arterial route into the city from Shannon Airport.

The existing character of the riverine landscape has always been an important part of the character of Cleeves, though much has been lost following the walled enclosure of the Cleeves site. There is an opportunity to re-create this link to the river both in terms of opening up the landscape and creating new landmark buildings.

There are six distinct but yet permeable areas identified within the overall Cleeves Masterplan site, each with their unique and distinct character, influenced by the four different industrial uses afforded to the site, including the Flaxmill Phase (1850 – 1884), Condensed Milk Phase (1884 – 1927), Dairy Disposal Phase (1927 – 1974) and Golden Vale Phase (1975 – 1986). The six identified areas are detailed in Figure 2.1 and are described as follows:

1. 'Flaxmill Site' (1.6 hectares) comprises the Flaxmill, perimeter walls, Chimney, Engine House, Water Tank and Steeping Galleries, and is one of the most significant industrial sites in the country. The site is also made up of buildings that were constructed between 1890 and 1950. These later buildings have been used for multiple functions including use as workshops. The site is surrounded by a high stone wall, defined by the North Circular Road to the south west, O'Callaghan Strand to the east, and Stonetown Teraace to the north east. The Flaxmill Site is predominantly at the higher level of 5.00 to 5.95 A.O.D.
2. Shipyard Site' (0.7 hectares) gently sloping towards the river, is located between the North Circular Road and Condell Road, adjoining Fernhill residential development to the north west and St, Michael's Rowing club to the south east, is currently used for storage and car parking and includes a warehouse.
3. 'Riverfront' (0.22 hectares) including St Michael's Rowing Club premises and club facilities, is defined by O'Callaghan Strand to the north and the River Shannon to the south extending from a point defined by the Condell Road and Shannon Bridge to the west.
4. 'Stonetown Terrace Site' (0.43 hectares) is accessed via the Stonetown Terrace Road and is defined by the Landsdowne Hall apartment block to the east, existing housing in Clanmaurice Gardens to the north, Clanmaurice Avenue to the west and the Quarry Site to the south. The site comprises an Upper Reservoir structure.
5. 'Quarry Site' (0.61 hectares) is dominated by a cliff face which adjoins the long rear gardens of housing in Clanmaurice Avenue to the north. Part of the southern boundary touches the North Circular Road and extends to include 2 no. Victorian Houses. The quarry was opened in c.1833 and used to supply stone for construction of Sarsfield Bridge (1835) and other major works in Limerick. Quarrying activity included lowering the base of the 1833 quarry to create a sump for the reservoir, which continues to exist today and is a main feature of the overall site. Access to the Quarry site from the Flaxmill is at the higher level of 5.80 A.O.D but drops down to 4.00 A.O.D towards the Quarry wall itself and significantly further down to the Reservoir water level.

6. ‘Salesians Site’ (0.9 hectares) is separate to the Cleeves Complex, located to the west of the Quarry site, with the long rear gardens of housing in Clanmaurice Avenue defining the northern boundary, Salesians primary school defining the western boundary and North Circular Road defining the southern boundary. The site comprises a complex of buildings including a former secondary school, currently used for the temporary accommodation of Ukranian refugees, a Sportshall, and Fernbank House, a former private dwelling which has been much altered and extended to meet the needs of the school.



2.2.2 Masterplan Vision

The Cleeves site is unique, as described in Section 2.2.1 and provides an opportunity to offer uniquely distinct spaces that do not replicate the amenities and character of other urban spaces. An integrated masterplan underpinned by a resilient and phased design approach is proposed, that:

- Enhances engagement with the city and celebrates the rivers’ edge by opening up the Flaxmill site to the river, offering a new riverside vantage point, activating the Shipyard site edge with water-related boating uses. The masterplan responds to the surrounding natural ecosystems and biodiversity, creating an enhanced and accessible public promenade linking O’Callaghan Strand to the Westfields Wetlands.
- Harnesses the value of the unique industrial heritage at Cleeves by organising the Quarter around spaces anchored by the specific heritage elements – Flaxmill buildings and Engine House; Chimney/Water Tank House/Infiltration Galleries; Reservoir/ Quarry, thus amplifying the unique nature of the site and its specific sense of place.

- Acts as an exemplar for conservation-led regeneration scheme of national and international significance
- Creates a vibrant public realm at the heart of the Quarter that links the diverse character areas whilst forming a spine that connects from the Riverside to the Reservoir/ Quarry
- Strengthens connections to the city by an enhanced realm for pedestrians, cyclists and boaters, promoting sustainable modes of movement, with potential for a mobility hub connecting public transport on Condell Road with facilities for shared bikes, scooters etc.
- Creates a permeable and inviting Quarter, enhancing neighbourhood and urban connectivity by pedestrian and visual linkages from Condell Road through to the Flaxmill site and from the upper Salesians and Stonetown Terrace sites to the Reservoir.
- Optimises compact development within the site constraints, whilst respecting visibility of the heritage fabric by concentrating massing away from views of the Flaxmill façade and iconic chimney.
- Integrates a diverse and complementary mix of Working, Living and Learning uses, in a public realm offering settings to enable benefits to be gained from synergies between different groups, strengthening a sense of community.
- Provides a Resilient Response to the environmental and climate setting through designing with sustainable initiatives and optimising massing for quality internal and external spaces.
- Sets out a sustainable incremental phasing strategy with new phased connection routes

2.2.3 Masterplan Framework

The Masterplan Framework facilitates the urban regeneration and renewal of a central, serviced and under-utilised city property. Consistent with the Development Plan objectives the Masterplan seeks to create an improved physical environment and to deliver services and infrastructure that will contribute toward city centre spatial and economic renewal whilst delivering essential housing.

The Masterplan demonstrates the potential of the site to accommodate a mix of uses with a proposed 60% of the site dedicated to commercial / educational floorspace; 30% dedicated to residential use; and 10% dedicated to mixed use purposes. The Masterplan at the time of conception (2023) provided for:

- Creative reuse of buildings of heritage significance including the Flaxmill, Cold Store, Engine House and Infiltration Gallery;
- Demolition of Salesians School and other buildings throughout the site, necessary to facilitate development and enable connectivity and permeability;
- Provision of 275 no. student residential bed spaces on the Quarry Site;
- Provision of between 180 - 220 no. residential units;
- Provision of between 35,000sqm – 36,500sqm of commercial / educational floorspace;
- Provision of between 5,000sqm – 6,500sqm of mixed uses;
- Development of a generous civic plaza in the forecourt of the historic Flaxmill; and
- Development of significant public realm facilitating connectivity and permeability

Residential use is primarily located on the Salesians, Quarry and Stonetown Terrace sites to respond to the neighbouring residential context. Commercial development is prioritised along the North Circular Road on the Shipyard, Infiltration Gallery and Flaxmill sites.

The massing strategy focuses on optimising compact development whilst respecting the historic context. It seeks to be sympathetic to the surrounding local context, including existing low rise housing, whilst engaging with the waterfront and enhancing visibility of the Cleeves site as a landmark development. The Salesians and Stonetown site to the north respond to the immediate context of low-

to mid-rise buildings and the existing Flaxmill building on site, with massing stepping between three and six storeys. South-west of the site on the Shipyard, a new iconic marker is proposed along the riverfront, with the taller element forming a relationship with both the Riverpoint development across the Shannon and the existing Chimney Stack on site.

The Cleeves site is centrally located in Limerick City and is well served by public transport connections. The Masterplan approach has been to reduce on-site car-parking, as supported by national, regional and local policy, in combination with increased parking for bikes. Enhanced connectivity with the established city centre will be promoted and supported, including provision of a proposed new pedestrian bridge as part of the Worldclass Waterfront Initiative.

Figure 2.2a Mixed Use Masterplan Proposal

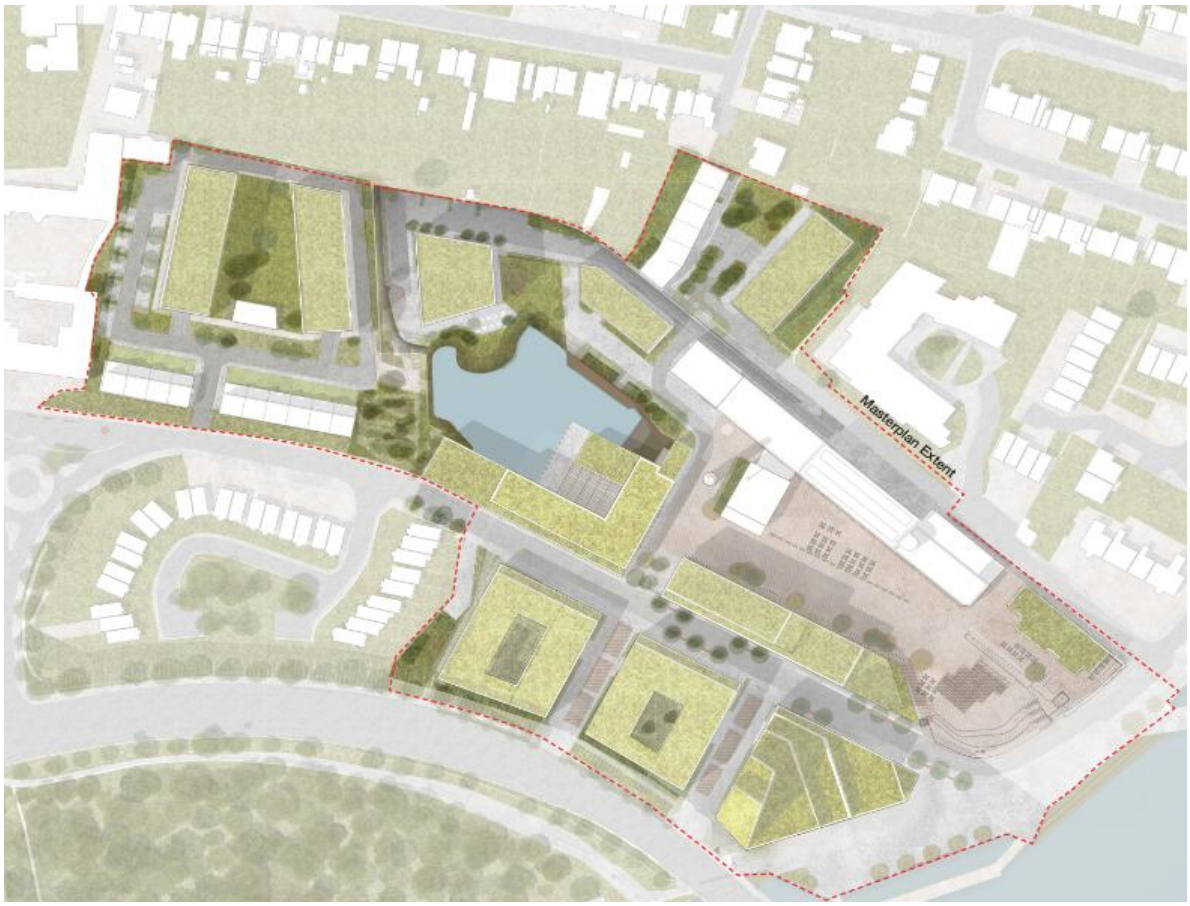


Figure 2.2b Mixed Use Masterplan Proposal

2.2.4 Masterplan Phasing

The Urban Regeneration Development Fund (URDF) funding secured, (€34.5m,) will assist in facilitating enabling works for the Cleeves site, thereby unlocking the site for development. Four phases of development are envisaged in delivering the Masterplan Site.

Phase I – Heritage Works

A phased approach has been proposed to manage the urgent stabilisation and repair of selected structures identified for retention within the Cleeves Riverside Quarter masterplan. Initial phases will prioritise works according to urgency with the objective of preventing loss of fabric due to deterioration arising from exposure to the elements.

Sub Phase 01 – urgent works to Main Mill roof and upper storey, peeling back of modern layers - commenced
Sub Phase 02 – urgent works to Engine House roof and envelope
Sub Phase 03 – urgent works to the Dairy Building roofs
Sub Phase 04 – envelope of the remaining buildings including peeling back of accretions

Works to the Main Mill are at an advanced stage and are due to commence in Q4 2025. The Flaxmill requires substantial and expansive repair and renovation to enable its reuse. Rectification of defects alongside peeling back of modern (post-1970s) layers is necessary to permit the building to be stabilised

and repaired. This repair work is required in advance of future works concerning renovation, retrofit and reuse coming forward and is in keeping with best conservation practice and the Architectural Heritage Protection Guidelines (2011).

The extent of repair to the Main Mill is defined as the underside of the structural deck of the third floor extending to the full length of the Main Mill building and all fabric above. The lower extent approximately aligns with the springing point of the second-floor window lintels. This scope has been informed by the design team's understanding of the building arrangement and condition, and the immediate measures required to address the main factors of decay.

Water ingress through the roof coverings of the Main Mill is the primary agent of decay, with advanced deterioration most notable in the upper storey. Multiple phases of utilitarian change and crude structural consolidation have left the building compromised and complex to repair. Some temporary stabilisation measures installed in recent years are performing an important function in slowing the progression of decay of the upper storey, however many of these are now also deteriorated and close to failure.

The Phase 01 works comprise the following:

Roof:

- Roof coverings replaced with thermal enhancements to form insulated warm roof;
- Repair / renewal of timber roof trusses, purlins and rafters on a basis of repair need;
- Removal of lift overrun to enable reforming of hipped roof profile;
- New roof access via central valley to serve building in its Phase 01-completed 'shell state';
- Repair / renewal of cast iron gutters;
- Upgrade of rainwater drainage system - new and additional downpipes and chutes;
- New secondary 'fail safe' gutter system;
- Water tank retained, overhauled, repaired and roofed;
- Thermal enhancement trials for the external windows and walls.

External Walls:

- Demounting and storage of windows to allow for masonry repair works to progress;
- Partial take down and rebuild of masonry at building's north-west aspect to address displacement;
- Take down and rebuild of parapet to address displacement – additional brick courses for edge protection, improved weathering, new rainwater outlets – construction phase openingup / recording to aid understanding of existing material, form and construction, and inform approach for rebuild;
- Cornice reformed with weathering, repaired / rebuilt as required – construction phase opening-up / recording to aid understanding of existing material, form and construction, and inform approach for repair / rebuild;
- Removal of horizontal wrought iron banding at Level 03 - NE and SW walls, NW gable;
- Removal of wall linings back to masonry at Level 03, grouting / repointing / packing;
- Original Level 03 window openings reformed through removal of wall linings / blockwork infill;
- Temporary linings installed to window openings, to remain post-Phase 01 completion;
- Take down and reassembly of below-cill spandrel at windows to allow for through-floor voids to be closed;
- Bat roosts integrated into former below-cill voids.

Floors

- Repair / renewal of cut / failed beam supporting Level 03 floor deck;

- Removal of ceiling (all failed) and modern partitions at Level 03;
- Modern Level 03 floor linings removed back to original floor finish, consolidation of original tiles where eroded / missing;
- Consolidation of masonry jack arches forming floor structure of level 03, entailing removal of soffit plaster linings back to masonry at Level 02, packing / repointing of open joints;

Ironwork

- Blasting of exposed iron beams and tie rods to remove corrosion and allow for protective
- coatings to be applied;
- Hand stripping of iron column coatings to allow for application of protective coatings;

Enabling Works

- Required within and beyond the Main Mill footprint to permit the placement of scaffolding and create safe access for Phase 01 works to take place.

Phase II - Residential & Public Realm (Subject development proposal)

This application for consent is being advanced for the Residential sites (Salesians Zone, Stonetown Terrace Zone, O'Callaghan Strand which is located within the Flaxmill Zone and the Quarry Zone); and the full Public Realm for the entire site excluding St. Michaels Rowing Club. The commercial buildings proposed for the Shipyard site in the Masterplan are not being advanced as part of Phase II. However, a temporary meanwhile use for the Shipyard Zone comprising a civic / open space is proposed as part of Phase II. Demolition will be undertaken on site to facilitate the proposed development, including the total demolition of the Salesians School and associated buildings. The details of this application are provided in Section 2.3 of this chapter.

Phase III – TUS Campus

Since the Masterplan Framework was prepared for the overall site, a detailed Feasibility Study has been undertaken to assess the potential of the Flaxmill building and proposed new building blocks to accommodate the TUS Campus development. The proposal provides for a development comprising approximately 16,650sqm of primarily educational floorspace, across three buildings including the existing Flaxmill and two new builds adjoining North Circular Road (North Circular Road and Infiltration Gallery). as detailed in Figure 2.4.

The ground floor of the Flaxmill Building will accommodate circa 1,000sqm of commercial floorspace intended to activate the ground floor frontage the historic façade as detailed in Figure 2.5. The new build element comprises buildings of up to five stories in height including:

- A new core to extend to the top floor of the Flaxmill
- A 3 storey extension to the Cold Store
- A new extension connecting the Engine House and the Flaxmill Building
- A 5 storey building, 16m wide at ground and first floor, on North Circular Road (5,005sqm)
- A 5 storey building stepping down to 3 storeys at the Infiltration Gallery (5,445sqm)
- Landscaping and Public Realm Enhancements

The next stage in the process is Planning Developed Stage: Outline Sketch Scheme Design and it is likely that consent shall be sought for this development in 2026, dependent on funding approval from the Higher Education Authority.

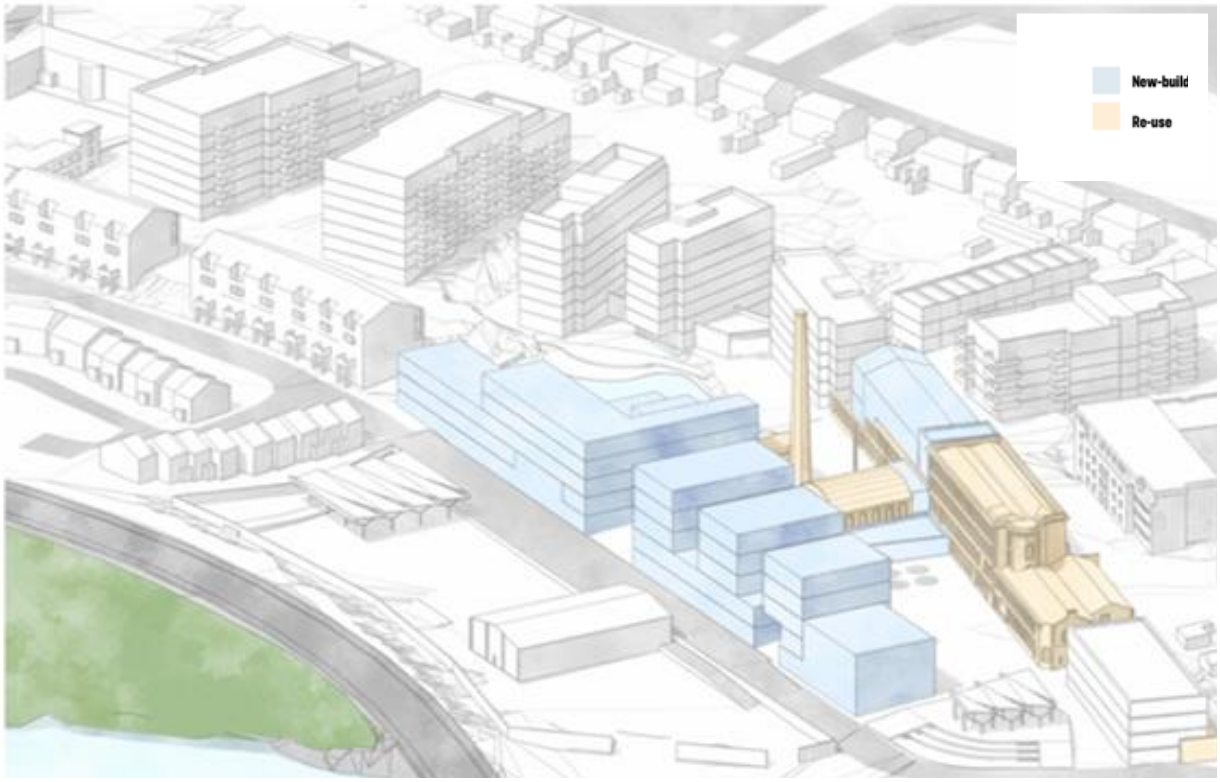


Figure 2.4 Proposed TUS development- Feasibility Stage

Figure 2.5 Proposed Groundfloor Uses - TUS Development

Phase IV – Shipyard Site

The final phase of development will be the Shipyard site which is intended to accommodate significant commercial development, including circa 23,000sqm of commercial floorspace, with significant buildings of up to 8 storeys in height and a landmark building extending towards the river. This part of the overall Masterplan is intended to accommodate most of the minimal car parking provision for the site within an undercroft / basement level.

There is no timescale defined for the delivery of this element of the development, but it is proposed that detailed design will commence after the consent process associated with the TUS educational campus. In the meantime, a temporary meanwhile use for the Shipyard Zone comprising a civic / open space is proposed as part of Phase II, which will be assessed in the EIAR.

Phases 3 and 4 of the Masterplan Framework will be subject to separate applications for permission / consent and will be subject to EIA Screening in the first instance, followed by the preparation of an EIAR where / when considered necessary.

2.2.5 Planning History

Historically, the site has had a variety of land uses since the early 19th century. During the early to mid-19th century, the site mostly comprised of agricultural land. There was a quarry located in the central portion of the site. By 1839, there was an active dock yard located in the southern portion of the site operated by the Limerick Ship Company. A detailed overview of the site's history is recorded in the Statement of Significance appended to Chapter 9.0 Cultural Heritage - Architectural in this EIAR.

During the 1850's, the site underwent rapid development associated with linen factory production. The flax mill, cold store, Victorian houses, and weaving complex buildings were constructed in the central portion of the site, with the addition of the chimney stack in circa1850. In the late-19th century, the site and buildings were used for a variety of purposes. During the 1870's, the site factory buildings were reopened as a flour and corn mill following a fire in the previous spinning factory.

By 1881, manufacturing of prepared coffee began in the southern dock yard site. In 1884, the Cleeves site began to process cream and skim milk. Additional ancillary buildings and structures were constructed during the late-19th and early-20th centuries associated with the condensed milk operation.

The site conditions and majority of structures remained relatively unchanged during the 20th century. The Salesian's School in the northwest of the site was established in 1924 through the purchase of existing buildings from the Cleeve family. In 1940, the St. Michael's Rowing Club workshop was constructed in the southeast of the site along the River Shannon. In 1950, additional packaging stores and storerooms were constructed associated with the cheese plant. Active use and operation on the site, including milk processing, ceased in 2011.

More recently, there is evidence of the following planning history across the site:

- 2003 - Retention of permission for the provision of 90 no. car parking spaces on site for staff, file reference no. 03770381
- 2003 – Retention of existing shop within the Cleeves site fronting North Circular Road in the area of the Cheese Plant / Packaging Store, file reference 03770383
- 2006 – Erection of School Sign and School Plaque at Salesians, file reference 06770090.

2.3 THE EXTENT OF THE PROPOSED DEVELOPMENT

Whilst the area of the proposed development site encompasses most of the Masterplan site, the St. Michael's Rowing Club site adjoining the river's edge, is excluded from the current development proposal, but will be included in Phase IV. Further, within the site not all buildings are proposed to be demolished / constructed or re-used as indicated within the Masterplan. Rather, the focus on this phase of development is to advance residential development in an effective and efficient manner to address the critical shortage of accommodation in the city, whilst ensuring that the development does not compromise the future delivery of Phase III TUS Educational Campus and the remaining Masterplan proposal.

2.4 DESCRIPTION OF THE APPLICATION SITE

Section 2.2.1 of this chapter has already identified and described the six different character areas defining the Masterplan site, including the extent of built structures in each zone.

The 5.09 hectare application site is subdivided into two parts by the North Circular Road with O'Callaghan Strand providing a barrier between the site and the river. The site has three access points including two from the North Circular Road and the third from Stonetown Terrace, a cul-de-sac extending from O'Callaghan Strand. The site (river front) adjoins a Natural Heritage Area and the River Shannon Special Area of Conservation. The site is also proximate to the River Shannon Special Protection Area.

Two structures within the site are designated protected structures; the Flaxmill Building (PS Ref no.264 & NIAH No. 21512053) and the octagonal brick chimney (PS Ref no.265 & NIAH No. 21512059).

Although the site is brownfield in nature and has been effectively abandoned since 2011, there are a number of existing, temporary uses on the site, including:

- Use of office space by Limerick Treaty Suicide Prevention and Ennis Road Community First Responders
- Storage facilities by a number of businesses, organisations, community groups and charity organisations
- Irish Defence Forces training destination,
- Use of property for film studies and shooting of films,
- Sporting facilities including use of hall in Salesians by a basketball club
- Event management including hosting circus, Scare Factory;
- Use of parts of the site as a contractors compound to facilitate construction projects in the city; and
- Temporary use of Salesians as refugee accommodation for Ukranian war refugees

Whilst most of these uses shall cease on site once construction commences, there are users such as the Limerick Treaty Suicide Prevention and Ennis Road Community First Responders, which could continue to use existing retained buildings on site for storage and meeting space purposes, subject to licensing arrangements.

Site levels vary significantly across the site. The original topography of the site had a slight gradient from north-west to south-east and a steeper gradient from north to south sloping towards the River Shannon. However, the original topography has been substantially altered by the historical development of the site. The lowest elevations encountered across the site of approximately 1.5 mOD are associated with the

disused quarry excavation in the centre of the site. The highest elevations are approximately 14 mOD and are encountered in the north-west of the site (former Salesian's School) and in the north of the site (Stonetown Terrace). Additionally, there is evidence of imported material where the levels across the Stonetown Terrace portion of the site have been raised by approximately 1 to 2 m high.

Ground investigations indicate widespread made ground across the site located over shallow bedrock. The made ground is generally composed of reworked fill material with variable secondary constituent components. Anthropogenic material was also encountered within the made ground material including red brick, concrete, plastic, and timber fragments.

Groundwater levels are variable across the site, ranging from 2.18 to 5.08 m BGL. Four standpipe installations were dry when dipped. The groundwater levels are likely to be 0.5 to 1.0 metres higher during the winter months. Part of the site is subject to flooding and this is considered in detail in Chapter 11.0 Water & Hydrogeology.

Geo-environmental testing has demonstrated that there is a variable contamination risk across the site. Asbestos was encountered in three samples tested from the Stonetown Terrace portion of the site and hazardous material was encountered in seven locations in the Shipyard portion of the site. Surface water infiltration testing has indicated that there is low permeability within the glacial subsoils where tested.

A stand of Japanese Knotweed was identified on the bank of the reservoir, whilst Himalyan Knotweed was identified in land situated between the Shipyard site and the Condell Road. Both stands are currently undergoing treatment in accordance with an Invasive Species Management & Treatment Plan.

Figure 2.6 Contextual View of Cleeves Site

2.5 CHARACTERISTICS OF THE PROJECT

The design approach for the proposed development is presented in the Architectural Design Statement prepared by the project architects, Feildin Clegg Bradley Studios and Bucholz McEvoy Architects and it should be considered in conjunction with this chapter of the EIAR.

Cognisant of the fact that the proposed development is largely within an industrial heritage site, with the exception of Salesians, the development seeks to work with the existing Cleeves factory buildings to provide an industrial 'axis' that will support a new transformative programme of mixed uses linking the river with the Quarry / Reservoir site beyond. The development intends to capture and reveal the memory of the site as an important site of production within Limerick City and bring a unique meaning to the public and community environments in the interfaces between new and old, promoting opportunities for activation of both the existing building environment as well as the new public realm.

The dominant cliff face, the old reservoir and the post-industrial early succession vegetation make this site unique. The Flaxmill complex and its rich industrial heritage is at the heart of the development proposal and establishes the core Public Space of the Cleeves Riverside Quarter. The approach seeks to preserve one of the most significant Flaxmills in Northern Europe for new life.

2.5.1 Description of the Proposed Development

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

The proposed development comprises Phase II, of an overall Masterplan with four phases of development proposed. Phase II will commence subsequent to ongoing emergency stabilisation and repair of the Flaxmill protected structure (Phase I). Phase III is intended to comprise an educational campus, inclusive of the adaptive reuse of the Flaxmill Building as part of that development and will be subject to a future separate application. Phase IV comprising the Shipyard site will be the final phase of development.

Two structures within the site are designated protected structures; the Flaxmill Building (PS Ref no.264 & NIAH No. 21512053) and the octagonal brick chimney (PS Ref no.265 & NIAH No. 21512059), which are to be retained.

The proposed development includes:

A. Demolition of a number of structures to facilitate development including (i) Salesians Secondary School and Fernbank House; (ii) 2 no. houses on North Circular Road; (iii) Residual piers from the basin of the reservoir; (iv) Upper Reservoir on Stonetown Terrace comprising 2 no. concrete water tanks, pump house and liquid storage tank; (v) 1960's lean-to building structures adjoining the Cold Store (former Weaving Mill); (vi) remaining fabric of c20th rear lean-to of the Flaxmill Building; (vii) c.1960s office building adjoining the Packing Store and Cheese Plant on North Circular Road; (viii) Cluster of buildings including altered part of the Linen Store, the former Linen Store, Storage Building, and Office/Lab building at O'Callaghan Strand / Stonetown Terrace with partial retention of existing stone wall; (ix) warehouse on the Shipyard site; and (x) partial removal of stone boundary wall defining the Cleeves site adjoining O'Callaghan Strand / Stonetown Terrace and around the Shipyard site.

B Construction and phased delivery of:

i. Residential Development in 4 development 'zones' within the site ranging in height from 3 – 7 storeys (with screened service plant at roof level) comprising; (a) 234 no. residential units; (b) 270 no. student bedspaces with ancillary resident services at ground floor level; (c) 299sqm of commercial floorspace; and (d) a creche. The specific development details of each proposed development zone comprise the following:

- Salesians Zone – 1 no. building with 2 no. blocks extending to 6 and 7 storeys comprising 146 no. apartments (76 no. 1 bed; and 70 no. 2 bed); a creche; semi basement car and bicycle parking; reception area, plant rooms, and refuse storage, with screened external plant and photovoltaic panels at roof level; 20 no. 3 storey 3 bed triplexe units with photovoltaic panels at roof level; and 30 no. car parking spaces for the dedicated use of the adjoining Salesians Primary School.
- Quarry Zone – 1 no. Purpose Built Student Accommodation (PBSA) building with 3 no. blocks extending to 6 and 7 storeys comprising 270 no. bedspaces with study rooms, shared areas, exercise room, reception area, plant rooms, refuse storage and bicycle parking all at ground floor level and screened external plant and photovoltaic panels at roof level. Provision is made for telecommunication antennae on the roof top of one block. Consent is also sought for use of the PBSA accommodation, outside of student term time, for short-term letting purposes.
- Stonetown Terrace Zone – 1 no. building extending to 4 - 5 storeys comprising 38 no. apartments (6 no. studios; 12 no. 1 beds; and 20 no. 2 beds) with plant rooms and refuse storage at ground level, ancillary infrastructure at basement level at northern end of the block, with screened external plant and photovoltaic panels at roof level; 9 no. 3 storey 3 bed townhouses with photovoltaic panels at roof level; and a dedicated secure bicycle storage facility.
- O'Callaghan Strand Zone – 1 no. building extending to 4 / 5 storeys comprising 21 no. apartments (9 no. 1 bed and 12 no. 2 bed) with an open roof structure accommodating communal open space, plant and photovoltaic panels; and 299qm of commercial ground floorspace intended to accommodate Class 1, Class 2 and / or Class 3 uses, with provision for car parking in the undercroft.

ii. Dedicated mobility hub with canopy and photovoltaic panels including double stacker bicycle parking; and EV Charging spaces, within the Shipyard Zone. A dedicated pedestrian/cycle link connects North Circular Road with Condell Road. The remaining area of the zone shall accommodate temporary car parking and a temporary external event space to be used on a periodic basis as the need arises, pending future redevelopment proposals as detailed in the Masterplan (Stage IV).

iii. Extensive provision of Public Realm including creation of the Reservoir/Quarry Park, the Flaxmill Square and the Riverside Corridor. Significant areas of civic and green spaces are provided, incorporating formal and informal play space; nature based SuDs, permeability and access; and a riverside canopy with photovoltaic panels functioning as an outdoor event space and incorporating heritage interpretative panels

iv. 3 no. dedicated bat houses;

v. Telecommunication antennae on roof of Block 2A of the PBSA, including (a) 9 no. Support poles to support 2 no. antennae each; (b) 6 no. microwave dishes affixed to the plant screen; and (c) associated telecommunications equipment and cabinets (effectively screened). To facilitate technologically acceptable locations at the time of delivery, a micro-siting allowance of 3m is proposed on the roof top of Block 2A of the PBSA for the infrastructure.

vi. Provision of vehicular access/egress points including (a) utilisation of existing access points to the Salesians Zone, to the Flaxmill and Quarry Zones and to the Mobility Hub on the Shipyard Site Zone; (ii) reopening an existing (currently blocked) access point off O'Callaghan Strand; (iii)

new access points to the proposed undercroft carparking at Salesians from the North Circular Road and at the end of Stonetown Terrace road which provides access to the Stonetown Terrace Zone; and (iv) emergency access only from Stonetown Terrace to the Flaxmill Zone;

vii. Provision of 30 no. dedicated car parking spaces to serve the Salesians Primary School; and

viii. All ancillary site development works including (a) water services, foul and surface water drainage and associated connections across the site and serving each development zone; (b) attenuation proposals; (c) raising the level of North Circular Road between Fernhill and O'Callaghan Strand; (d) refuse collection store (e) car and bicycle parking to serve the development; (f) public lighting; (g) all landscaping works.; and (h) temporary construction measures including (i) construction access to the Quarry site including provision of a temporary access across the reservoir; and (ii) temporary use of onsite mobile crusher.

Table 7.1 Development Statistics		
No. of Residential Units	234 no. units	
	Apartments 205 no.	Townhouses & Triplexe Units 29 no.
Unit Mix	Number	Percentage
Studio	6	2.5%
1 bed apartment	97	41.4%
2 bed apartment (3 person)	98	41.8%
2 bed apartment (4 person)	4	1.7%
3 bed townhouses & Triplexe Units	29	12.3%
Number of Student Bed Spaces	270 no. bedspaces[2]	
Creche Area	381sqm Capacity for 34 no. children	
Commercial Floorspace	299sqm	
Site Area Gross	5.09 hectares gross	
Site Area Net	2.63 hectares[3]	
Density	117 units per hectare	
Floor Area to be Demolished	11,000sqm GIA	
Gross Floor Area	33,877sqm	
Building Height	3 - 7 storeys	
Plot Ratio	0.8 (net site area)	
Site Coverage	25% of net site area	
Public Open Space	7,817sqm of public realm (15.3% of total site)	
Communal Open Space	12,419sqm	

Based on the key principles set out in the Limerick Development Plan 2022 - 2028, the architectural team have developed a comprehensive design for the development site. Full details of the proposed development can be found in the plans and drawings accompanying the development proposal. The Site Layout comprising the development proposal is detailed in Figure 2.6 and seeks to achieve a high quality mixed use development, with an immediate focus on the delivery of residential units, all in accordance with the requirements of the Development Plan.

[2] *4 bed spaces equate to 1 no. residential units as per definition provided in the Sustainable Residential Development & Compact Settlement Guidelines*

[3] *Excludes Shipyard Site, Riverside Site, North Circular Road, Infiltration Gallery and Flaxmill as these are not intended for residential use. It includes 0.78 hectares of public realm*

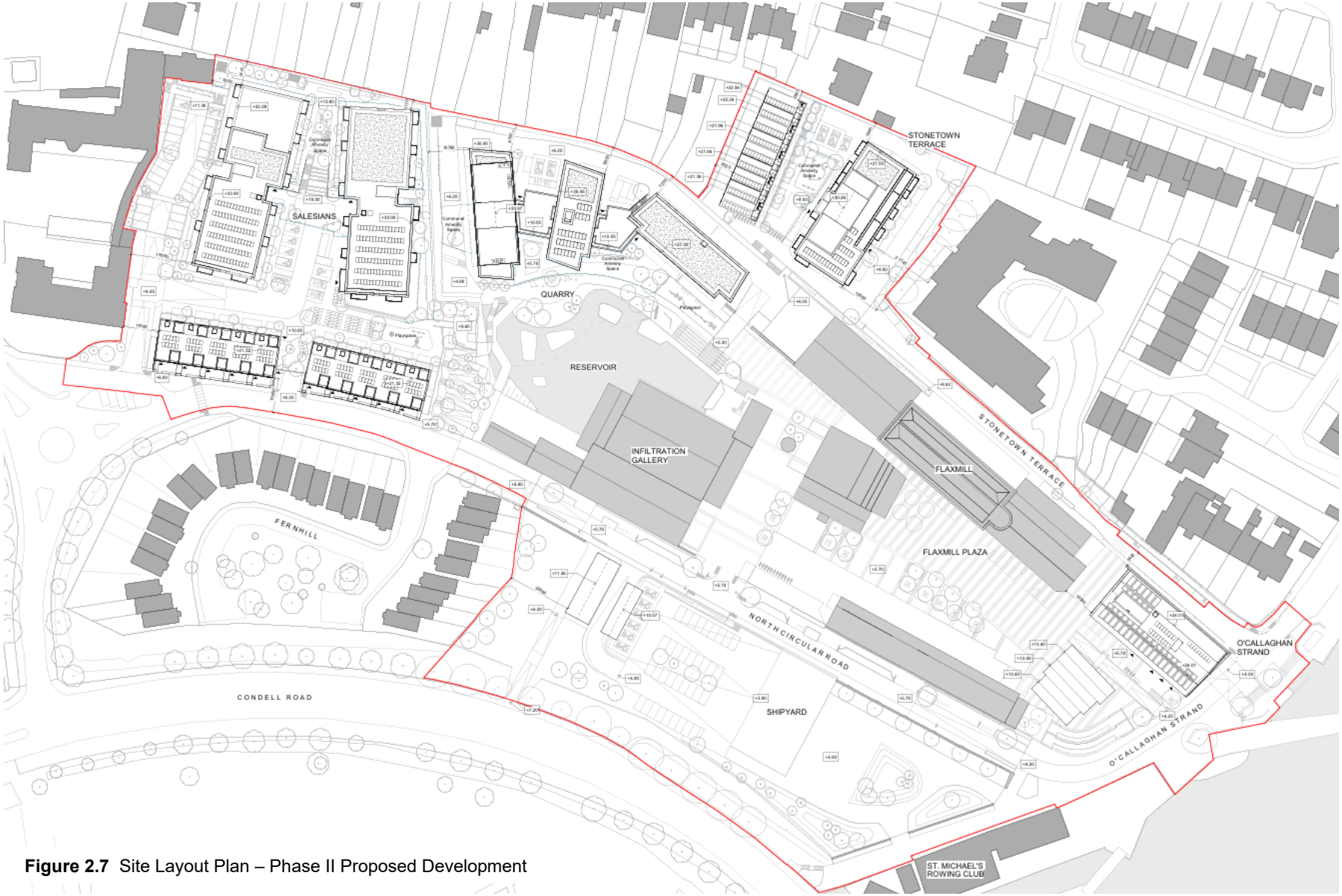


Figure 2.7 Site Layout Plan – Phase II Proposed Development

2.5.2 Demolition

Building reuse and retention of historic fabric and features is being led by a conservation philosophy, guiding the retention, consolidation, repair and reuse of the historic structures as part of a multi-phase development spread across phases I, II and III. Demolition is proposed as detailed in Figure 2.8 to enable the regeneration and redevelopment proposal. The buildings identified in red are to be demolished as part of the Phase II proposed development.

An Asbestos Survey Report undertaken by Phoenix Environmental in 2024 on existing buildings confirmed the presence of asbestos in all buildings, except for the modern offices adjoining the Linen Store in the O'Callaghan Strand zone and the warehouse in the Shipyard Zone. The safe removal and disposal of this hazardous materials is detailed in Chapter 19.0 Material Assets – Waste Management.

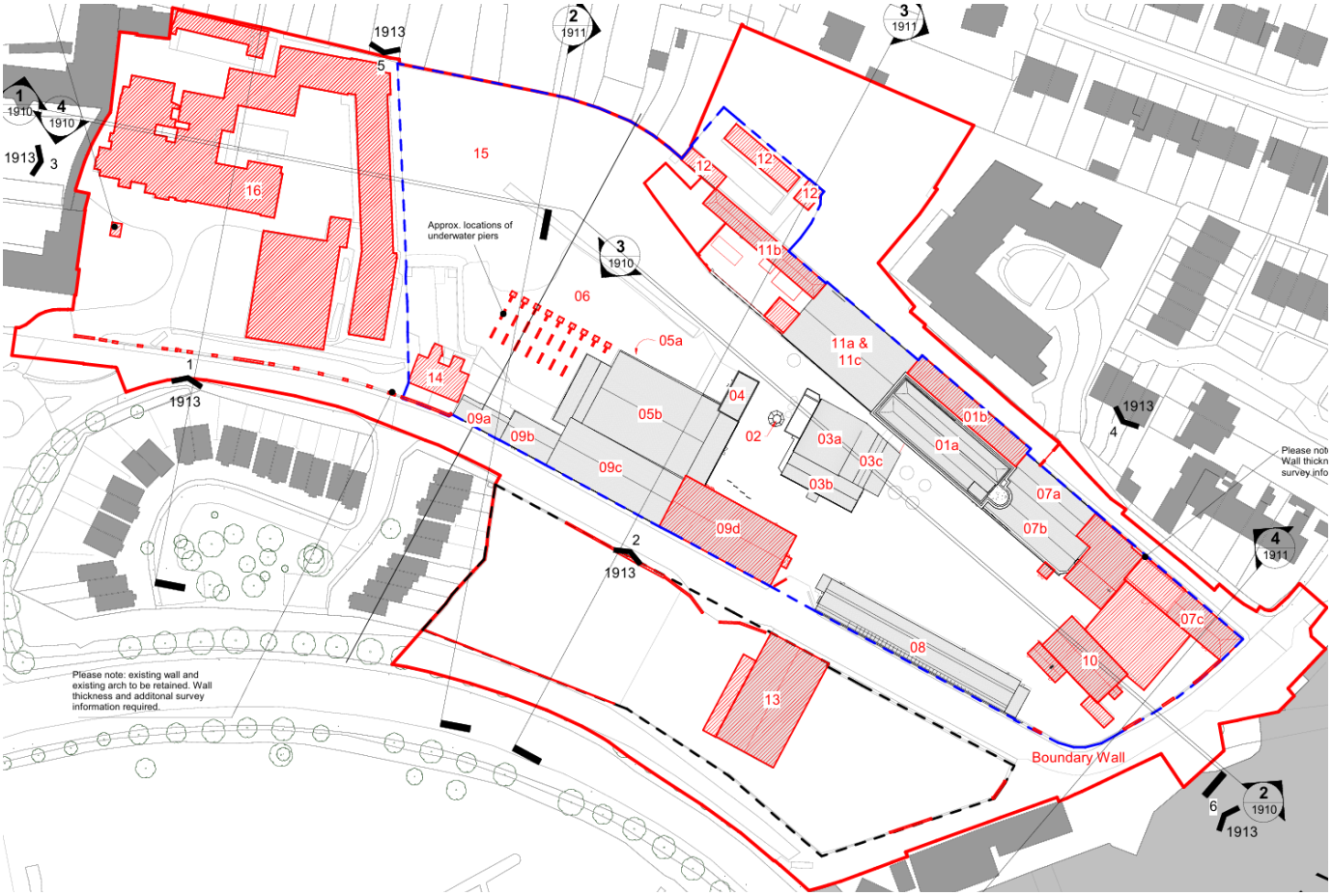


Figure 2.8 Buildings Proposed for Demolition highlighted in red with buildings to be retained identified in grey.

Salesians Site

The totality of the Salesians school and Fernbank House (Ref.16) are to be demolished to enable construction of 146 no. apartments, 20 no. triplexe units and a creche, with 1,073sqm of communal open space and car parking. The existing 2 – 3 storey structure, with a gross floorspace of 5,989sqm wraps around the perimeter of the school site, with car parking dispersed throughout and no notable external amenity space. Demolition of the building is necessary to facilitate compact growth and the provision of apartment units in compliance with the Sustainable Urban Housing Design Standards for New Apartments 2025. It is proposed to undertake Building Recording of Fernbank House only having regard

to its historic fabric and to salvage and reuse material on site where feasible and practical. An Architectural Heritage Assessment of Fernbank House is appended to Chapter 9.0 Cultural Heritage Architecture.

The Salesians Site currently accommodates a former secondary school, currently used for the temporary accommodation of Ukranian refugees, a Sportshall and Fernbank House, a former private dwelling which has been much altered and extended to meet the needs of the school. The house, though of heritage value, is not listed as a protected structure, is not included on the Record of Protected Structures; and is not included on the NIAH inventory. Initial consideration was given to the adaptive reuse of Salesians School and Fernbank House. However, early consideration determined that converting the school into housing would present significant challenges due to differing spatial requirements, existing infrastructure, and regulatory hurdles

The Architectural Design Report accompanying the development proposal explored options for reuse of the building. It demonstrates that with suitable retrofitting to modern building regulations, approximately 72 no. homes could be accommodated within the existing fabric, along with 32 no. new build units in a 4 storey block. This would only yield 104 no. residential units on the site in contrast to the 166 no. units achievable with demolition. In the interest of making the most efficient use of serviced urban land within the city centre, it was considered that the resulting low density development over four stories only, would not result in an optimum design or density solution for this city centre site.

Quarry Site

Two houses (Ref.14) fronting onto North Circular Road are to be demolished to facilitate pedestrian and cycle access to the Cleeves site, and in particular, the public amenity offering provided by the reservoir in the Quarry area. This access facilitates the only pedestrian connectivity point between the Cleeves and Salesians site, thereby enhancing permeability within the development. Demolition of the houses will also provide a direct temporary construction access into the site. The two storey houses have a gross floorspace of 285sqm and are in need of substantive repair. It is proposed to undertake Building Recording having regard to their historic fabric.

The reservoir context is to be reinvigorated as a new public open space with the removal of circa 1950 residual piers from within the basin (Ref 06).

Stonetown Terrace Site

It is proposed to demolish the Upper Reservoir at Stonetown Terrace (Ref. 12). This includes the two concrete water tanks (approximately 3m deep), pump house and liquid storage tank. There is a suspended RC walkway over the tanks that is in poor condition and has failed at one section. The pump house has a roof covered with asbestos sheets and a small masonry storage building beside the tanks is covered in asbestos sheeting. A masonry walled building with a timber truss roof and rusted tin sheet roofing is also to be demolished. The building is two storeys from the lower Flaxmill Plaza part of the site and one storey from the higher Stonetown Terrace. This demolition will facilitate the construction of 38 no. apartments and 9 no. townhouses with 380sqm of communal open space and associated car parking.

Further, demolition of a 1960's lean-to building structures (Ref. 11b) adjoining the Cold Store (former Weaving Mill) is proposed. The weaving building is largely derelict and has been the subject of substantial change after 1927. As part of the permeability and urban connectivity strategy the scheme proposes to open up part of the masonary façade to create a pedestrian link, offering connectivity between Stonetown

Terrace and the Flaxmill Plaza. This route also allows for emergency vehicle access to the proposed PBSA buildings on the Quarry site. The remaining area of wall will provide a representative samples of surviving elevation.

Flaxmill Plaza Site

The c20th rear lean-to of the Flaxmill Building is to be demolished (Ref 01b). The upper storey and roof of the rear lean to shall be demolished as part of stabilisation and repair works to the Flaxmill undertaken as part of Phase I of the Masterplan. The remaining ground floor of the extension is to be demolished to provide for access to the upper site from Stonetown Terrace. Its removal will reveal the currently closed off north elevation of the main mill.

The c.1960s reinforced concrete frame office building (Ref. 09d), which adjoin the Packing Store and Cheese Plant, is to be demolished. The roof covering of this building appears to comprise asbestos sheeting. The surviving fragment of an earlier stone built single storey element (1853 façade) that addresses the North Circular Road is to be retained.

The existing low wall and railings on North Circular Road are to be removed.

O'Callaghan Strand Site

Comprising a cluster of 4 no. buildings, the altered part of the Linen Store, the former Linen Store, Storage Building, and Office/Lab building at O'Callaghan Strand / Stonetown Terrace, will have selected demolition.

The roof, walls and slab of the Linen Store (Ref. 07c) are to be demolished, with retention and reuse of the external stone walls onto Stonetown Terrace and O'Callaghan Strand. The much altered single storey building (Ref. 07c) between the linen store and the offices is to be demolished with the wall onto Stonetown Terrace to be partially retained. It is necessary to remove some of the wall to facilitate emergency vehicular access to the Flaxmill Plaza in the event of a flood. The later c20th storage building and office/lab building are to be demolished (Ref. 10).

The existing wall at O'Callaghan Strand will be lowered to 450mm above ground level with total removal where there are entrance/building locations identified.

The area of structures to be demolished is circa 1,580sqm and this is necessary to facilitate the construction of 21 no. apartments, 236sqm of communal open space at roof level and 299sqm of commercial floorspace intended to activate the Flaxmill Plaza. This demolition will also facilitate vehicular emergency access from Stonetown Terrace to the Flaxmill Plaza and North Circular Road in the event of a flood.

Shipyard Site

It is proposed to demolish the 1990s reinforced concrete structure (Ref. 13) on the Shipyard Site with a gross floor area of 770sqm. The existing stone wall around the Shipyard site adjoining North Circular Road is to be retained with partial demolition for access to proposed mobility hub and two new openings are to be provided in the wall between the Shipyard site and the riverside in a previously altered part of wall.

Chapter 9.0 Cultural Heritage – Architecture of the EIAR considers these demolitions in the context of an Architectural Heritage impact assessment.

2.5.3 Residential Development

The proposed development provides for the equivalent of 302 no. residential units, including 234 no. apartments, triplexe units and townhouses; and 270 no. purpose built student accommodation bedspaces.

Salesians Zone

Salesians will create 166 no. new homes for Limerick. The apartments are made up of one-bedroom two-person apartments (46%), two-bedroom four-person apartments (42%) and three-bedroom five-person back-to-back triplexes (12%). The zone is served with 1073sqm of communal open space.

The southern part of the Salesians site is framed by 20 no. three storey, three bed triplexe units fronting onto North Circular Road, all incorporating and benefiting from the level difference between the road and the site. The units addressing North Circular Road have a finished floor level (FFL) of 6.3m, whilst the units facing the block of apartments have a FFL of 10m Each unit is provided with private amenity space and dedicated bin storage with PV panels provided at roof level. The terrace of housing is effectively broken with vehicular access into semi – basement carparking accommodating 45 no. car parking spaces, inclusive of 7 no. EV spaces. Adjoining the car parking is undercroft storage for 280 no. bicycles with dedicated cycle access off the vehicular ramp to the apartment blocks to the rear. Additional external bicycle parking provision is accommodated immediate north of the triplexe units, providing an additional 83 no. visitor parking spaces.

To the rear of the triplexe units, accessed directly from the North Circular Road is a proposed building with two blocks comprising seven storeys to the south and with six storeys at the northern end facing Clanmaurice Avenue. The FFL of the apartment block to the south is 10m, increasing to 13.6m to the north. Generally situated circa 40m to the south of the houses on Clanmaurice Avenue, the building is situated 31.8m from one dwelling on Clanmaurice Avenue with a rear protruding extension The building, which comprises two separate blocks – Block A to the west and Block B to the east each accommodates plant, bin storage and sprinkler tanks at ground floor level. In total, the two blocks accommodate 76 no. one bed apartment units and 70 no. two bed apartment units, all with private amenity open space. Provision is made for 4 no. accessible car parking spaces at surface level. PV panels and green roofs dominate both roof tops. Air Source Heat Pumps (ASHP) are provided at roof level on Block A and will be surrounded by a perimeter perforated metal screening which will have an acoustic performance function, as well as visually screening the plant.

Quarry Zone

This zone comprises 1 no. Purpose Built Student Accommodation (PBSA) building with 3 no. wings extending to 6 and 7 storeys comprising 270 no. bedspaces and 1,377sqm of communal amenity space, with a finished floor level of 6.2m. Communal spaces include a reception area, space for informal social interactions and meetings, touchdown spaces, spaces for individual and shared study and multipurpose space for small seminars. Communal services facilities include managers / security office, laundry facilities, centralised storage, facilities for handling, storage and collection of refuse. The disposition of the student accommodation on the site balances the provision of amenity space with optimum orientation in terms of daylight and sunlight, with the provision of a continuous public path along the reservoir.

The West Wing comprises seven stories. It includes a study room, storage area, ancillary plant rooms and bed spaces at ground floor level and six stories of student bedspaces and shared communal areas. The roof comprises screened external plant including ASHP and an array of telecommunications masts. The ASHP plant and other roof plant is surrounded by a perimeter perforated metal screening which will have an acoustic performance function, as well as visually screening the plant.

The Central Wing comprises seven stories. This wing includes a reception area and a significant shared communal space, with external seating / amenity space at upper ground level and six stories of student bedspaces and shared communal areas. The roof mainly comprises PV panels with a portion dedicated as a green roof.

The East Wing comprises six storeys. It has an exercise room, laundry room, ancillary plant rooms and also accommodates refuse storage areas at upper ground floor level with five stories of student bedspaces and shared communal areas. The roof comprises a green roof.

Two external terraces are provided at first floor level, proving a link between the Central Wing and both the East and West Wings. The PBSA is also served by 730sqm of external communal open space, 8 no. car parking spaces and 62 no. bicycle parking spaces.

Stonetown Terrace Zone

The Stonetown Terrace site will necessitate the construction of a retaining wall on its boundary to the north, east and west. The proposed five storey apartment block on the eastern boundary of Stonetown Terrace, neighbouring Landsdowne Hall has a finished floor level of 9.5m. It comprises 38 no. apartments including 6 no. studios; 12 no. 1 beds; 2 and 20 no. 2 beds, with bin storage and associated plant at ground floor level. Provision is made for 86 no. bicycle storage spaces and an additional 2 no. cargo bikes in a dedicated, secure bicycle storage facility. The roof comprises screened external plant including ASHP and PV panels. The ASHP plant and other roof plant is surrounded by a perimeter perforated metal screening which will have an acoustic performance function, as well as visually screening the plant. Some 380sqm of communal open space is provided to serve the apartments and the townhouses..

The 9 no. three storey, three bed town houses with a finished floor level of 9.5m, flank the western site boundary of the zone. The townhouses have their own dedicated rear gardens which are separated from the gardens of houses in Clanmaurice Avenue by a retaining wall. Bicycle parking is facilitated on curtilage and the houses are serviced by individual ASHP's situated in the rear garden of each property. The roofs benefit from panels.

In addition to bicycle parking provided within the apartment block, provision is made for an additional 27 no. external bicycle spaces for visitors inclusive of 3 no. cargo bike spaces. A total of 14 no. parking spaces have been accommodated in this zone.

O'Callaghan Strand Zone

This zone comprises 1 no. building extending to 4 / 5 storeys comprising 21 no. apartments including 9 no. 1 bed and 12 no. 2 bed) units, with a finished floor level of 5.7m. The building has a non-thermal, non-airtight pitched covering over the roof with open air joints in roof panels accommodating communal open space and plant. The roof valley has PV panels the roof pitch facing south west. The northern half of the roof space accommodates ancillary plant with ASHP's whilst the southern half of the roof space, comprising 236sqm, functions as communal open space for the 21 no. apartments.

Four car parking spaces are accommodated at ground floor level within the building with dedicated shutters separating the car spaces from the public plaza. Thirty four bicycle spaces are accommodated at ground floor level within the building.

2.5.4 Creche

A creche is accommodated at ground floor level within Block B in the Salesians Zone in the heart of the scheme. It is accessible from the hillside steps, which includes a ramp, or by a publicly-accessible lift next to the basement car park entrance. The creche with a floor area of 381sqm has capacity for 34 no. children.

The Guidelines for Planning Authorities on Childcare Facilities (2001) indicate that Development Plans should facilitate the provision of childcare facilities in appropriate locations and requires the provision of a minimum of one childcare facility with 20 places for each 75 dwellings. The Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities 2025 nuances the childcare requirement by stating that: 'Notwithstanding the Planning Guidelines for Childcare Facilities (2001), which are subject to review, and which recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units, the threshold for provision of any such facilities in apartment schemes should be established having regard to the scale and unit mix of the proposed development'. One-bedroom units and studio units are excluded for the purposes of calculating requirements.

In the case of the proposed development, when the 97 no. 1 bed units and 6 no. studio units are removed, the remaining 131 no. units generate a childcare requirement for 34 no. spaces. Accordingly, the proposed creche facility with capacity for 34 no. children is very much intended to accommodate local need. A generous 178sqm of dedicated outdoor amenity space is provided to serve the creche. Drop off facilities are provided in proximity to the creche along with 4 no. parking spaces. A total of 4 no. dedicated bicycle parking spaces are provided for employees with visitor bicycle spaces accommodated in the visitor bicycle spaces for the apartments.

2.5.5 Commercial Floorspace

Commercial floorspace (299sqm) has been accommodated within the ground floor of the apartment block fronting onto O'Callaghan Strand, within the O'Callaghan Strand Zone. This space is largely flanked by the existing stone boundary wall surrounding the Cleeves Site, on its northern and eastern boundary. The commercial refuse area is enclosed within the building and is accessed off Stonetown Terrace.

The specific use of this unit has not yet been identified and so a range of uses is possible including Class 1, Class 2 and / or Class 10 uses, which includes use as a shop, professional services or services to visiting members of the public or the use as a museum /art gallery /library. The purpose of this space is to activate the Flaxmill Plaza and to support the area defined by the Riverside Canopy. The proposed public realm plan supports this use by providing for a dining / socialising area external the premises.

2.5.6 Mobility Hub

A Mobility Hub is proposed on the Shipyard Site. Whilst a Mobility Hub was proposed on the Shipyard site from the outset in the Masterplan, it did comprise an integral part of the proposed commercial building at basement level. Thus, pending redevelopment proposals for the Shipyard site, it is

proposed to locate the Mobility Hub at the western extremity of the site, separated from Fernhill by a flood berm and urban woodland planting.

The Mobility Hub will accommodate 36 no. cargo bike spaces; 84 no. double stacker bicycle spaces; and 6 no. EV Charging spaces. It is intended to serve the proposed development and the proposed Phase III educational campus development by TUS. The Hub shall be relocated as part of any future Phase IV development on the Shipyard Site. The Mobility Hub currently provides for 24 no. temporary car parking spaces pending redevelopment of the site.

2.5.7 Meanwhile Uses / Event Space

The temporary meanwhile uses currently operating on site are detailed in Section 2.4 of this chapter. Whilst most of these uses shall cease on site once construction commences, there are users such as the Limerick Treaty Suicide Prevention and Ennis Road Community First Responders, which could continue to use existing retained buildings on site for storage and meeting space purposes, subject to licensing arrangements.

In addition to these uses, it is envisaged that the Shipyard Site shall function as a temporary event space for cultural/arts/music events pending redevelopment of the site. The Shipyard site is capable of accommodating pop up and community support uses and could include food markets and stalls should the demand exist. Similarly, the proposed area accommodating the Riverside Canopy has the potential to accommodate external exhibition space; events and social gatherings and to function as informal facility for ball games as the need arises. The Riverside Canopy will also accommodate heritage interpretative panels providing historical reference and understanding to the Cleeves site.

2.5.8 Works to Boundary Wall

Surrounding the Cleeves site and the Shipyard site, the stone boundary walls presents an opportunity and also a constraint in relation to the proposed development. With regard to the opportunity for the proposed development, the wall has the potential to provide legibility and inform future residents and visitors to the subject site of the long history associated with the site. The constraints in relation to the wall relate primarily to the lack of permeability and as a barrier to movement and reducing the interaction with the existing neighbourhood. In addition, the wall also presents potential difficulties with regard to passive surveillance. Noting the above, the proposal includes for some interventions to the wall to provide permeability, which will entail some removal of and interventions to the historic wall, as follows:

- The existing wall at O'Callaghan Strand will be lowered to 450mm above ground level, with the exception of areas where there are entrance/building locations where the wall will be removed entirely.
- The retained existing stone walls on North Circular Road are to be stabilised following works to facilitate the raising of North Circular Road;
- The existing low wall and railings on North Circular Road are to be removed;
- Existing stone wall around Shipyard site adjoining North Circular Road is to be retained with partial demolition for access to proposed mobility hub and the provision of two new openings is to be provided in the wall between the Shipyard site and the riverside in a previously altered part of wall
- Locally widen the existing opening in the wall between the Shipyard Site and the riverside; and
- Remove and reinstate the existing wall at the western boundary on the Shipyard site neighbouring Fernhill.

Chapter 9.0 Cultural Heritage – Architecture of the EIAR considers these interventions in the context of an Architectural Heritage impact assessment.

2.5.9 Public Realm & Landscaping

The design intent is to create a high quality and appropriate landscape and public realm for future residents which will meet their recreational needs and provide an attractive visual setting and associated social amenity spaces. The public realm strategy seeks to provide three new public areas including creation of the Reservoir/Quarry Park; development of the Flaxmill Square; and the enhancement of the Riverside Corridor intended to transform the quayside in front of the Cleeves site. A total of 0.78 hectares of the site is dedicated to public realm space

The Reservoir / Quarry Park will incorporate formal and informal play space with the natural reservoir the dominant feature. The Quarry Park will accommodate the Salesians and Quarry Wall Stairs and Walkway which provides connectivity and permeability between the different development zones and North Circular Road. The proposed architectural intent requires a suspended walkway and stairs over the existing reservoir basin with an adjacent stair structure extending to North Circular Road. Beneath the top landing of the stairs is a wildlife feature to house native bats. It is proposed to cantilever out two RC beams below ground level to provide support the top of the stairs without impacting the wildlife feature.

The Flaxmill Square provides a significant area of civic space fronting the majestic Flaxmill building. Incorporating nature based SuDs, and accommodating permeability and access, the plaza provides an important link connecting the Riverside and the Reservoir.

The Riverside Corridor public realm will offer a vantage point overlooking the river and city quays with viewing terraces-curved seating and a riverside canopy offering a micro-climatic sheltered location functioning as an outdoor event space. This space will also accommodate heritage interpretative panels providing a historical understanding of the evolution of the Cleeves site.

The main objective of the landscape strategy for the residential area is to place the new residential community within a cohesive landscape that responds to and integrates the proposed development within the overall site. The landscape approach seeks to create a permeable network of green infrastructure and open spaces throughout the development and the masterplan site. Key characteristics influencing the landscape strategy and design of the proposed site are:

- Facilitating public access to the natural reservoir within the heart of the Cleeves site
- Maintaining and enhancing biodiversity throughout the site but in particular along the quarry walls
- Providing landscaped open areas with soft grass and planted zones.
- Facilitating high quality hard landscaped areas.
- Providing new pedestrian and cycle links facilitating connectivity between each development zone, the site and the surrounding road network, including the Condell Road.

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

2.5.10 Telecommunication Antennae

Block 2A (west wing) of the PBSA proposes 9 no. Support poles to support 2 no. antennae each; 6 no. microwave dishes affixed to the plant screen; and associated telecommunications equipment and cabinets (effectively screened). A comprehensive report has been prepared by ISM Independent Site Management and which accompanies the application for consent under separate cover. The report details why the infrastructure is necessary to mitigate the impact the development will have on the existing poor mobile phone signal in the area and provide both the occupants of the development and the local area with adequate voice and data services to meet modern demands.

The proposed development involves the micrositing of telecommunication antenna by approximately 3 meters on the rooftop of Block 2a of the PBSA. The adjustment is intended to optimise signal coverage and network performance without altering the overall design or height of the installation. The flexibility is required to facilitate technologically acceptable locations at the time of delivery of the the infrastructure.

2.5.11 Access & Layout

The proposed development has three existing vehicular access/egress points and a fourth acccess point which is currently blocked. Access points to the Salesians Zone, to the Flaxmill and Quarry Zones and to the Mobility Hub on the Shipyard Site Zone replace existing entrance locations, while the fourth access point off O'Callaghan Strand is to be unblocked. There are two new access points proposed, including one providing access to the undercroft carparking at Salesians from the North Circular Road and the other at the end of Stonetown Terrace providing access to the Stonetown Terrace Zone. In addition, a proposed access provided from Stonetown Terrace to the Flaxmill Zone will enable occasional traffic associated with emergency vehicles.

The roads surrounding the proposed development, that is North Circular Road, O'Callaghan Strand and Stonetown Terrace will be traffic calmed and designed to have pedestrian and cyclist priority. North Circular Road and Stonetown Terrace, in particular will, operate as shared spaces. Further, it is proposed to regrade the North Circular Road to a flood protection level of 5.7m AOD as a key flood mitigation measure that would ensure emergency access during a 1-in-200-year flood event and protect the Quarry and Flax Mill sites from tidal flooding.

A total of 30 no. surface car parking spaces are provided within the Salesians Zone on the western boundary adjoining Salesians primary school. The car parking is provided for the dedicated use of the adjoining Salesians Primary School only and is being delivered on foot of an agreement with the Salesian Sisters, following disposal of land to the Council. These 30 no. spaces are not included in Table 2.2 below as they are not intended to serve the development proposal.

The proposed car and bicycle parking provision serving the development aligns with the parking requirements set out in the Limerick Development Plan 2022 – 2028 and the Sustainable Urban Housing Design Standards for New Apartments 2025, as detailed in Table 2.2. Minimal car parking is provided having regard to the city centre location of the development proposal. In accordance with the minimum requirement of 1 no. EV Charge Point space per five car parking spaces, a total of 17 no. EV spaces are provided within the parking distributed around the residential units. An additional 6 no. charging points are provided in the Mobility Hub. Ducting shall be provided for every parking space. The bicycle parking numbers includes both residential and visitor parking provision.

Table 2.2 Car Parking Provision			
	Maximum Provision	Required	Provided
Salesians	0.5 spaces per < 3 bed unit 0.75 space per 3+ bed unit 1 space per 80sqm for creche	88	49
Quarry (PBSA)		0	8
Stonetown Terrace		27	14
O'Callaghan Strand		11	5
Shipyard		0	10* 26**
Creche		4	4
Total		**130**	**116**

* Residential Car Club Spaces

** Visitor Parking Spaces Serving Proposed Development and Future Phase III of Masteplan

The proposed cycle parking provision serving the development has regard to the parking requirements set out in the Limerick Development Plan 2022 – 2028 and the Sustainable Urban Housing Design Standards for New Apartments 2025.

The Design Standards for New Apartments indicates that one bicycle parking space is required per residential bedroom and one visitor space per two residential units. There are 394 beds provided across 234 residential units and therefore, 394 residential cycle parking spaces and 117 visitor cycle parking spaces are required in accordance with the Design Standards.

The Limerick Development Plan 2022 – 2028 indicates that for student accommodation in Zone 1, one cycle parking space is required per five beds. There are 270 beds provided in the Quarry PBSA and therefore 54 cycle parking spaces are required.

The total cycle parking provision for the residential development and the PBSA is in excess of the minimum required (565 no.) with 576 no. spaces provided across the entire scheme. These spaces are being provided in safe, covered areas within the various residential development zones as detailed on the schedule breakdown provided by the Project Architects.

An additional 36 no. cargo cycle parking spaces and 84 no. double stacker cycle parking spaces are provided in the mobility hub (Shipyard Zone). This is deemed to be a reasonable quantum considering the cycle sharing schemes that will be available for use. There are also 3 cycle parking spaces being provided for creche use.

2.5.12 Annual Use of PBSA

The proposed PBSA units will be used for student accommodation only during the academic year and student accommodation and/or tourist/visitor accommodation outside this time.

The potential for student related uses (e.g. visiting language schools, etc.) and non-student related uses during the non-academic year is an important component of student accommodation schemes to ensure their commercial viability. It is also important to ensure activity in the area and guard against anti-social behavior due to an absence of passive surveillance which would decrease outside of the academic year.

In this regard Section 2 of the Planning & Development Act 2000, as amended, defines student accommodation as: a) a building or part thereof used, or to be used, for the sole purpose of providing

residential accommodation to students during academic term times, whether or not provided by a relevant provider (within the meaning of the Qualifications and Quality Assurance (Education and Training) Act 2012), and that is not used, or to be used (*a*) as permanent residential accommodation, or (*b*) as a hotel, hostel, apart-hotel or similar type accommodation other than for the purposes of providing residential accommodation to tourists or visitors outside of academic term times.

Any non-student related use outside the academic year will be managed in the same manner as the student use. The measures set out in the Operational Management Plan prepared by M & C Property will apply to any non-student use outside the academic year.

2.5.13 Drainage Strategy

The drainage strategy to be delivered as part of the proposed development is intended to service the Masterplan lands and the extent of development envisaged within the Masterplan, including the proposed TUS Educational Campus. Designed by ARUP Consulting Engineers, the development zones will be treated separately, such that each site will have an independent set of surface water, foul and watermain networks (where possible) to enable phasing of the works.

All existing utility services within the Cleeves development site are to be decommissioned and removed with the exception of the combined sewer located at the north-western corner of the Salesians site. This sewer currently transverses the site boundary and connects to the neighbouring Salesian Primary School property. It is proposed to divert this combined sewer, rerouting it off-site in accordance with the drainage strategy.

The design approach for foul water services from each zone will have individual connections to the adjacent Uisce Eireann foul sewers on North Circular Road and on Stonetown Terrace. The estimated daily wastewater hydraulic loading from the proposed development and the Phase III TUS development would be 263.3 m3/d. The anticipated average foul discharge for the proposed development is 1.84 l/s with a peak discharge of 11.08 l/s. Confirmation of Feasibility has been received from Uisce Eireann.

Surface water will be managed in accordance with the CIRIA SuDS Manual and discharges from the site will be restricted to 2 litres/second/hectare, prior to discharge to the Shannon River, in accordance with the Greater Dublin Strategic Drainage Study (GDSDS) and the Limerick Development Plan 2022-2028.

The overall strategy is to promote the use of Sustainable Urban Drainage Systems (SuDS) to minimise final discharge rate and mitigate flood risk on each site. The primary objective is to use the reservoir as an attenuation facility, managing surface water runoff from the adjacent Salesians, Quarry and Stonetown Terrace sites. Controlled discharge from the reservoir will be facilitated via a 225 mm diameter outlet pipe, which will traverse through the Flaxmill Plaza site and connect to the final manhole before discharging to the River Shannon. There is no work proposed to the existing outfall. The existing deep manhole at the southern end of the site is in very poor condition. It is proposed to construct a new offline manhole adjacent to the existing structure (to keep the existing system operational during construction). The new manhole will be fitted with a TideFlex non-return valve to prevent backflow and protect the site from flooding from the outfall pipe. A combination of SuDS and petrol interceptors will be used to treat the surface water runoff on site before it is discharged to the Shannon River.

Surface water calculations prove that there is sufficient capacity in the reservoir to attenuate excess runoff for a 1:100 year storm (plus 30% climate change and 10% urban creep) from adjacent sites. A reservoir clean-up strategy be implemented during the construction phase. This will include:

- Controlled draining of the reservoir
- Removal of accumulated sediment
- Survey and inspection of the reservoir bed.

The proposed SuDS scheme for the proposed development is estimated to achieve a 14% decrease in the hypothetical greenfield runoff rate for Zone 1 and a slight increase relative to the greenfield runoff rate for Zone 2. This results in the post development runoff rate being reduced to almost greenfield rates, with significant benefits to the receiving environment.

The design approach for the provision of potable water to each site comprises individual ring mains for each site, with separate metered connections to the existing Uisce Eireann (UE) mains adjacent to each site. The anticipated average water demand is 3.447 litres / second with a peak demand of 18.506 l/s for the proposed development and Phase III TUS Educational Campus.

Salesians Zone

All existing services on the Salesians site will be removed except for a combined sewer, which will be diverted off-site; the site's surface water will be managed through three independent catchments discharging to the reservoir using SuDS measures including green roofs (15% coverage), rain gardens porous paving, and a piped gravity system. Foul flows will connect to the existing combined sewer and water will be supplied via the North Circular Road main.

Quarry Zone

The Quarry site adopts a drainage strategy similar to the Salesians site, with surface water attenuated in the reservoir via SuDS measures including green roofs covering 25% of roof area and adjacent raingardens. Foul water connects to the public sewer on North Circular Road 125m downstream, and water supply is via a Uisce Eireann approved connection 250m downstream on North Circular Road.

Stonetown Terrace Zone

Green roofs covering 25% of roof area, porous paving, and raingardens, collectively attenuate the site's runoff volume. Residual surface water is conveyed via a gravity-fed piped system to the reservoir, with supplementary storage provided by surrounding landscaped areas. A water feature, integrated into the elevation drop between Stonetown Terrace and the Quarry site, facilitates flow to a hydraulically compact bioretention zone, from which water is captured in an underground network before final discharge to the reservoir. Foul drainage is managed through a gravity system discharging to the existing combined sewer on Stonetown Terrace, and potable water is supplied via a connection to the nearest public watermain, both as approved by Uisce Éireann.

Flaxmill Zone including O'Callagan Strand Zone

The Flaxmill Plaza site comprises two distinct surface water catchments. The major catchment draining southeast, incorporates SuDS features including tree pits and rain gardens. Residual flows are directed to an attenuation tank located at the southeast corner, with controlled discharge to the Shannon River via an existing outfall. The minor catchment drains northwest to the reservoir through a separate gravity-fed network for attenuation. Foul water is conveyed via gravity systems to the existing combined sewer along

North Circular Road, and potable water is supplied through a ring main connected to the Uisce Éireann network.

Shipyard Zone

The Shipyard site is a unique case, as the surface water is fully attenuated by SuDS measures. Swales are lined on the peripheries of the site and porous paving in the parking areas attenuate the remaining runoff. Water and foul connections have been provided to future proof the site for future development as per the overall Masterplan.

2.5.14 Lighting Strategy

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

The site lighting will be divided across the site.

- The Salesians site will be stand alone with all lighting in this area being controlled from a central point within the Salesians Apartment block building
- The Shipyard site will be controlled from local pillars located on the shipyard site
- The remainder of the site will be controlled from a central location within the Flaxmill building

To promote energy efficiency, the majority of lights on site will be programmed with dimming setting, controlled by photocells. Walkways and amenity areas will be programmed with dusk to midnight switching, and roadways with dusk to dawn switching, as per Limerick City & County Council specification.

The Quarry Roadway being the primary route for the foraging wildlife will incorporate presence detection lighting. The lighting will be off unless there is movement detected. Lights will be activated via movement sensors. The purpose of this is to always ensure minimum light in the area to allow maintenance of the foraging route.

2.5.15 Energy Strategy

An Energy Report has been prepared by ARUP and accompanies the application for consent under separate cover. The main aim of the Energy Strategy is to meet or exceed the sustainability and energy targets set by the Irish Building Regulations, Technical Guidance Document Part L 2022 – Conservation of Fuel and Energy - Dwellings.

The proposed development incorporates a range of energy reduction strategies aligned with Part L 2022 for Dwellings, including passive solar design through optimised glazing to balance daylighting, solar gain, and thermal performance. Building fabric insulation will meet or exceed regulatory U-values, with thermal bridging minimised using Acceptable Construction Details and certified junctions. Energy-efficient LED lighting will be installed throughout, and all hot water vessels and pipes will be fully insulated to enhance performance and safety. Heating systems will be effectively controlled to meet user needs efficiently, and all measures are supported by DEAP assessments to ensure compliance and optimal energy performance. The residential apartment units have been designed to achieve A2 Building Energy Ratings (BERs), and the townhouses are designed to achieve A1 BERs.

The new residential apartments will be de-centralised building-by-building. There will be a central, roof mounted air-to-water source heat pump on each apartment building and individual water-to-water pumps within each dwelling. A local air source heat pump system in combination with a Mechanical Ventilation Heat Recovery (MVHR) system per dwelling is proposed for the townhouses. The new student accommodation will be a centralised system. There will be an air-to-water source heat pump for each student block, providing the primary space heating through radiators which serve the living spaces, bathrooms and bedrooms.

The development has been designed using the Home Performance Index (HPI), Ireland's national certification system for sustainable residential developments, developed by the Irish Green Building Council (IGBC). HPI goes beyond energy efficiency, assessing factors like indoor air quality, thermal comfort, water usage, ecological impact, transport options, and the overall health and well-being of residents. The scheme has been designed in anticipation of achieving Gold standard.

2.5.16 Utilities

Electricity

The existing ESB network runs along the NCR, O'Callaghan Strand and the R464. There is an existing ESB substation located centrally in the site near the Salesians school. This ESB substation will need to be decommissioned and removed from the site prior to commencement of construction. ESB will confirm the loads being fed from here and allowance will be made to divert supply from another source to allow the decommission of same.

Each building has been assessed based on their individual loads to determine electrical supply requirements for primary supply. The Salesians site is provided with an ESB substation for each of the apartment blocks and a Kiosk substation for the triplexe units. The PBSA in the Quarry Zone is provided with a standalone ESB substation at ground floor. In Stonetown Terrace the apartment block will be provided with a dedicated ESB sub-station and the townhouses will be provided with a supply from a nearby existing substation to cater for these houses via externally located ESB mini pillars. For O'Callaghan Strand, provision has been made for a dedicated ESB substation at ground floor level. The Shipyard Site will be provided with an ESB metered mini pillar will be located on the site.

Telecoms / Fibre

The Metropolitan Area Network (MAN) is currently routed across the Shannon Bridge and on Shelbourne Road. There is a spur serving the old Salesians secondary school. eNet have confirmed that the MAN will be extended to serve the developments on the Cleeves Riverside Quarter site as required[4]. There is also an extensive telecoms duct network available on North Circular Road and O'Callaghan Strand.

All apartments shall be cabled from a local electrical riser to outlet boxes at the TV location in the living room for a minimum two fibre broadband utility suppliers such as SIRO, Virgin Meida or OpenEir. All townhouses / triplexe units shall be cabled from the local underground network via external telecoms boxes to outlet boxes at the TV location in the living room for a minimum two fibre broadband utility suppliers such as SIRO, Virgin Meida or OpenEir.

[4] Stage 2A2 Structural Planning Report

The development has been designed and planned in anticipation of achieving Wiredscore Neighbourhood Certification which will confirm the quality and resilience of a building's digital infrastructure. The certification assesses a building's ability to adapt to new technologies and meet the evolving demands of tenants and occupiers.

Gas

There is a 125mm diameter (Low Pressure) Gas main located on O'Callaghan Strand and NCR with a spur located on Stonetown Terrace. The nearest Medium Pressure line is at the Sarsfield Bridge at the other end of O'Callaghan Strand.

2.6 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE CONSTRUCTION PHASE

An Outline Construction and Environmental Management Plan (CEMP) has been prepared by AtkinsRealis setting out the key environmental management measures associated with the construction of the proposed development, to ensure the construction phase of the development has minimal impact on the receiving environment. It will be the responsibility of the appointed Contractor to further develop the CEMP and to fully implement its measures.

The outline CEMP provides the following information:

- Introduction providing details on the existing site and the proposed development.
- Existing Site Environmental Conditions provides details of the main existing geotechnical, hydrological, ecological and archaeological conditions onsite. These conditions are to be considered by the Contractor in the construction phase of the proposed development.
- Overview of Construction Works, this section provides an overview of the construction works proposed and drainage and sediment controls to be installed.
- Environmental Management Plan (EMP), this section outlines the main requirements of the EMP and outlines operational controls for the protection of the environment for example soil management, waste management, site drainage management, site reinstatement & decommissioning, habitat and archaeology management, etc.
- Health & Safety Management Plan, this section defines the work practices, procedures and management responsibilities relating to the management of health and safety during the design and construction of the proposed residential development.
- Outline Emergency Response Plan contains predetermined guidelines and procedures to ensure the safety, health and welfare of everybody involved in the project and to protect the environment during the construction phase of the proposed development.

The CEMP details the mitigation measures to be implemented in order to comply with the environmental commitments outlined in the EIAR. The contractor will be contractually obliged to comply with all such measures. In the event planning permission is granted for the proposed development, the CEMP will be updated prior to the commencement of the development, to address the requirements of any relevant planning conditions, including any additional mitigation measures which are conditioned and will be submitted to the planning authority for written approval.

2.6.1 Site Sequencing

It is anticipated that planning approval for the development proposal will be secured in early 2026 and that construction will commence on site in Q1 2027, subject to the discharge of any pre-commencement planning conditions. The development proposal has a projected completion timeframe of four years dependent on market conditions and funding streams. This estimation is based on the typical construction programmes for other similar developments. In the event that the phases were not developed (due to unforeseen circumstances) the construction period may extend, having regard to the nature of the project and the need for flexibility, contractor pricing etc. It is important to note that the mitigation measures outlined in the EIAR will ensure that an extension to the construction period will not have a negative impact on the receiving environment.

The development is structured into nine distinct but overlapping stages. Depending on market conditions and delivery mechanisms, some stages may progress more quickly or slightly ahead of others. For instance, Stage 8 is a priority for early delivery, as it will significantly enhance the site's appearance and help establish Cleeves as an attractive place to live, work, and enjoy leisure activities. Therefore, Stage 8 may begin earlier than planned, depending on the progress of Stages 6 and 7.

Maintaining flexibility in the delivery sequence is essential to ensure the development can adapt to changing market conditions. The anticipated sequence of stages is outlined below and detailed further in Table 2.3:

Stage 1: Construction of Bat Houses - A 3-month period is allocated exclusively to this stage to allow bats on-site to adjust to their new accommodation. No other construction activity will overlap with this stage.

Stage 2: Site Demolition and Enabling Works - This stage involves demolishing identified buildings and structures to facilitate development and installing enabling drainage infrastructure across the Flaxmill area. Temporary surface treatments will be applied to support access to the upper-level sites (Salesians and Stonetown). This stage is expected to take 12–15 months.

Stage 3: Flood Protection Works - Raising the North Circular Road and implementing other flood protection measures will occur concurrently with Stage 2 and is expected to take 15 months.

Stage 4: Salesians Zone Development - Construction of apartments and triplexe units, along with local public realm and communal open spaces, will begin midway through Stage 2. This stage is expected to take 18–24 months.

Stage 5: Stonetown Terrace Zone Development - This stage will likely begin alongside Stage 4 and take 15–18 months. Given its timeline, Stonetown Terrace is expected to be the first zone ready for occupation.

Stage 6: O'Callaghan Strand Zone Development - Construction of apartments in this zone will begin midway through the Stonetown Terrace works and is expected to take 15 months, likely completing before the Salesians Zone.

Stage 7: Quarry Zone PBSA and Public Realm - This stage includes the construction of Purpose-Built Student Accommodation (PBSA) and associated amenities, as well as public realm improvements around the reservoir. It is expected to take 24 months.

Stage 8: Flaxmill Plaza and Riverside Public Realm - Delivery of Flaxmill Plaza and riverside canopy works is anticipated to take 15 months. This stage will begin after the completion of Stonetown Terrace but before the Salesians Zone is finished. Completion is expected to align with the PBSA.

Stage 9: Shipyard Mobility Hub - The final stage involves constructing the Mobility Hub on the Shipyard site, along with associated site works. This will commence once all other stages are complete and is expected to take 6 months.

Table 2.3 Site Sequencing

		2027				2028				2029				2030			
Stage	Work Activity	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Construction of Bat Houses																
2	Demolition/enabling works																
3	Flood Defence works																
4	Construction of Salesians																
5	Construction of Stone Terrace																
6	O'Callaghan Strand																
7	Construction of PBSA																
8	Delivery of Flaxmill Plaza																
9	Mobility Hub on the Shipyard																

2.6.2 Masterplan Phased Delivery

Taking a holistic view of the entire masterplan site, it is anticipated that the masterplan site could take ten years to be delivered. However, this is dependent on securing relevant planning approval in a timely manner for each phase. Development within the overall masterplan area will be phased as per the phasing plan detailed in Chapter 1.0 and in accordance with the following anticipated timelines:

- Phase I Heritage Works – Commence Q1 2026 with Phase 01 stabilisation and repair works to the Flaxmill. Three other sub phases of works have been identified which shall progress once Phase 01 works are complete. It is likely that Phase I works will be ongoing and will overlap with Phase II works comprising the proposed development.
- Phase II Residential & Public Realm Works (the proposed development) – As stated above delivery of Phase II is likely to take four years to complete.
- Phase III TUS Educational Masterplan – Consent shall be sought for this development in Q2 2026, dependent on funding approval from the Higher Education Authority. The delivery timescale for this phase of the Masterplan is difficult to establish at this time, as significant repair works are required to the Flaxmill building to facilitate its adaptive reuse and which will absorb significant time. It is likely that this phase of works will overlap with both Phase I & Phase II works.
- Phase IV Shipyard Site - There is no timescale defined for the delivery of this element of the development, but it is likely that detailed design will commence after the consent process associated with the TUS educational campus.

2.6.3 Construction Working Hours & Personnel

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

It is estimated that there will be several hundred staff present within the development site during peak construction. Site staff will include management, engineers, construction crews, supervisors, environmental health and safety personal, and maintenance contractors.

2.6.4 Construction Works & Methods

Site Establishment and Security

The first activity to be carried out at the site will be the establishment of site facilities and security. The site office and welfare facilities (site compounds) will be located on the Shipyard site for most phases, with development in the O'Callaghan Strand Zone and in the Quarry Zone accommodating independent site compounds, following construction of the Mobility Hub within the Shipyard site. Refer to Figures 2-3 to 2-11 of the Outline CEMP. All the sub-contractors as well as the main contractor and project managers will occupy offices within the construction compound. The site parking for all staff, contractors and visitors will also be located in this area.

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

Site Access and Egress

The proposed haul route for demolition waste and construction materials and plant will be from the N18, via the Clonmacken Roundabout and the R527 Condell Road. This route ensures that construction traffic will avoid the city centre and residential areas. Banks persons will be deployed for extra-long deliveries and as specified in the contractor's construction management plan. The proposed haul route is indicated in Figure 2.9.

Within the necessary constraints of performance, durability and cost, construction materials will be sourced from local suppliers and manufacturers, where possible. Transport of materials to site shall be carried out in accordance with the Contractor's Traffic Management Plan (TMP) with HGV's using designated haulage routes (as above) and timing of deliveries if necessary to avoid peak traffic periods. The construction phase of the proposed development will result in additional traffic on the roads in the vicinity of the development. Additional vehicles will comprise heavy goods vehicles, fuel trucks and light goods vehicles. The proposed haul route will be utilised by all construction related HGVs. Further construction traffic details and associated mitigation measures are set out in Chapter 18: Material Assets - Traffic & Transport.

The reservoir will be temporarily drained to enable works, and temporarily partially infilled to allow for access of construction vehicles onto the Quarry site.

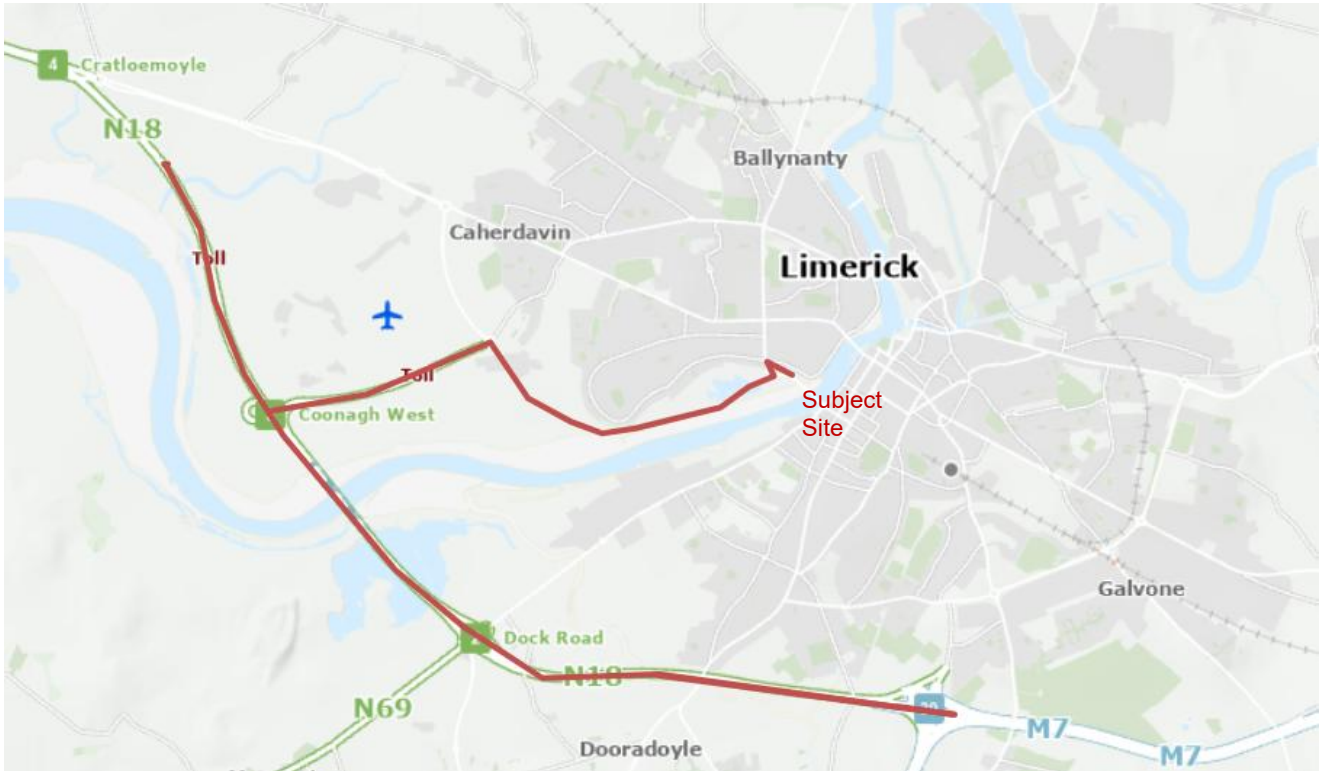


Figure 2.9 Proposed Haulage Route for Materials in Red Line

Demolition

Demolition of the buildings and structures as detailed in Section 2.5.2 of this chapter has been informed by a Pre-Demolition Waste Audit prepared by AtkinsRealis. The results of the pre-demolition audit show that the estimated total volume of material arising from the demolition of the site is 9503T, comprising 75% precast/panels concrete; 21% brickwork; 3% steel and the remaining comprising PVC window frames, metal corrugated cladding, fluorescent lighting and internal roof lining boards.

The Construction and Demolition Resource Waste Management Plan (CDRWMP) and the Circular Economy Plan prepared by ARUP detail the waste management proposals for the site including reclamation and disposal. The on-site reuse of site-won materials will be prioritised, where feasible.

It is proposed that material from buildings (brick, block, plaster etc.) shall be crushed on site to produce recycled aggregate for use on site. This will require a separate waste authorisation (CoR) for the mobile crusher and a Regulation 28 registration for the production of recycled aggregate in accordance with the criteria. Sampling, testing and storage of the material will be carried out in accordance with the national criteria.

Where removal off site is necessary, there are a number of recycling waste contractor facilities in proximity to the site as detailed in the CDRWMP and in Chapter 19.0 Material Assets – Waste Management, which could be utilised on the project for segregated waste removal.

Soil recovery facilities are located further afield, with the closest facilities located approximately 100km in Co. Cork (Tulligmore Quarry Solutions Limited and Roadstone at Garryhesta Pit).

There are numerous Waste Facility Permit sites in the general area, circa 30km from the site, accepting inert soil and stone. Chapter 19.0 Material Assets – Waste Management considers the impacts arising from waste generated on site.

Site Clearance

To facilitate the earthworks operation, site clearance will have to be carried out to remove vegetation. Removal of woody vegetation shall only take place outside the bird breeding season (1st March to 31st August). No removal of habitats will occur outside of the masterplan area during the construction phase. Temporary surface water management measures as detailed in the Outline CEMP and in Chapter 11.0 Water & Hydrogeology will be put in place prior to site clearance and stripping and will remain in place until the completion of the development, or until the completion of each stage / phase.

Topsoil will be stripped from areas to be developed, as necessary, although given the brownfield nature of the site, this process will only be applicable to limited areas. All excavated topsoil will be stored in dedicated stockpiles with environmental controls in place. Prior to topsoil clearance, the site shall be re-inspected and re-surveyed for Invasive Species. The stand of Japanese Knotweed within the reservoir area shall be surveyed and any mitigation measures necessary shall be undertaken in accordance with the Invasive Species Management Plan as detailed in Volume III Appendix 7.3 and Chapter 7.0 Biodiversity. There is a responsibility on the Environmental Manager or Ecological Clerk of Works (ECoW) to regularly inspect and supervise maintenance of the environmental controls throughout the process.

Earthworks

A project-specific ground investigation (GI) was undertaken of the proposed development site by Priority Geotech Limited (PGL) from March to May 2025. The Structural Report (ref. CRQMP-ARUP-ZZ-ZZ-RP-CE-0001) prepared by Arup and accompanying the application for consent under separate cover provides a summary of the findings of this GI, as well as previous GI undertaken at the site

The report describes the stratigraphy of the site as topsoil (one borehole) and made ground (surfacing material) composed of bituminous surfacing and concrete hardstanding underlain by made ground (fill material) composed of historical fill material, construction and demolition waste, and reworked subsoil material with anthropogenic material. Bedrock level is variable across the site, being encountered from 0.7 to 14.5 m BGL[5]. This will necessitate rock ripping / breaking and the noise & dust implications of this activity in an urban location are considered in Chapter 13.0 Noise & Vibration and Chapter 14.0 Air Quality. Further detail on site stratigraphy is contained in Chapter 10.0 Land & Soils of this EIAR.

As part of the 2025 GI, geoenvironmental testing using Waste Acceptance Criteria (WAC) was undertaken of 61 no. samples from the site. This testing has demonstrated that there is a variable contamination risk across the site. The majority of made ground material across the site is suitable for disposal to an inert licenced landfill. However, asbestos was encountered in three samples tested from the Stonetown Terrace portion of the site which are suitable for disposal to a non-hazardous licenced landfill with asbestos. Also, hazardous material (17 05 03*) was encountered in seven locations in the Shipyard portion of the site.

During the construction phase, excavated materials will arise from excavations to achieve the required formation levels, for building foundations and substructures, internal road network and parking areas, and

[5] Section 2.3.5 CDRWMP, ARUP

installation/diversion of site services and utilities. It is estimated that approximately 46,100m3 (or 98,120 tonnes) of excavated material will be generated. The made ground is considered unlikely to be suitable for reuse and all of this material is expected to require off-site disposal (26,800m3 or 50,920 tonnes). The excavated subsoils and rock are likely to be suitable for reuse, comprising 19,300m3 (or 47,200 tonnes).

Construction of Buildings

On completion of the bulk earthworks, construction of remaining building rising elements and/ or foundations for the buildings will commence. The exact construction sequence has not been determined, but it will be similar to what is described below:

- Completion of foundations and rising elements
- Construction of ground floor
- Erection of reinforced concrete frame
- Construction of floors and roof slab and rising elements between levels
- Facades
- Fit out

It has been estimated that 22,500 tonnes of general fill and 15,000 tonnes of engineered slab fill will be required by the proposed development[6]. Assuming all the excavated subsoils and rock can be reused on-site, it has been estimated that 13,500 tonnes of fill material will need to be imported to meet the fill requirement for the proposed development.

It is proposed to use an on-site, mobile crusher to crush excavated stone for reuse on-site. For example, crushed stone could be used on-site as granular fill material, subject to the material fulfilling the requirements of the specification for Class 6F3 in the TII Earthworks Specification for National Roads (Series 600) and any other relevant regulations or specifications that may apply to the proposed use.

As detailed in the Structural Report prepared by ARUP, under separate cover and accompanying the application for consent, the borehole, trial pit and probe data indicates that pad foundations and strip footings will be used to support superstructure walls and or columns and core walls. Lean mix upfill will be required from the underside of the pad foundations down to competent bearing stratum or rock. The only building that will require a piled solution is the Stonetown Terrace Apartments. Ground beams, pile caps and cores supported by piles are proposed for this building.

Shallow pad foundations bearing on the shallow limestone bedrock are the likely foundation solution for structures in the Salesian's Zone, Quarry Zone and O'Callaghan Strand Zone portion of the site. Shallow pad foundations bearing on the glacial subsoils or shallow pile foundations bearing in the underlying competent limestone bedrock are the likely foundation solutions for structures in the Stonetown Terrace portion of the site

The existing heritage wall around the proposed O'Callaghan Strand building is proposed to be partially retained. The proposed foundation structure will be set back to avoid undermining or interacting with the existing heritage wall foundations. The proposed solution is to incorporate a series of ground beams which will extend to the perimeter to pick up the edge/corner columns, thus, allowing the pad footings to be set back circa 2.0m from the existing heritage wall.

[6] Section 8.4 Circular Economy Plan, ARUP

Different structural schemes were considered for the apartment blocks, mindful of the need for future flexibility, to accommodate unforeseen circumstances and market conditions. Based on existing market and pricing circumstances, an in-situ structural scheme is proposed for all buildings, with the exceptions of the building on the Salesians site which will be pre-cast, using pre-manufactured concrete components to construct the building's framework. In the case of the PBSA on the Quarry site, components of the block will likely use pre-cast including longer span areas, linking the blocks.

Delivery of Landscaping & Public Realm

The proposed architectural intent requires a suspended walkway and stairs over the existing reservoir basin. The structural scheme to support the walkway will consist of pairs of RC piers at circa 5m centres supported off the reservoir bedrock. Similarly, the adjacent stair structure will require 2no. RC piers intermediately to break up the span. Beneath the top landing of the stairs is a wildlife feature to house native bats. It is proposed to cantilever out two RC beams below ground level to provide support the top of the stairs without impacting the wildlife feature.

Cranage

Cranes will not be required on site. Mobile cranes may be used for some activities. All materials being lifted by crane will be controlled by guide ropes and will only be carried out under the strict supervision of appropriately qualified and experienced banksmen.

General Safety & Health Considerations

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

It is intended to operate a Health, Safety & Environmental Management System in line with ISO 18001 & ISO 14001. This Management System translates the company policy into processes to ensure safety, health and environmental responsibilities and performance can be monitored, reported and improved.
A suitably qualified and competent Project Supervisor Design Process (PSDP) has been appointed and a suitably qualified and competent Project Supervisor Construction Stage (PSCS) will be appointed in line with those requirements laid down in the Safety, Health and Welfare at Work Construction Regulations 2013.

Monitoring During Construction

Appropriate Air Quality and Dust monitoring will be carried out and records will be kept of all such monitoring. Construction works will be carried out in such a way as to limit the emissions to air of pollutants (particularly dust and fine particles (PM10)), employing Best Practicable Means. Air quality & climatic issues associated with the proposed development including the proposed monitoring and mitigation measuresare dealt with in detail in Chapter 14.0 & 15.0 of this EIAR.

Noise monitoring will be carried out in accordance with Safety, Health and Welfare at Work (Construction) Regulations 2006 – 2021 Safety, Health and Welfare at Work Act 2005, BS 6187:2011 - Code of Practice for Full & Partial Demolition, BS 5228:2009 Code of Practice for Noise & Vibration Control on Construction & Open Sites. Vibration monitoring will be carried out in accordance with BS 5228-1, 2009, Code of

Practice for Noise & Vibration Control on Construction & Open Sites. Issues associated with Noise & Vibration are dealt with further in Chapter 13.0.

Construction Waste

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

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

The CDRWMP has estimated that the construction of the proposed buildings will generate approximately 3,380 tonnes of waste materials, as set out in Table 16 of that report. The main waste storage area will be located in the site compound on the Shipyard site. A dedicated and secure area containing bins, and/or skips, and storage areas, into which all waste materials generated by construction site activities, will be established within the development.

Waste materials generated will be segregated at the site compound, where it is practical to do so. Where the on-site segregation of certain waste types is not practical, offsite segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled.

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

2.7 DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE OPERATIONAL PHASE

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

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

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

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

2.7.1 Energy Statement

As detailed previously in Section 2.5.13, the ARUP Energy Analysis report enclosed with the application sets the technologies employed to achieve compliance with the building regulations Part L and NZEB standards. The development is also seeking HPI accreditation.

The thermal efficiency of the buildings will ensure that the development will be sustainable and will be protected against the impacts of future climate change which may include storm events and prolonged colder periods during the winter season. These factors will contribute to reducing the impact the operational development has on the local and global climate which will ultimately contribute in a positive manner in reducing the impact on human health.

2.7.2 Environment / Global Issues

Increasing levels of greenhouse gases have been linked with changes in climate and predicted global warming. By far the biggest human contribution to the greenhouse gases is in emissions of carbon dioxide. To minimise the embodied emissions impact, materials will be sourced locally where possible (reducing carbon dioxide emissions associated with transportation), and preference will be given to reusing materials, and using materials in their natural state (reducing the emissions associated with processing). Chapter 15.0 Climate sets out the potential impacts and mitigation in respect of Climate whilst Chapter 14.0 deals with Air Quality.

2.7.2 Utilities

Section 2.5.14 of this chapter details how the development proposal will connect into existing utilities infrastructure. This section assesses demand likely to arise and capacity to accommodate same.

Telecoms / Fibre

The Metropolitan Area Network (MAN) is currently routed across the Shannon Bridge and on Shelbourne Road. There is a spur serving the old Salesians secondary school, which is part of the overall site. eNet have confirmed that the MAN will be extended to serve development on the Cleeves site as required. There is also an extensive telecoms duct network available on North Circular Road and O'Callaghan Strand.

Based on the findings of a comprehensive report prepared by ISM (Independent Site Management, 2025) which accompanies the application for consent under separate cover, Block 2A (west wing) of the PBSA proposes 9 no. Support poles to support 2 no. antennae each 6 no. microwave dishes affixed to the plant screen; and associated telecommunications equipment and cabinets (effectively screened). A comprehensive report has been prepared by ISM Independent Site Management and which accompanies the application for consent under separate cover. The report details why the infrastructure is necessary

to mitigate the impact the development will have on the existing poor mobile phone signal in the area and provide both the occupants of the development and the local area with adequate voice and data services to meet modern demands.

To facilitate technologically acceptable locations at the time of delivery, a micro-siting allowance of 3m is proposed on the roof top of Block 2A of the PBSA for the infrastructure. The adjustment is intended to optimise signal coverage and network performance without altering the overall design or height of the installation. The flexibility is required to facilitate technologically acceptable locations at the time of delivery of the the infrastructure.

ESB Networks

There are three active substations in the vicinity of the site, including the Salesians substation, Fernhill substation and the Stonetown Terrace substation. The existing Lansdowne substation in the Flaxmill is not showing as active (ARUP 2024), ss per information received from ESB and as noted from the ESB Capacity Map.

The Fernhill substation has limited capacity available. For the proposed development which includes carpark lighting and EV charging only on the Shipyard Site, supply will be from Fernhill substation to a new metered supply on the Shipyard site. Should the use of the site expand in the future a new Kiosk may be required and a space allowance has been provided for this in order to future proof a supply to the site.

A new substation has been provided at the Stonetown Terrace Apartments which also caters for the townhouses.

The Salesians substation will be decommissioned and an allowance made to divert the supply. New substations are proposed as part of the development proposal to service the site. The estimated maximum demand for the proposed development is in the region of 2.7MVA.

2.7.3 Effluents

Effluent arising from foul drainage from the proposed development and the proposed Phase III TUS educational Campus will be discharged through piped systems to the local authority sewers. Details of the impacts and mitigation measures for surface water and foul drainage are recorded at Chapter 20.0 Material Assets – Utilities of this EIAR. Mitigation measures include measures designed to avoid, reduce, remedy or offset impacts. The proposed development will increase the quantity of foul drainage discharging to receiving foul sewerage network. The anticipated average foul discharge for the proposed development development is 1.84 l/s with a peak foul discharge of 11.08 l/s. When considered cumulatively with the Phase III TUS Educational Campus and having regard to the fact that the services provided are intended to serve the Masterplan site, the average foul discharge increases to 3.05 l/s with a peak discharge of 16.47 l/s.

2.7.4 Domestic Municipal Waste/Waste Management

Chapter 19.0 Material Assets – Waste Management and the Operational Waste Management Plan, prepared by AtkinsRealis, provides detail on the domestic waste management for the proposal. Chapter 19.0 estimated that 348,824kg of waste will be generated at the proposed fully occupied development per annum. The objective of the Operational Waste Management Plan is to maximise the quantity of

waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information to the residents of the development.

2.7.5 Diesel Storage

Within each plot, emergency generators are provided within the building footprint. These are powered by diesel and the fuel is stored within a belly tank underneath each generator in a dedicated plant room. The total capacity of the generators is circa 740kVA and the fuel provided within the belly tank will provide a minimum of 8 hours runtime. The generator breakdown is as follows:

- Quarry – Approximate generator size: 220kVA generator.
- Salesians – Approximate generator size: 330kVA generator
- Stonetown Terrace - Approximate generator size: 100kVA generator
- O'Callaghan Strand - Approximate generator size: 90kVA generator

Typically, each generator will only be run for 30 minutes every month as part of regular testing. There is no proposal to use these generators to supplement general power or to export to the grid. They are only for emergency use.

2.8 SECONDARY AND OFF-SITE DEVELOPMENTS

The planning application includes details of the necessary road works including junction alterations and flood mitigation measures, which are required to facilitate this development. These works are assessed within this Environmental Impact Assessment Report.

There are no secondary or off-site development works necessary to facilitate the development proposal save for connection to the existing road network and water services.

The Limerick (River Shannon) Flood Relief Study is ongoing with planning consent yet to be sought for proposed flood relief works. The proposed development is not dependent on these works. Rather the flood alleviation measures proposed as part of the development proposal, to protect the proposed development along O'Callaghan Strand against tidal flood inundation, will interface to provide a holistic design solution that will work in tandem with the wider, more extensive flood defence measures along the Shannon in this area (i.e. flood defence walls / barriers).

2.9 PROJET CHANGES – GROWTH & ALTERATIONS

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

The Vision Masterplan accompanying the proposed development demonstrates that the Cleeves site is planned to grow, regenerate and further develop in future years. Regard has been made to this future growth potential in various chapters of this EIAR in so far as possible. Whilst all baseline information relates to the masterplan site, the impacts are generally limited to those of the proposed development. Drainage infrastructure and traffic generation impacts has been assessed having regard to the entire

masterplan area, given the importance to future proof key infrastructure provision within the site to accommodate future growth.

The parameters for the future development of the area in the vicinity of the subject site are governed by the Limerick Development Plan 2022 – 2028 which has zoned the subject site and the wider masterplan site for city centre uses and for existing residential uses. The future development earmarked for the Masterplan lands, will be the subject of separate planning applications / consents in the future, notwithstanding the holistic approach taken to coordinated and integrated development on the site at this time.

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

The surrounding context consists of a mix of residential, employment, educational and open space public amenity lands. It does not include any man-made industrial processes (including SEVESO II Directive sites (96/82/EC & 2003/105/EC) and Seveso III Directive 2012/18/EU which would be likely to result in a risk to human health and safety.

The risk of accidents can arise during construction and operation phases as part of normal construction measures and day to day living and activities. The risk of accidents and mitigation measures considered necessary to address same, has been considered and are presented in Chapter 21.0 Risk Management for Major Accidents /Disasters.

2.11 OTHER RELATED PROJECTS AND POTENTIAL FOR EX-SITU EFFECTS

The proposed development within the application site is reliant on the delivery of service infrastructure across the masterplan site including the surface and foul water network and road transport infrastructure. Regard is had to the overall masterplan proposal for the site where relevant and necessary, although it is important to note that the true impacts of development can only be established from what is actually proposed as part of the planning application. All other works are 'potential' future works.

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