



# White Heather, Dublin 8

Lifecycle Report

**liv** consult

# Contents

<b>Applicant .....</b>	<b>4</b>
<b>1.0 Development Description .....</b>	<b>4</b>
<b>2.0 Introduction and Scope.....</b>	<b>4</b>
<b>3.0 Building Lifecycle Report .....</b>	<b>5</b>
<b>4.0 Measures to Effectively Manage and Reduce Long Term Costs.....</b>	<b>6</b>
4.1 Buildings.....	6
4.2 Material Specification.....	6
4.2.1 Brick.....	7
4.2.2 Stone and Metal Cladding .....	7
4.3 Roofing.....	7
4.3.1 Roof Terraces.....	7
4.3.2 Green Roof .....	7
4.4 Windows and Doors.....	7
4.5 Balconies.....	7
4.6 Landscaping .....	8
4.6.1 Hard Landscaping Materials.....	8
4.6.1 Soft Landscaping Materials .....	8
<b>5.0 Internal Building Fabric Schedule.....</b>	<b>8</b>
5.1 Floors.....	8
5.1.1 Common Areas - Entrance Lobbies / Reception Areas.....	8
5.1.2 Lifts.....	8
5.2 Tenant Amenity Areas.....	9
5.2.1 Meeting Rooms/Co-Working Space/ Resident Lounge/ Cinema .....	9
5.2.2 Gym.....	9
5.2.3 Internal Balustrades & Handrails.....	9

5.2.4 Carpentry and Joinery .....	9
<b>6.0 Building Services .....</b>	<b>10</b>
6.1 Electrical Services .....	10
6.1.1 Electrical Infrastructure.....	10
6.1.2 Lighting Services Internal and External.....	10
6.1.3 Fire Alarm.....	10
6.1.4 Fire Extinguishers.....	10
6.2 Mechanical Systems .....	11
6.2.1 Mechanical Plant .....	11
6.2.2 Waste Management .....	11
6.2.3 Composting .....	11
6.2.4 Water Services.....	11
6.2.5 Gas Services .....	11
6.3 Heating and Ventilation Services.....	12
6.3.1 Centralised Plant .....	13
6.3.2 Pumps .....	13
6.3.3 BMS .....	13
6.3.4 Mechanical Heat Recovery Ventilation.....	13
6.3.5 Heat Interface Units .....	13
6.3.6 E-Car Charging Points .....	13
<b>7.0 Transport.....</b>	<b>14</b>
7.1.1 Public Transport Accessibility.....	14
7.1.2 Bicycle Storage .....	14
7.1.3 E-Car Facilities .....	14
7.1.4 Car Sharing.....	14
<b>Appendix 1.....</b>	<b>15</b>

## Applicant

U and I (White Heather) Limited

### 1.0 Development Description

Permission is sought by U and I (White Heather) Limited for a Strategic Housing Development at the White Heather Industrial Estate, South Circular Road, Dolphin's Barn, Dublin 8 and No. 307/307a South Circular Road, Dublin 8 and an industrial building at 12a St James's Terrace. The 1.535ha site is bounded by the Grand Canal to the south; Our Lady of Dolours Church and residential dwellings on the South Circular Road to the north; Priestfield Cottages to the east; and residential dwellings at St James's Terrace to the west.

A new residential neighbourhood development of 335 no. units is proposed to make efficient use of this residentially zoned site, which benefits from high-quality amenity space along the Grand Canal and access to high-quality transport links. The site benefits from the opportunity to access the existing Dolphins Barn neighbourhood facilities, as well as enhancing the connectivity of the area for the Dublin 8 community as a whole. A core principle of the proposed residential scheme is to put residential amenity and recreation to the fore, opening up the site and the local area to the Grand Canal.

The proposed development is intended to provide for a vibrant and diverse community, while delivering a connected residential neighbourhood which knits in to both the established and the emerging residential developments in the area. High-quality landscaping and public realm, with a focus on the creation of distinctive character areas is proposed. A new street will run east-west across the north of the site and the creation of a new public space at the heart of the proposed scheme will connect to a publicly accessible linear park along the canal to the south. Permeability is a key feature of the proposed pedestrian realm, including a mix of dedicated and shared surface areas through the site with a c. 190 m continuous amenity strip along the Grand Canal Linear Park.

The entrance to the scheme will be from the existing junction at the South Circular Road, which will be reconfigured and upgraded. The existing access road at St James's Terrace will provide pedestrian access only to the development. Car parking is proposed at undercroft and at surface levels, with a number of dedicated car sharing spaces in convenient locations. Covered and secure bicycle storage facilities are located at undercroft and at surface level, adjacent to block entrances. A sustainable travel approach has been adopted, particularly with regards to access to Dublin City Centre, with the Luas (850m) and Dublin Bus stops adjacent to the development site. The City Centre area is also accessible by bicycle and walking, at approximately 10 and 30 minutes respectively.

The proposed residential mix includes a combination of studio units, 1-bedroom apartments, 2-bedroom apartments units within 7 no. blocks and a terrace of 3-bedroom townhouse units. A change of use of an existing residential building at 307/307a South Circular Road to be used as a shared workspace. The proposed Part V social housing requirement is provided at 10% in 2 no. discrete blocks within the proposed scheme. This high-quality Build to Rent scheme will also include 2 no. cafés and a 2-storey creche unit, while the residents will also have access to residential amenity areas at ground floor level and at fifth floor level with access to a roof terrace area overlooking the canal. A landscaped square will be accessible to the public, with private open space and amenity areas for the residents also provided including children's play areas and roof level terraces. Building heights range from 2 no. to 10 no. storeys, with finger blocks arranged in a north-south direction and height tapering down from the centre of the site to the boundary.



## 2.0 Introduction and Scope

LIV Group was established in 2008 to provide corporate residential management services for the banking sector, specialising in Block Management, Facilities Management and Lettings. In 2014, LIV transitioned into the UK's Build-to-Rent (BTR) sector and has since been the first to introduce a dedicated operating model that defines every stage of a development from acquisition to operation. Together our people, skills and experience have helped us develop a market-leading advisory and management capability, which is increasingly recognised as delivering the best BTR-specific model for the UK private rented sector. In 2016, LIV Consult was created to provide bespoke and specialist consultancy advice to the BTR market in the UK and internationally and is currently advising on the development of more than 35,000 BTR homes in developments from high-rise apartment communities to suburban masterplans.

Today, LIV based in 3 offices across the UK and working internationally within advisory, delivery and capital funding roles. Its market-leading operational model is informed by our wealth of experience in having managed residential assets for over 12,000 properties in over 250 residential sites throughout the UK. LIV has experience on over 2,000 operational BTR homes including both urban and suburban developments including some that we have overseen from the initial advisory stage through to their operational management.

Information available here: <https://www.liv-group.co.uk/>

## 3.0 Building Lifecycle Report

The purpose of this report is to provide an initial assessment of long-term running and maintenance costs as they would apply on a per residential unit basis at the time of application, as well as demonstrating what measures have been specifically considered to effectively manage and reduce costs for the benefit of the residents. This is achieved by producing a Building Lifecycle Report.

The Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities (2018) (hereafter referred to as the SUH Guidelines) introduced a requirement to include details on the management and maintenance of apartment schemes. This is set out in Section 6.11 to 6.14 - “Operation & Management of Apartment Developments”, specifically Section 6.13.

Section 6.13 of the SIH 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.”

The enclosed document reviews the outline specification set out for the proposed Build to Rent development at White Heather Industrial Estate, Dublin 8. The report provides information on the practical implementation of the design and material principles of the proposed development.

Please note that detailed specification of the building fabric has not been provided for all aspects of design materials and finishes, and where applicable indicative information has been provided based on material and services for similar developments.

As the building design develops this document will be updated and a schedule will be generated detailing maintenance and replacement costs over the lifespan of the materials and development constituent parts in a summary document. This will enable a robust schedule of building component repair and replacement costs which will be available to the property management company so that running, and maintenance costs of the development are kept within the agreed Annual operational budget. This will take the form of a Planned Preventative Maintenance Schedule (PPM) at operational commencement of the development.

## **4.0 Measures to Effectively Manage and Reduce Long Term Costs**

### **4.1 Buildings**

The proposed development comprises of 335 BTR units arranged across seven blocks and a standalone three storey residential terrace. The building will range in height from 2-10 storeys, with a centralized amenity space in Block 3 at Ground and Fifth floor levels.

### **4.2 Material Specification**

Consideration is given to the requirements of Building Regulations in relation to durability and design life. The development is designed to follow best practice principles to ensure that the long-term durability and maintenance of materials is an integral part of the design and specifications of the proposed development.

In-situ reinforced concrete structure is proposed for the residential blocks providing robust enclosure and separation of dwelling units as well as a suitable support to the secondary façade. The development's design is of contemporary composition featuring high quality brickwork with enhanced stone features to the block entrances. The material choice will ensure that the buildings proposed are durable as well as being of high visual quality.

	Description	Maintenance
<b>4.2.1 Brick</b>	High quality brickwork is proposed on the external facade.	In general, brickwork finishes require little maintenance due to their durability, which reduces the amount of associated costs. Most maintenance is preventative: checking for hairline cracks, deterioration of mortar, plant growth on walls, or other factors that could signal problems or lead to eventual damage.
<b>4.2.2 Stone and Metal Cladding</b>	Stone generally requires little maintenance and weathers well, whereas metal cladding requires little maintenance and is resistant to corrosion.	Most maintenance is preventative; checking for hairline cracks, deterioration of sealant, plant growth on walls, or other factors that could signal problems or lead to eventual damage.  Metal can lead to lower ongoing maintenance costs in comparison to exposed porous materials which may be liable to faster deterioration. Long term cleaning requirements should be taken into consideration.

#### 4.3 Roofing

A Single Ply lightweight waterproofing roof system solution will be implemented to offer quick installation and minimal lightweight roofing.

	Description	Maintenance
<b>4.3.1 Roof Terraces</b>	The roof terrace amenity space located on Block 3 will be equipped with seating and planters.	Required maintenance will include (1) quarterly inspection of drainage layer and outlets and removal of any blockages to prevent water build up (2) inspection of all metalwork and fixings for loosening or degradation including railings, planters, flashings, decking, drainage channels and repair/replace as necessary; and (3) landscaping contract to carry out any general maintenance and repairs.
<b>4.3.2 Green Roof</b>	Use of green roofs and traditional roof coverings with robust and proven detailing to roof elements.	Quarterly maintenance visits to include inspection of drainage layer and outlets and removal of any blockages to prevent water build up. Inspection of vegetation layer for fungus and decay. Carry out weeding as necessary. No irrigation necessary with sedum blankets.

#### 4.4 Windows and Doors

Use of factory finished and alu clad windows and doors. All windows shall be double glazed windows with a combined thermal transmittance not greater than 1.2W/m<sup>2</sup>K. All windows shall comply with BS EN ISO 10077-1: 2006 - 'Thermal performance of windows, doors and shutters. The windows shall not require any further maintenance following installation.

#### 4.5 Balconies

Relatively low maintenance required. All balconies will be steel clip on (Max span 2m) w/ Schoeck/ancon type steel to concrete thermal break connection. Maintenance would involve checking balcony system as per manufacturer's7

specifications including all hardware components for any signs of wear and/or weathering, and any structural damage or modifications.

#### 4.6 Landscaping

The landscaped space between and around buildings and the site edges provides public amenity and biodiversity. It is also an integral part of the architectural design of the site. Design extends to both soft and hard landscapes and supports an accessible, safe and high-quality approach to building approach and site permeability.

	Description	Maintenance
<b>4.6.1 Hard Landscaping Materials</b>	Use of sustainable, robust materials, with high slip resistance will be used. Durable and robust finishes to be selected for all fencing, furniture, bins, planters and bicycle storage units. Pedestrian and cyclist friendly hierarchy of streets and open spaces are complemented by generous and high-quality landscape treatments providing long-term residential environments.	Selection process of materials will minimise ongoing maintenance.
<b>4.6.1 Soft Landscaping Materials</b>	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 the width of planting strips.	See above.

## 5.0 Internal Building Fabric Schedule

### 5.1 Floors

	Description	Maintenance
<b>5.1.1 Common Areas - Entrance Lobbies / Reception Areas</b>	Materials are selected for their slip rating and hard-wearing quality.	Maintenance will be conducted through annual visual inspections and intermittent replacement of chipped or loose tiles.
<b>5.1.2 Lifts</b>	Materials will match those chosen in the lobby/reception areas for both aesthetic consistency and maintenance purposes.	Maintenance will be conducted through annual visual inspections and intermittent replacement of any damaged tiles.



## 5.2 Tenant Amenity Areas

	Description	Maintenance
<b>5.2.1 Meeting Rooms/Co-Working Space/ Resident Lounge/ Cinema</b>	Mix of Timber Laminate and selected carpet finish on underlay.	Fitting these areas with carpet allows for flexibility to alter and change as fashions alter, as well as ease of replacement if necessary. Requires visual inspection with regular cleaning.  Timber flooring will require regular visual inspection and cleaning.
<b>5.2.2 Gym</b>	Materials will be selected for their durability and aesthetic	Flooring will be selected based on its durability and having a low-maintenance finish.
<b>5.2.3 Internal Balustrades &amp; Handrails</b>	Implementation of aluminum materials over timber alternatives throughout the scheme.	Fittings will be chosen with hard-wearing long-life materials (e.g. aluminum) as opposed to available timber options.
<b>5.2.4 Carpentry and Joinery</b>	Fitted kitchens and fitted wardrobes to all bedrooms. High quality internal doors and frames, skirtings and window boards across all blocks	General maintenance will be required to mitigate damages and general wear and tear.

## 6.0 Building Services

### 6.1 Electrical Services

	Description	Maintenance
<b>6.1.1 Electrical Infrastructure</b>	Involves maintenance of electrical switchgear and switchboards.	The cost for replacing equipment is to be updated on completion of a design matrix of equipment at a later detailed design stage. All equipment will meet and exceed ESB, ETCL, CIBSE recommendations and be code compliant in all cases.
<b>6.1.2 Lighting Services Internal and External</b>	All lighting sources will be low energy LED bulbs for energy efficiency and ease of maintenance.	Involves an annual inspection of all internal and external lighting sources and a quarterly inspection of emergency lighting.
<b>6.1.3 Fire Alarm</b>	All equipment to meet requirements and be in accordance with the current IS3218.	Involves the quarterly inspection of panels and testing of devices as required.
<b>6.1.4 Fire Extinguishers</b>	See above.	Annual inspection with replacement of all extinguishers at year 10 of scheme operation.

## 6.2 Mechanical Systems

	Description	Maintenance
<b>6.2.1 Mechanical Plant</b>	Air source heat pumps will be utilised in a centralised plant strategy to provide the primary heating source for the development.	The specification and maintenance plan for a centralised heating system will be developed at a later design stage.
<b>6.2.2 Waste Management</b>	<p>An Operational Waste Management Plan (OWMP) has been prepared by AWN Consulting for this development which details the estimated quantity of waste arisings and the strategy for the management of waste during the operation of the development.</p> <p>This document will be implemented and further developed as the development is operated.</p> <p>A domestic waste strategy will be implemented to accommodate waste segregation and help reduce potential waste charges.</p>	The OWMP aims to ensure waste management prescriptions that adhere to a waste management hierarchy are implemented at this site thus ensuring re-use, recycling and recovery of waste opportunities are maximised and that disposal of waste to landfill will be considered as the last resort. The OWMP sets out the proposal for waste collection at the site to ensure that waste collections are completed in the required intervals to prevent any potential impact on the surrounding environment.
<b>6.2.3 Composting</b>	Provision of organic waste bins will be provided in all waste storage areas.	This will serve to reduce waste charges and comply with national policy and legislation pertaining to the segregation of biodegradable waste.
<b>6.2.4 Water Services</b>	All units shall have separate meters for water and electricity for the tenants to monitor and target their usages.	All relevant equipment will be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<b>6.2.5 Gas Services</b>	Gas detection systems will be selected with the design and management team to meet and exceed the CIBSE recommended lifecycles.	Gas detection systems will be fitted through the scheme which will require annual maintenance and service inspection.

### 6.3 Heating and Ventilation Services

There is increasing recognition of the benefits of future proofing against growing fuel costs through energy efficiency and using sustainable technologies. Where possible, the final design solution will incorporate the most energy efficient systems to provide a complete new operational and sustainable system.

Each unit will be Nearly Zero Energy Building (NZEB) compliant as outlined in the 2019 Part L building regulations. The material specifications, design and sustainable technology strategy will be developed to comply with NZEB standards.

As part of the proposed development the following strategies and technologies will be incorporated to provide a new high efficiency installation:

	Description	Benefits
<b>6.3.1 Centralised Plant</b>	Centralised plan will consist of Heat Pumps and Condensing Boilers in Cascading Arrangement. The Part L renewable contribution shall be covered by the use of heat pumps. High efficiency gas boilers will be incorporated into the system.	High efficiency heat pump along with Condensing boilers offer reliable and effective solution for the development.
<b>6.3.2 Pumps</b>	All pumps serving the plant to be A rated energy efficiency.	High efficiency band for appliances ensures reduction in required primary energy
<b>6.3.3 BMS</b>	Advanced Building Energy Management system will control the plant to ensure its operation to maximum efficiency.	Optimised plant operation will use less primary energy
<b>6.3.4 Mechanical Heat Recovery Ventilation</b>	Mechanical heat recovery ventilation (MVHR) will be considered to provide ventilation with low energy usage. MVHR provides tempered fresh air to occupied spaces. Heat is removed from exhaust air stream and transferred into the fresh air supply stream negating the need to use energy to heat the air	MVHR reduces the heating load on the boiler plant by eliminating cold air infiltration
<b>6.3.5 Heat Interface Units</b>	Each apartment will be fitted with a Heat Interface Unit (HIU) which shall be wall mounted and designed to provide indirect space heating and Instantaneous DHW. Each unit contains an ultrasonic heat meter to fitted with MBUS communications which will be linked back to plantroom and provide a record of heat and hot water used by the occupier for purpose of billing.	The HIU has compact dimensions and greatly reduces the area required for plant within the apartments.
<b>6.3.6 E-Car Charging Points</b>	<p>Ducting shall be provided to the entire car park of the subject scheme to allow for future E-Car charging car park spaces. This provision around the entire parking area will allow future charging point to be installed at any of the car parking spaces with minimum works as and when required. Currently 10 car spaces provide EV chargers.</p> <p>In anticipation of future demand, the relevant charging points will be pre-wired to their home electricity meter in the designated meter location. The socket point will have a lockable cover on it so that only that resident may use the power point.</p>	Providing the option for E-Car charging points will futureproof the development.



## 7.0 Transport

	Description	Benefits
<b>7.1.1 Public Transport Accessibility</b>	The site benefits from being located along a QBC (South Circular Road), with the Luas Red line a 10-minute walk to the West.	Proximity to Dublin's public transport network reduces resident reliance on private transport.
<b>7.1.2 Bicycle Storage</b>	It is proposed that there will be 556 no. cycle spaces available.	Providing this infrastructure will encourage residents to cycle or minimise their carbon footprint through motorcycle use. Ultimately, bicycle use will lead to less commuter traffic to and from the development.
<b>7.1.3 E-Car Facilities</b>	Pre-wired infrastructure for future E-Car charging points will be installed. Current provision allows for 10 EV points and further provisions will be made around the entire car park to meet demand as required.	The development will be futureproofed against the rising demand for E-Car solutions.
<b>7.1.4 Car Sharing</b>	An E-Car car sharing scheme will be available onsite via a GoCar partnership there are 7 dedicated car stations.	Implementing a car sharing scheme reduces reliance of private motor ownership.

## Appendix 1

Tabulated below is an itemised account of a typical BIF report.

Building Investment Fund Calculations			
Ref.	Element	Life Expectancy (years)	Amount
1.00	Roofs		
1.01	Replacement felt roof covering incl. insulation to main roofs/ overhaul to green roofs.	18	
1.02	Replacement parapet details	18	
1.03	Replacement/ repairs to facades	18	
1.04	Replace roof access hatches	25	
1.05	Specialist Roof Systems - Fall arrest	25	
1.06	Overhaul waterproofing details to penthouse paved areas	12	
2.00	Elevations		
2.01	Recoat metal panels to penthouse apartments	25	
2.02	Minor repairs and preparation for decorations of rendered areas	18	
2.03	Replace exit/ entrance doors	25	
2.04	Replace Rainwater goods	25	
2.05	Recoat powder coated Finishes to balconies / Grills to Basement vents	20	
2.06	Periodic replacement and overhauling of external fixings	5	
2.07	Replace Balcony floor finishes	25	
3.00	Staircores & lobbies		
3.01	Decorate Ceilings	7	
3.02	Decorate Walls	7	
3.03	Decorate Joinery	7	
3.04	Replace fire doors	25	
3.05	Replace carpets (stairwells & lobbies)	12	
3.06	Replace entrance mats	10	
3.07	Replace nosings	12	
3.08	Replace ceramic floors tiles Entrance lobbies	20	
3.09	Fixed Furniture & Equipment - Provisional Sum	18	
4.00	Basement & Car Parking		

4.01	Remove/ Replace ceiling insulation	25	
4.02	Repaint parking spaces & Numbering	7	
4.03	Replace store doors, ironmongery & digi-locks	15	
4.04	Replace Bike stands	25	
4.05	Replace basement access control at entrance & core entrances	12	
5.00	M&E Services		
5.01	General - Internal re-lamping	7	
5.02	Replace Internal light fittings	18	
5.03	Replace External light fittings (lights at entrance lobbies)	18	
5.04	Replace smoke detector heads	18	
5.05	Replace manual break glass units/ disabled refuge call points	18	
5.06	Replace Fire alarm panel	18	
5.07	Replace lift car and controls	18	
5.08	Replace AOV's	25	
5.09	Replace security access control installation	25	
5.10	Sump pumps replacement	15	
5.11	External Mains Water connection	15	
5.12	Electrical Mains and Sub Mains distribution	20	
5.13	Emergency Lighting	20	
5.14	Overhaul and/or replace Waste Pipes, Stacks & Vents	20	
6.00	Exterior		
6.01	External boundary treatments - Recoat powder coated Finishes to railings	60	
6.02	Replace external signage	18	
6.03	Replace cobble lock areas	18	
6.04	15-year cutback & thinning of trees. Overhaul landscaping generally	20	
6.05	Replace CCTV provision	12	
6.06	External Handrails and balustrade	18	