# Building Lifecycle Report

## Strategic Housing Development at Mill Road, Saggart, County Dublin

## December 2021


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# Residential Complex

# consisting of

# 274 No. Dwellings

# at

# Mill Road, Saggart,

# Co. Dublin

## Tetrarch Residential Limited

## Building Lifecycle Report

**Rev 1**

**November**

**2021**

# Contents

# 1 Introduction

*The Sustainable Urban Housing Design Standards for New Apartments – Guidelines for Planning Authorities* (published in March 2018), introduced a requirement to include details on the management and maintenance of any residential units that may be contained within housing developments.

The Guidelines state that consideration of the long-term running costs and manner of compliance of the proposal with the Multi-Unit Developments Act, 2011 are matters which should now be considered as part of any assessment of a proposed apartment development.

Section 6.13 of the guidelines requires that apartment applications shall:

- *'…. include a building lifecycle report, which in turn includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application';*
- *'….demonstrate what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.'*

This Building Life Cycle Report document sets out to address the requirements of Section 6.13 of the Apartment Guidelines above.
It is broken into two sections as follows:

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| Section 1: | An assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application |
| Section 2: | Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents. |

# 2 Proposed Development

This report relates to the various elements of the proposed Tetrarch Residential Ltd development at Mill Road, Saggart, Co. Dublin. The overall development will comprise the construction of a scheme comprising 274 No. residential units, in two apartment blocks of eight and five storeys as well as five blocks of houses and duplexes respectively:

Block A – 67 No. units over 8 storeys
Block B – 118 No. units over 5 storeys
Including internal plantrooms, bin storage and standalone bike storage and ESB unit substation at ground level.

The development will also include the construction of associated car parking spaces and bicycle parking spaces, respectively; vehicular, pedestrian and cycle access and egress; provision of electric vehicle charging points; provision of boundary treatments including associated lighting; changes in levels, associated hard and soft landscaping.

The location of the proposed apartments (at Ground Floor Level) is shown in Appendix A.

276 No. carparking spaces and 634 No. bicycle spaces (218 No. short term and 416 No. long term) have been provided.

# SECTION 1:

**AN ASSESSMENT OF LONG-TERM RUNNING AND MAINTENANCE COSTS AS THEY WOULD APPLY ON A PER RESIDENTIAL UNIT BASIS AT THE TIME OF APPLICATION.**

## 1.1 Long Term Running Costs

The aim of the developer is to manage and minimise potential unnecessarily high running costs on a per residential unit basis. Tetrarch Residential Ltd have applied their experience to ensure the provision of a product which will be well managed and easily maintained.

## 1.2 Property Management of the Common Areas of the Development

A property management company will be employed at an early stage to ensure that all property management functions are dealt with and that the running and maintenance costs of the common areas are kept within the agreed annual service charge.

## 1.3 Service Charge Budget

The property management company has a number of key responsibilities, primarily the compiling of the service charge budget for the development for agreement with the Owner's Management Company (OMC). The service charge budget covers items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical, electrical, lifts, life safety systems, security, property management fee, etc., to the development common areas in accordance with the *Multi Unit Developments Act 2011.*

This service charge budget also includes an allowance for a Sinking Fund and this allowance is determined following the review of the Building Investment Fund (BIF) report prepared for the OMC. The BIF report, once adopted by the OMC, determines an adequate, estimated, annual cost provision requirement based on the needs of the development over a 30-year cycle period. The BIF report will identify those works which are necessary to maintain, repair, and enhance the premises over the 30-year life cycle period, as required by the *Multi Unit Development Act 2011 (MUD).*

A sample format of the typical BIF report is set out in Appendix B.

*Note: the detail associated with each element heading i.e., specification and estimate of the costs to maintain / repair or replace, can only be determined after detailed design and the procurement/ construction of the development and therefore the figures provided are estimates.*

## 1.4 Sinking Fund

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

# SECTION 2:

**MEASURES SPECIFICALLY CONSIDERED BY THE PROPOSER TO EFFECTIVELY MANAGE AND REDUCE COSTS FOR THE BENEFIT OF RESIDENTS.**

The following are an illustration of the energy measures that are planned for the units to assist in reducing costs for the occupants.

## 2.1 Building Design

| Measure | Description | Benefit |
|---|---|---|
| Daylighting | A daylight and sunlight analysis will be carried out in accordance with the BRE 'Site Layout Planning for Daylight and Sunlight' Design Guide (2nd edition), '*Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities' and BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting'.* | Reduces the requirement, and therefore expense, for continuous artificial lighting. |
| Apartment Blocks | In total, the scheme provides for a total of 185no. apartments. Each apartment benefits from a private amenity area (balcony / terrace), open plan living areas and adequately sized bedrooms. The floor plates are manipulated and glazing areas are maximized to ensure each apartment receives adequate natural daylight. A minimum of 50% of the total no. of units are dual aspect. Car & bicycle parking, plant room and communal amenity facilities are provided on the ground floor of each block, and in the communal grounds and curtilage of the apartments. | The design of each apartment block requires minimal on-going maintenance, creates a pleasing aesthetic. |
| Houses & Duplex | There is a total of 51no. housing units and 38no. duplex units proposed in the development. Each unit has a rear garden/private terrace and maximized landscaping to the front where possible, providing a defensible transition space for future residents. | The design of each house and duplex unit requires minimal on-going maintenance, creates a pleasing aesthetic. |

## 2.2 Landscape

| Measure | Description | Benefit |
|---|---|---|
| Paving and Decking Materials | Sustainable, robust materials with high slip resistance and permeability, e.g. precast reconstituted stone pavers, to be used for paving. Durable and hardwearing equipment (e.g. for exercise, fencing etc.) to be used throughout. | Robust materials and elements reduce the frequency of required repair and maintenance. |
| Soft Landscape | Planting proposals have been formulated to complement the local setting as well as being fit for purpose in respect of private and public realm uses and spatial constraints imposed by garden sizes and the width of planting strips. Native tree and plant species have been prioritised for planting while non-native species have also been selected where spatial constraints are a factor. Plant species have been selected so that irrigation will be not required for the soft landscape in normal circumstances. | Diversity of planting and inclusion of native plants and habitats will benefit biodiversity and ecology of the site.<br>Reduction in the frequency of required soft landscape maintenance. |
| Site Layout | High quality landscaping - both hard surface (for the cycle /car parking and circulation pavements) and soft landscaping with planting and trees. The landscaping will be fully compliant with the requirements for Part M / K of the Technical Guidance Documents and will provide level access and crossings for wheelchair users and pedestrians with limited mobility.<br><br>Designated car parking including accessible & visitor car parking reduces the travel distances for visitors with reduced mobility. | Plenty of room for cyclists and pedestrians along with car spaces provides a good balance between pedestrians and car users and encourages sustainable modes of transport.<br><br>Wheelchair user-friendly. |

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| Maintenance & Management | Maintenance and management requirements have been considered through the design process and efforts made to avoid onerous maintenance and management requirements, where possible.<br><br>Bark mulch / weed membrane used to suppress weeds, displacing chemical input. Good quality soil reduces need for additional chemical fertiliser. | Estate maintenance inputs and costs reduced. |
| Balconies & openable windows | Use of balconies & openable windows allow individuals to clean windows themselves. | Reduces the cost and reliance on 3rd party contractors for cleaning & maintenance. |
| Sustainability & Biodiversity | Sustainability aspects of the proposed development include the use of native species where possible across the site.<br><br>Other species have been carefully selected for compatibility with the use and size of available spaces which is an important factor in long term management. The overall objective is to enhance the biodiversity potential of the site in addition to providing seasonal interest and variety. Inputs from the project Ecologist have informed habitat creation and plant selection.<br><br>Judiciously placed flowering shrub and groundcover planting have been included to further promote biodiversity (pollinator species attracting insects and birdlife) and interest, including green rooftop. | Enhanced sustainability and biodiversity of long-term estate management. |

## 2.3 Energy & Carbon Emissions

| Measure | Description | Benefit |
|---|---|---|
| BER Certificates | A Building Energy Rating (BER) certificate will be provided for each dwelling in the proposed development when complete which will provide detail of the energy performance of the dwellings. A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy.<br><br>It is required to design to Nearly Zero Energy Building level of efficiency for the apartments. This typically corresponds to an A2 BER rating.<br><br>An A2 property can be expected to require 25-50 kWh/$m^2$/yr. For a 75$m^2$ 2-bed apartment, the running costs for space and water heating (based on typical occupancy and heating the entire dwelling to a comfortable level) would be in the region of €280/year (Source: SEAI "Guide to Building Energy for Homeowners). | Achieving a high BER rating means a reduction in energy consumption and running costs. |

<table>
<tr>
<td>Fabric Energy Efficiency.</td>
<td>The U-values being investigated will be in line with the requirements set out by the current regulatory requirements of the Technical Guidance Documents Part L, Conservation of Fuel and Energy - Buildings other than Dwellings. See below Table 1 of Part L, Building Regulations.<br><br>
<table>
<tr><th colspan="3">Table 1 Maximum elemental U-value (W/m²K)[1, 2]</th></tr>
<tr><th>Column 1<br>Fabric Elements</th><th>Column 2<br>Area-weighted Average Elemental U-value (Um)</th><th>Column 3<br>Average Elemental U-value – individual element or section of element</th></tr>
<tr><td>Roofs<br><br>Pitched roof<br>- Insulation at ceiling<br>- Insulation on slope<br><br>Flat roof</td><td><br><br><br>0.16<br>0.16<br><br>0.20</td><td><br><br><br>0.3</td></tr>
<tr><td>Walls</td><td>0.18</td><td>0.6</td></tr>
<tr><td>Ground floors[3]</td><td>0.18</td><td>0.6</td></tr>
<tr><td>Other exposed floors</td><td>0.18</td><td>0.6</td></tr>
<tr><td>External doors, windows and rooflights</td><td>1.4[4,5]</td><td>3.0</td></tr>
<tr><td colspan="3">Notes:<br>1. The U-value includes the effect of unheated voids or other spaces.<br>2. For alternative method of showing compliance see paragraph 1.3.2.3.<br>3. For insulation of ground floors and exposed floors incorporating underfloor heating, see paragraph 1.3.2.2.<br>4. Windows, doors and rooflights should have a maximum U-value of 1.4 W/m²K.<br>5 The NSAI Window Energy Performance Scheme (WEPS) provides a rating for windows combining heat loss and solar transmittance. The solar transmittance value $g_{perp}$ measures the solar energy through the window.</td></tr>
</table>
<br>Thermal bridging at junctions between construction elements and at other locations will be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Document Part L.</td>
<td>Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric, lower energy consumption and thus minimise carbon emissions to the environment.</td>
</tr>
</table>

## 2.4 Low-Energy Technologies under Consideration

A variety of low-energy technologies are being considered during the design stage of the development in order to meet the requirements of Part L of the Building Regulations and to achieve a Near Zero Energy Building (NZEB) rating.

The specific combination from the list below will be decided on and then implemented to achieve the A2/A3 BER Rating.

| Measure | Description | Benefit |
|---|---|---|
| Exhaust air heat pump | An exhaust air heat pump system is under consideration for heating, hot water and ventilation of the apartment units. | Heat pumps operate with efficiencies >400%. Exhaust air heat pumps utilise extract air as the air source for the heat pump. This will re-cycle the heat from the dwelling's ventilation system. These machines are ideal for apartments and more compact air-tight low energy or passive homes. Air is drawn through ducts to the heat pump from the bathrooms, utility and kitchen areas. The cold waste air is discharged to outside through another duct, and condensation to a drain. Additional heat generated internally from lighting, people and domestic appliances is also utilised through heat recovery from outgoing exhaust air. |

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| Monobloc or bi-bloc (split) air-source heat pump | Outdoor air-to-water heat pumps function on the same principle as exhaust air devices, but require an outdoor unit mounted in a garden or on a roof or balcony to provide a source of low-temperature heat. Multiple heat pumps are being considered for this projects, including systems which provide hot water only and are used in combination with other technologies for space heating and other heat pumps which provide both water and space heating from a single device. | Outdoor air-to-water heat pumps offer many of the benefits of exhaust air heat pumps, with comparable coefficients of performance (CoP) of over 300%, thereby offering low-cost heating and hot water to tenants throughout their lifespan. |
| Mechanical ventilation heat recovery (MVHR) system with integrated air-to-water heat pump (2-stage MVHR + EAHP) | This system provides space heating primarily through recovery of heat from exhaust air. Continuous ventilation of the apartment provides a significant source of low-temperature heat and the system's built-in heat pump uses this to provide hot water or increase further the provision of warm air as required in an efficient manner. | Ventilation systems without heat recovery place a substantial extra load on the heating system, as warm room air is replaced by fresh cool air which needs to be reheated to maintain a comfortable temperature. MVHR systems eliminate this issue by transfer of heat from outgoing to incoming air without direct mixing or contamination of the incoming airstream. This further reduces energy bills and costs for tenants. |

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| Electric Heating | Electric radiators made with high thermal ceramic heating elements with digital thermostat controls. | 100% efficient, i.e. all the electricity used is converted into heat.<br>Low running / maintenance costs.<br>No requirement for expensive equipment such as boilers, pumps, etc.<br>Thermostatic controls allow the radiator to quickly adapt to changes in the room temperature. |
| Low-energy LED Lighting | Shall be designed and specified in accordance with the BER requirements in each unit and in the landlord areas in accordance with Part L. | Lower consumption of energy and therefore lower carbon emissions. |
| Central extract/ demand-controlled ventilation | Central extract and demand-controlled ventilation will be considered to provide ventilation with low energy usage. | Central extract ventilation provides continuous ventilation with low energy usage.<br><br>Central extract operates at a low trickle speed constantly and ramp up in response to an increase in humidity from wet areas.<br>Demand control ventilation incorporates automated wall vents which open/close dependent on internal humidity conditions. |

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| E-CAR Charging Points | Ducting shall be provided from a local landlord distribution board to designated E-car charging car park spaces. This will enable the management company the option to install E-car charging points within the carpark to cater for E-car demand of the residence. This system operates on a single charge point access card. A full re-charge can take from one to eight hours using a standard charge point. | Providing the option of E-car charging points will allow occupants to avail of the ever-improving efficient electric car technologies. |
| Combined Heat and Power | Combined Heat and Power, (CHP), is a technology being evaluated in the event a number of apartments remain in a single ownership. This technology generates electricity and captures the waste heat from the generation unit that can be used within the development. This works very well when used in conjunction with a central plant based system. | CHP can achieve energy efficiencies by reusing waste heat from the unit to generate heat required for space heating & domestic hot water services in the apartment developments. |
| Solar Photovoltaic Panels | Solar PV panels will be considered for installation on rooftops, to convert solar radiation into usable electricity for residents. | Provides free electricity to residents, who are of an age profile to make particular use of daytime peak generation, as opposed to younger or working-age residents who are less likely to be at home during the day. |
| Battery Energy Storage Systems | Allowance in the design has been made for electric battery systems, designed to store energy generated onsite via solar PV as well as energy purchased at night rate tariffs. This overcomes the main disadvantage of solar technology, namely that generation peaks do not necessarily coincide with demand peaks. | Battery storage systems have dual benefits to consumers and to the national grid, allowing residents avail of free solar and cheap night-rate electricity, while balancing demand from the grid. |

## 2.5 Materials / Material Specification.

The practical implementation of the Design and Material principles has informed design of building facades, internal layouts and detailing of the proposed apartment buildings. The proposed envelope of the building is a mix of selected brickwork of varying tones, with high-performance Upvc joinery windows and doorsets, and powder coated metal balconies. Facades that meet the public realm are animated and carefully considered. All the considered materials will help create a building that resists deterioration, and which is easily maintained and managed.

The Apartment Buildings are designed in accordance with the Building Regulations, in particular Part D 'Materials and Workmanship', which includes all elements of the construction. The Design Principles and Specification are applied to both the apartment units and the common parts of the building and specific measures taken include:

| **Measure** | **Description** | **Benefit** |
|---|---|---|
| Material Selection | Consideration is given to the requirements of the Building Regulations and includes reference to BS 7543:2015, 'Guide to Durability of Buildings and Building elements, Products and Components', which provides guidance on the durability, design life and predicted service life of buildings and their parts.<br><br>All common parts of the proposed apartment building and, the durability and performance of these are designed and specified in accordance with Figure 4; Phases of the Life Cycle of BS7543; 2015. (Please see Appendix B for this figure). The common parts are designed to incorporate the guidance, best practice principles and mitigations of Annexes of BS 7543: 2015 including: | Ensures that the long-term durability and maintenance of Materials is an integral part of the Design and Specification of the proposed development. |

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| | • Annex A Climatic Agents affecting Durability<br>• Annex B Guidance on materials and durability<br>• Annex C Examples of UK material or component failures<br>• Annex D Design Life Data sheets | |
| Brickwork to the Apartment Blocks external envelope | Selected brick of two tones is proposed, in accordance with Architect's selection and specification. Imagery of the brick selection is captured in the Darmody Architecture's Material Report and Design Statement. | Requires minimal maintenance and does not require regular replacement. |
| Brickwork to the Houses & Duplex | Selected brick of two tones is proposed, in accordance with Architect's selection and specification. The high-quality brickwork is combined with pre coloured render finish to proportional areas of the unit's facade. | Requires minimal maintenance and does not require regular replacement. |
| Installation of factory finished UPVC joinery windows and doorsets | Selected window and door units, in accordance with Architect's selection and specification | Requires minimal maintenance and does not require regular replacement |
| Installation of factory finished Precast steel balcony/balustrade | Selected vertical steel balustrade with steel panels, in accordance with Architect's selection and specification. Imagery of the balcony/balustrade selection is captured in the Darmody Architecture's Material Report and Design Statement. | Requires minimal maintenance and does not require regular replacement |

## 2.6 Waste Management

| Measure | Description | Benefit |
|---|---|---|
| Construction & Demolition Waste Management Plan | A Construction and Demolition Waste Management Plan shall be submitted to South Dublin City Council (SDCC) prior to commencement of the development.<br><br>The waste management plan will be developed in line with the Waste Management Act (1996), the Eastern Midlands Waste Management Plan (2015-2021) and the Department of Environment and National Construction and Demolition Waste Council policy statements.<br>Excavated material from the site will be disposed off-site to a licensed facility.<br><br>Excavated topsoil will be retained in a stock-pile for re-use in the landscaping of the site. | The report will demonstrate how the scheme has been designed to comply with best practice. |
| Operational Waste & Recycling Management Plan | This application is accompanied by an Operational Waste Management Plan (OWMP) prepared by AWN Consulting | The Plan demonstrates how the scheme has been designed to comply with national regional, and local waste legislation, waste bye-laws, along with best practice. |
| Storage of non-recyclable waste and recyclable household waste | Inclusion of centralised communal waste storage areas for apartments and duplex units, with enough space to accommodate weekly storage of bins for dry mixed recyclable, organic waste, glass and mixed non-recyclable waste. | Easily accessible by all residents, facilities management personnel and the waste contractor(s), minimises potential littering of the scheme, reduce potential waste charges and does not limit waste contractor selection. |

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| | Domestic waste management strategy (Apartment & Duplex Units):<br>Dry mixed recyclable, glass, mixed non-recyclable waste and organic waste segregation. | Helps reduce potential waste charges and does not limit waste contractor selection. |
| | Security restricted shared waste storage rooms | Reduce potential for fly tipping by residents and non-residents. |
| | Well signed waste storage rooms and waste receptacles. | Help reduce potential cross contamination of waste and reduce waste charges. |
| Composting | Addition of organic waste bins to be provided throughout the development | Helps to reduce waste charges and the amount of waste going to landfill. |
| Bin Storage Capacity | Capacity of bin stores allows for weekly storage of bins, reducing costs to the waste management company and charges imposed on residents as a result. | Helps to reduce waste charges. |

## 2.7 Human Health and Well Being.

| Measure | Description | Benefit |
|---|---|---|
| Natural Daylight | The design, separation distances and layout of the apartments have been optimised for the ingress of natural daylight/sunlight to the proposed dwellings to provide good levels of natural light. | Reduces reliance on artificial lighting thereby reducing costs. |
| Accessibility | All units, including access and egress, will comply with the requirements of Part M and K. | Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances. |
| Open Green Space | Provision of open green space is provided throughout the space with the provision of 6no. Public Open Spaces, and ample amount of communal amenity space. These range of green spaces provide an opportunity to connect with the environment, and also allow opportunities for children's play. | Facilitates interaction with outdoors, increasing health benefits. |
| Security | The scheme is designed to incorporate good passive surveillance with the following security strategies likely to be adopted:<br>• Secure bicycle storage areas for each apartment plus visitor bicycle stands;<br>• CCTV for common areas;<br>• Gated access on both entries<br>• Routine access fob audits. | Access to all residents to reduce the risk of crime, littering within the scheme and reduction of potential waste charges. |

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| Natural Amenity | A number of permeable open spaces edged with rich planting schemes are proposed throughout the development. | Facilitates community interaction and socializing, resulting in improved wellbeing. Contact with green open space is proven to improve mental health and wellbeing. |
| Apartment Units | The unit layouts have been devised with respect to equality with the provision of adequately sized bedrooms. The design team considered the quality of the shared living spaces and the importance of natural daylight by providing large glazed windows, and external/recessed balconies. In addition, all units will comply with the accessibility requirements of Part M/ K, as included in the building regulations and this results in a reduced level of adaption required, and associated costs, potentially necessitated by residents' future circumstances. The scheme is designed to incorporate passive surveillance of communal areas which reduces the risk of crime to all residents. | The apartments have been designed with the health and wellbeing of the user in mind, with a demonstration of how the scheme has been designed to comply with best practice for future residents. |

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| Houses and Duplex Units | The built environment has been designed in order to maximise the quality of life within the development, with the health and wellbeing of the user in mind. Generous open spaces surrounding the housing units have been defined and orientated for this purpose. Passive surveillance has been incorporated into the design. This reduces the risk of crime to all residents within the scheme, littering, and loitering of green spaces. The garden design of each unit in the scheme is integral to the health and wellbeing approach of the development and have been maximized in specific units where possible, and Duplex units have private terraces and outdoor space, with direct views and connection to Communal and Public Spaces. | The design of each unit in the scheme is integral to the health and wellbeing of future residents. |

## 2.8 Transport and Accessibility

| Measure | Description | Benefit |
|---|---|---|
| Access to Public Transport. | A full Traffic Assessment including a Travel Plan (aka a Mobility Management Plan) will accompany this application which highlights the many alternative modes of transport to the private car.<br><br>Mill Road is a two-way road with separate pathways on one or two sides of the road along various sections.<br><br>A new site entrance is proposed to serve the development from Mill Road with additional potential secondary access routes provided for as per the architectural site plan.<br><br>Dedicated cycle lanes and pedestrian walkways will be provided within the site. Additionally, a two-way cycle track and footpath is proposed from the new site entrance off Mill Road which will link up with existing facilities within and surrounding the existing Citywest facilities and the LUAS red line stop.<br><br>The development will be well served by public transport, with Dublin Bus Route 69 stopping on | The availability, proximity and ease of access to high quality public transport services contributes to reducing the reliance on the private motor vehicle for all journey types. |

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| Permeable Connections | There is provision of dedicated pedestrian and cycle infrastructure within the site. The route includes pedestrian facilities along its length.<br><br>These existing paths will connect with new paths on the development, subsequently providing convenient access to local services and amenities in the area. | Ensures long-term attractiveness of walking and cycling to a range of local facilities.<br><br>This strong infrastructure ensures that there will be a balance of transport modes used by future residents of the proposed development. |
| Bicycle Storage | The provision of private secure & covered bicycle parking facilities for the apartments, together with abundant visitor bicycle parking within the public open spaces. | Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle. |

## 2.9 Management

| Measure | Description | Benefit |
|---|---|---|
| Residents' Manual | Once a purchaser completes their sale, a homeowner box will be provided which will include:<br>• Homeowner manual – this will provide important information for the purchaser on details of their new property. It typically includes details of the property such as MPRN and GPRN, information in relation to connect with utilities and communication providers, contact details for all relevant suppliers and User Instructions for appliances and devices in the property.<br>• A Residents Pack prepared by the OMC which will typically provide information on contact details for the Managing agent, emergency contact information, transport links in the area and a clear set of rules and regulations. | Residents are as informed as possible so that any issues can be addressed in a timely and efficient manner. |

## APPENDIX A – GROUND LEVEL SITE PLAN:

## APPENDIX B – ITEMS INCLUDED IN A TYPCIAL BIF

**Items Included in a Typical BIF**

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

| Ref | Element | Life Expectancy (Years) | Cost |
|---|---|---|---|
| | | | |
| **1.0** | **Roofs** | | |
| 1.1 | Replacement of flat roof covering including insulation to warm roof build ups. | 20 (40 for tiled roofs) | |
| 1.2 | Replacement parapet details | 20 | |
| 1.3 | Replacement/ repairs to facias | 20 | |
| **2.0** | **Elevations** | | |
| 2.1 | Repairs & preparation for decorations of rendered areas | 20 | |
| 2.2 | Replace exit/ entrance doors | 25 | |
| 2.3 | Replace rainwater goods | 25 | |
| 2.4 | Recoat powder coated finishes to balconies | 15 | |
| 2.5 | Periodic replacement and overhauling of external fixings | 5 | |
| 2.6 | Replace balcony floor finishes | 25 | |
| **3.0** | **Stair Cores and Lobbies** | | |
| 3.1 | Decorate ceilings & walls (stairwells & lobbies) | 2 | |
| 3.2 | Decorate Joinery (stairwells & lobbies) | 2 | |
| 3.3 | Replace fire doors (stairwells & lobbies) | 25 | |
| 3.4 | Replace carpets (stairwells & lobbies) | 10 | |
| 3.5 | Replace entrance mats (stairwells & lobbies) | 10 | |
| 3.6 | Replace nosings (stairwells) | 10 | |
| 3.7 | Replace ceramic floors tiles (stairwells & lobbies) | 20 | |
| 3.8 | Fixed Furniture & Equipment (Provisional Sum) | 18 | |

| | | | |
|---|---|---|---|
| **4.0** | **M&E Services** | | |
| 4.1 | General - Internal re-lamping (stairwells & lobbies) | 5 | |
| 4.2 | Replace Internal light fittings (stairwells & lobbies) | 15 | |
| 4.3 | Replace external light fittings (at entrance lobbies) | 15 | |
| 4.4 | Replace smoke detector heads | 18 | |
| 4.5 | Replace manual break glass units/ disabled refuge call points | 18 | |
| 4.6 | Replace fire alarm panel | 18 | |
| 4.7 | Replace AOV's | 25 | |
| 4.8 | Replace security access control installation | 15 | |
| 4.9 | External mains water connection | 20 | |
| 4.10 | Electrical mains and sub mains distribution. | 20 | |
| 4.11 | Emergency lighting | 20 | |
| 4.12 | Overhaul and/or replace waste pipes, stacks & vents | 20 | |
| 4.13 | Replacement of Boilers & CHP | 20 | |
| 4.14 | Replacement of Heat Recovery Ventilation Units | 20 | |
| 4.15 | Replacement if Pipework Distribution | 30 | |
| **5.0** | **Exterior** | | |
| 5.1 | External boundary treatments - recoat powder coated finishes to railings | 40 | |
| 5.2 | Replace external signage | 15 | |
| 5.3 | Replace cobble-lock areas | 20 | |
| 5.4 | 15-year cutback & thinning of trees & general overhaul of the landscaping | 15 | |
| 5.5 | Replace CCTV provision | 10 | |
| 5.6 | External handrails and balustrade | 15 | |
| 5.7 | Replace Bicycle Stands | 25 | |

## APPENDIX C – FABRIC REQUIREMENTS – BUILDING REGULATIONS PART L

| | |
|---|---|
| Pitched Roof | 0.16 |
| Flat Roof | 0.20 |
| Walls | 0.18 |
| Ground Floors | 0.18 |
| Other Exposed Floors | 0.18 |
| External Personnel Doors, Windows and Rooflights | 1.4 |

*Table 1: Maximum elemental U-value (W/m²K) for development*

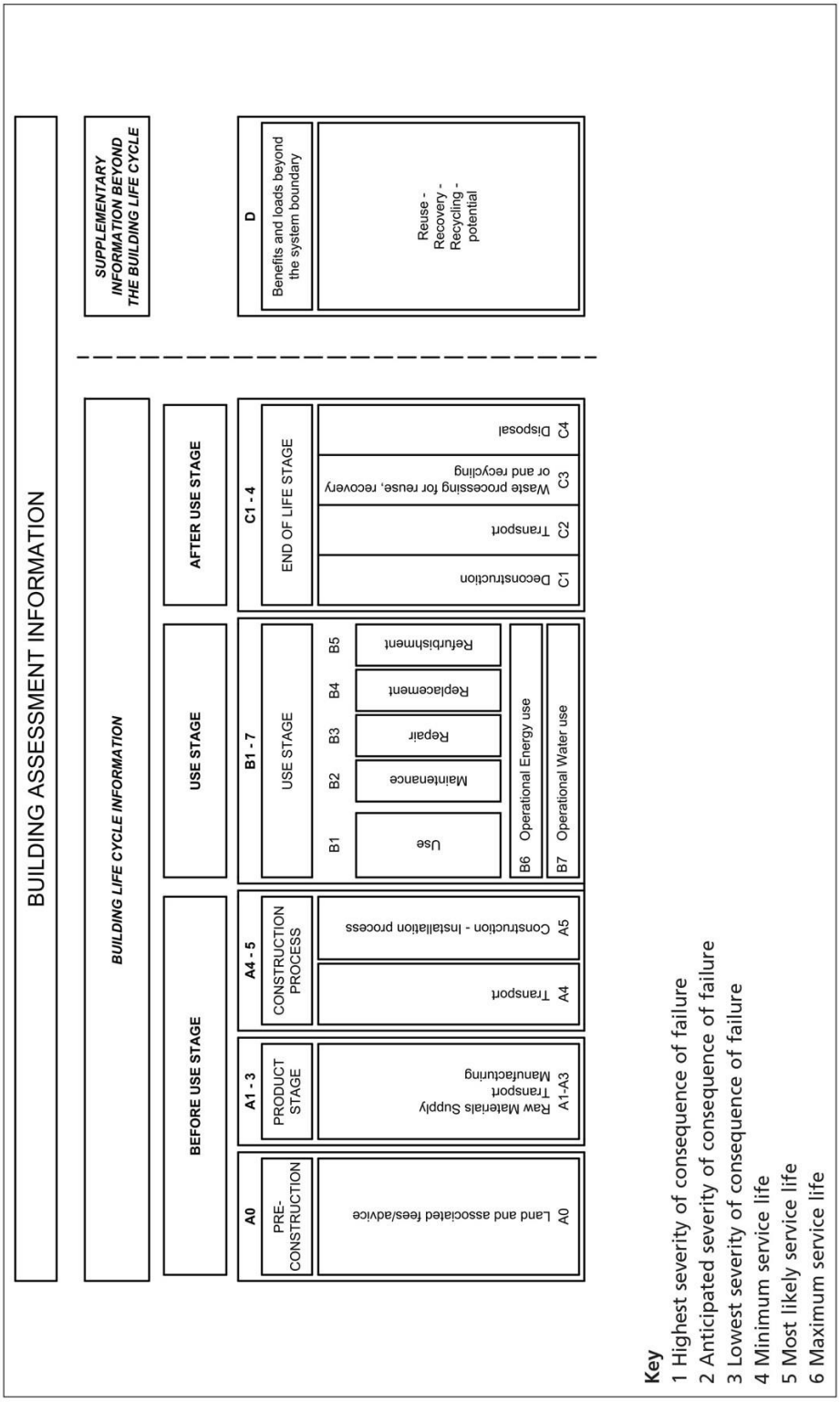


Figure 4 Phases of the life cycle