The Arboury, Belgard Road, Tallaght, Dublin 24

Lifecycle Report

liv consult

Contents

liv consult

Applicant

Landmarque Belgard Development Company Limited

1.0 Development Description

The site of c.0.898 ha is located at the former ABB Site, Belgard Road, Tallaght, Dublin 24, D24 KD78. The site is bound by Belgard Road (R113) to the east, Belgard Square North to the North and Belgard Square East to the west and Clarity House to the south.

The proposed development will consist of:

1. Demolition of all existing structures on site (with a combined gross floor area of c. 3625 sqm)
2. The construction of a mixed-use residential development set out in 3 No. blocks including a podium over a basement, ranging in height from 2 to 13 storeys (with core access above to roof terrace), comprising:
334 no. residential units of which 118 No. will be Build to Rent (BTR) residential units, with associated amenities and facilities across the development, 4 No. retail/café/restaurant units and 3 no. commercial spaces associated with the 3 no. live-work units (723 sqm combined), Childcare facility (144 sq.m.),
670 No. bicycle parking spaces including 186 visitor spaces; 117 car parking spaces (including 6 disabled spaces) are provided at ground floor and basement level.

The overall development has a Gross Floor Area of 29,784 sq.m.

Two (2) podium residential courtyards and three (3) public accessible pocket parks, two (2) to the North & one (1) to the South.

Linear Park (as a provision of the Tallaght Town Centre LAP) providing safe public pedestrian and cycling access between Belgard Rd and Belgard Square East

3. Of the total 334 residential units proposed, unit types comprise:

Block A (Build-to-Rent)
91 no. 1 bed units
1 no. 2 bed 3 person units
26 no. 2 bed 4 person units

Blocks B & C
2 no. live-work studio units
102 no. 1-bed units
12 no. 2-bed 3 person units
88 no. 2-bed 4 person units including 5 no. duplex units
1 no. 2-bed 4 person live-work unit
11 no. 3-bed units

4. All associated works, plant, services, utilities, PV panels and site hoarding during construction

2.0 Introduction and Scope

About LIV

LIV Group is headquartered in Leeds, UK and operates in the United Kingdom and Ireland.

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 3,054 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 residential development at The Arboury site, Belgard Road, Tallaght, Dublin 24. 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 Management of Common Areas

A property management company will be enlisted at the initial stages of development to ensure that all property management functions are dealt with and that the running and maintenance costs of common areas are kept within the agreed annual operational budget.

The enlisted company will enter into a contract directly with the Owners Management Company (OMC) for the ongoing management of the built development. This contract will be for a maximum period of 15 years in the form prescribed by the PSRA.

The management company will have the following responsibilities:

- Timely formation of an Owners Management Company (OMC) – which will be a company limited by guarantee having no share capital. All future purchasers will be obliged to become members of this OMC
- Preparation of annual service charge budget for the development common areas
- Fair and equitable apportionment of the Annual operational charges in line with the Multi Units Development Act 2011 (MUD Act)
- Engagement of independent legal representation on behalf of the OMC in keeping with the MUD Act - including completion of Developer OMC Agreement and transfer of common areas
- Estate management
- Third Party Contractors Procurement and management
- OMC Reporting
- Accounting Services
- Corporate Services
- Insurance Management
- After Hours Services
- Staff Administration

4.1 Service Charge Budget

The enlisted property management company for the development has several key responsibilities; foremost including the compiling of the service charge budget to be agreed with the 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 (“MUD” Act).

This service charge budget also includes an allowance for a Sinking Fund which is determined following the review of the Building Investment Fund (BIF) report prepared for the OMC. Once adopted by the OMC, the BIF report determines an 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 that 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.

In line with the requirements of the MUD Act, the members of the OMC will determine and agree each year at a General Meeting of the members the contribution to be made to the Sinking Fund with regards to the BIF report.

A standard format for the BIF report can be found in Appendix 1.

5.0 Measures to Effectively Manage and Reduce Long Term Costs

5.1 Buildings

The proposed development comprises of 334 units arranged across three blocks. The building will range in height from 2 – 12 floors, with a centralised amenity space on the Ground Floor in Block A, B and C and at Ground and Seventh floor levels.

5.2 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
5.2.1 Brick	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.
5.2.2 Stone and Metal Cladding	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.

5.3 Roofing

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

	Description	Maintenance
5.3.1 Roof Terraces and Gardens	Block A and C will include a roof garden or terrace. Each terrace 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.
5.3.2 Green Roof	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.

5.4 Windows and Doors

Use of factory finished and aluminium clad windows and doors. All windows shall be double glazed windows with a combined thermal transmittance not greater than 1.2W/m2K. 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.

5.5 Balconies

Relatively low maintenance required. All balconies will be steel clip on (Max span 2m) with Schoeck / ancon type steel to concrete thermal break connection. Maintenance would involve checking balcony system as per manufacturer's specifications including all hardware components for any signs of wear and / or weathering, and any structural damage or modifications.

5.6 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
5.6.1 Hard Landscaping Materials	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.
5.6.2 Soft Landscaping Materials	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.

6.0 Internal Building Fabric Schedule

6.1 Floors

	Description	Maintenance
6.1.1 Common Areas - Entrance Lobbies / Reception Areas	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.
6.1.2 Lifts	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.

6.2 Tenant Amenity Areas

	Description	Maintenance
6.2.1 Meeting Rooms / Co-Working Space / Resident Lounge / Games Room	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.
6.2.2 Gym	Materials will be selected for their durability and aesthetic	Flooring will be selected based on its durability and having a low-maintenance finish.
6.2.3 Internal Balustrades & Handrails	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.
6.2.4 Carpentry and Joinery	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.

7.0 Building Services

7.1 Electrical Services

	Description	Maintenance
7.1.1 Electrical Infrastructure	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, ETCI, CIBSE recommendations and be code compliant in all cases.
7.1.2 Lighting Services Internal and External	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.
7.1.3 Fire Alarm	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.
7.1.4 Fire Extinguishers	See above.	Annual inspection with replacement of all extinguishers at year 10 of scheme operation.

7.2 Mechanical Systems

	Description	Maintenance
7.2.1 Mechanical Plant	Air and water heat pumps will be utilised in a centralised plant strategy to provide the primary heating source for the development.	All equipment to be detailed as part of the detailed design section of the development. Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
7.2.2 Waste Management	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. This document will be implemented and further developed as the development is operated. A domestic waste strategy will be implemented to accommodate waste segregation and help reduce potential waste charges.	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.
7.2.3 Composting	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.
7.2.4 Water Services	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.
7.2.5 Gas Services	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.

7.3 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. The site is uniquely located in an area which has been identified for a district heating system (TDHS). The heating district scheme will utilise waste heat from a local data centre to provide low carbon, low-cost hot water, and space heating to buildings in the Tallaght area. By harnessing the waste heat and passing it through a large-scale heat pump it can achieve far greater efficiencies than air source heat pumps, even when supplying at high temperatures.

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
7.3.1 Centralised Plant	The district heating system will deliver Low Pressure Hot Water (LPHW) to the site in the form of a Flow Pipe and Return Pipe with ducting for Control / Metering. This will terminate in a Plate Heat Exchanger within a centralised plant room in the basement.	High efficiency system designed to recover waste from local data centre, providing low carbon, low-cost hot water, and space heating.
7.3.2 Pumps	All pumps serving the plant to be A rated energy efficiency.	High efficiency band for appliances ensures reduction in required primary energy
7.3.3 BMS	Advanced Building Energy Management system will control the plant to ensure its operation to maximum efficiency.	Optimised plant operation will use less primary energy
7.3.4 Heat Interface Units	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 will have two plate heat exchangers (one for heating the radiators and the second for heating the hot water in the kitchens and bathrooms) which will be fitted with an energy meter 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.
7.3.5 E-Car Charging Points	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 will allow future charging points to be installed at any of the car parking spaces with minimum works as and when required. 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.	Providing the option for E-Car charging points will futureproof the development.

8.0 Transport

	Description	Benefits
8.1.1 Public Transport Accessibility	The site benefits from excellent public transport connections including the new bus connects routes along Belgard Square East and two Luas stops at The Square and Tallaght Hospital. Both of which are an 8-minute walk from the development.	Proximity to Dublin's public transport network reduces resident reliability on private transport.
8.1.2 Bicycle Storage	It is proposed that there will be 670 no. cycle spaces available – including 186 visitor spaces at surface level and basement level.	Providing this infrastructure will encourage residents to cycle, thereby minimising their carbon footprint. Promoting bicycle use will lead to less congestion in the area around the development.
8.1.3 E-Car Facilities	Pre-wired infrastructure for future E-Car charging points will be installed in the under-croft carpark. Provision will be made around the entire car park to meet demand when required.	The development will be futureproofed against the rising demand for E-Car solutions.
8.1.4 Car Sharing	An E-Car car sharing scheme will be available onsite via a dedicated partnership such as Go Car or Yuko. Designated spaces will be assigned in the under-croft car park.	Implementing a car sharing scheme reduces the reliance on private motor ownership and encourages a sustainable environment.

Appendix 1

The BIF table below illustrates what would be incorporated for the calculation of a Sinking Fund, based on the proposed development. Specification to be finalized at detailed design stage:

Building Investment Fund Calculations			
Ref.	Element	Life Expectancy (years)	
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	Stair Cores & 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	