



Building Lifecycle Report

Proposed Build to Rent Scheme

Malahide Road (R107), Dublin 17.

On Behalf of Claregrove Developments Ltd.

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Disclaimer

Without Prejudice to the generality of this Building Lifecycle Report, the information provided is indicative and subject to change following detailed design and construction. As far as possible information is correct at the time of submission to the relevant authority for Planning Approval.

0.0 Introduction

The *Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities* (March 2018) provide policy guidance on the operation and management of apartment developments and include the requirement for the submission of a Building Lifecycle Report with planning applications.

This report is required to provide certainty on the long-term management and maintenance structures of Multi-Unit Developments, demonstrating compliance with *Multi-Unit Developments Act* of 2011. It should outline legal and financial arrangements, effective and appropriately resourced maintenance and operational regimes and show consideration of the long-term running costs of any scheme as they would apply on a per residential unit basis at the time of application. The *Building Lifecycle Report* should also demonstrate what specific measures have been considered to effectively manage and reduce costs for the benefit of residents.

Section 6.13 of the *Sustainable Urban Housing* 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 Apartment Guidelines 2018, and is divided into 2 sections to reflect the above requirements:

Section 01

Assessment of long-term running and maintenance costs as they would apply on a per residential unit basis at the time of application

Section 02

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

0.1 Proposed Development

This Building Lifecycle Report relates to the two blocks of the built to rent scheme at Malahide Road, Dublin 17. The complete proposal includes a variety of housing types, from own door duplexes to apartments. The scheme in total comprises 331 No. Units, of which 10 No. are own door duplexes, 81 No. are one bed two person apartments, 14 No. are 2 bed three person apartments, and 226 No. are 2 bed four person apartments.

Within the greater housing development, a range of open spaces and amenities such as dedicated recycling areas, shared work space, a gym and a laundry are provided. These will also be available to the residents within the apartment blocks, however, for the purposes of this report, only amenities provided within and immediately adjacent to the apartment block have been considered.

The proposed apartment development will be comprised of 321 No. apartment units and 10 No. own door duplexes designed to the highest standards as Build-to-Rent properties. These are arranged over 8 Storeys excluding the ground floor and mezzanine. All apartments are reachable via a lift are therefore accessible to disabled people. Total gross floor area of both Block A and Block B amounts to 2427.3 sqm

Internally both blocks include recycling areas, 201 parking spaces, 11 secure motorcycle spaces and 474 secure bicycle parking spaces. In addition, 166 no. visitor bicycle parking spaces are also provided to the front and sides of both blocks.

The blocks wrap around south easterly communal open spaces at the rear. External landscaped amenity space is provided through a landscaped public open space with seating and roof terraces. The area of the semi-public landscaped space equates to 1.910 sqm

Section 01

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

From the outset of this project, care has been taken by Claregrove Developments Ltd. to ensure that long-term running costs for residents and maintenance costs for the operators are reasonable. The aim of Claregrove Developments Ltd is to manage and minimise potential unnecessarily high running costs for expenditure on a per residential unit basis.

1.2 Property Management of the Common Areas of the Proposed Development

Claregrove Developments has considered the long-term running costs for residents and maintenance costs for the operators from the commencement of the design process, with the aim to manage and minimise potential unnecessarily high running costs for expenditure on a per residential unit basis.

Claregrove Developments Ltd. and their design team have a proven track record in the delivery of residential projects. The design team have applied lessons from previous schemes and the application of changes in the standards that have arisen from the new apartment guidelines. Therefore, ensuring the provision of an excellent end product which will be well managed and easily maintained for the foreseeable future.

For this report the Residence will be considered as per a Build-to-Rent, where there is a commercial entity owning or operating and maintaining the development. The Multi-Unit Developments Act, 2011 (MUD Act) sets out the legal requirements regarding the management of apartment developments. In this regard it is advised that when granting permission for such developments planning authorities attach appropriate planning conditions that require:

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

Build-To-Rent schemes, where there is a commercial entity owning, or operating and maintaining the development, may by their nature have different arrangements and obligations. Planning authorities should provide planning conditions for such developments which ensure the provision of appropriate management and maintenance structures including for the scenario where the BTR nature of a development is altered following specified period under SPPR 7(a) above.

1.3 Service Charge Budget

The property management company (PMC) has several key responsibilities for the development for agreement with the development owners.

There would typically be a service charge budget in multi-unit developments to cover items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security, property management fee, etc, to the development common areas in accordance with the Multi Unit Developments Act 2011 ("MUD" Act); with Build-to-Rent, this is required to be undertaken by management instead.

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 02

Measures specifically considered by the proposer to effectively manage & reduce costs for the benefit of residents.

The following is an indication of the energy saving measures that are planned for all units to assist in reducing day to day running costs for occupants:

2.1 Building Design

Measure	Description	Benefit
Daylighting to units	Where possible, as outlined in ' <i>Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities</i> (March 2018)' to have regard for quantitative performance approaches to daylight provisions 'outlined in guides like the BRE guide ' <i>Site Layout Planning for Daylight and Sunlight</i> ' (2nd edition) or BS 8206-2: 2008 – ' <i>Lighting for Buildings – Part 2: Code of Practice for Daylighting</i> ' when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision'.	Reduces the requirement for continuous daylighting, thus reducing the expense of artificial lighting
Daylighting to circulation areas	Natural lighting provided via tall windows at access entrance points into the building in both the front, rear and side elevations.	Reduces the requirement for continuous daylighting
External Lighting	<p>External lighting will comply with the latest standards and achieve:</p> <ul style="list-style-type: none"> • Low-level lighting • Utilise low voltage LED lamps • Minimum upward light spill <p>Each light fitting is to be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile.</p>	Lighting will be designed to achieve the required standards, provide a safe environment for pedestrians, cyclists, and vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna.

2.2 Landscape

Measure	Description	Benefit
Paving and Decking Materials	Use of robust high-quality materials and detailing to be durable for bikes, play, etc.	Ensures the longevity of materials.
Site Layout & Landscaping Design	<p>High quality landscaping both hard surface (for the cycle /car parking and 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.</p> <p>Designated car parking including accessible & visitor car parking reduces the travel distances for visitors with reduced mobility.</p>	<p>Plenty of room for cycles and pedestrians along with car spaces provide a good balance between pedestrians and car users.</p> <p>Wheelchair user-friendly.</p>
Balconies & openable windows	Use of balconies & openable windows allow individuals to clean windows themselves	Reduces the cost and reliance on 3 rd party contractors for cleaning & maintenance.

2.3 Energy & Carbon Emissions

Measure	Description	Benefit
BER Certificates	A Building Energy Rating (BER) certificate will be provided for each unit in the proposed development. This will provide detail of the energy performance of the units. This is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target an A2/A3 rating for the apartments this will equate to the following emissions. A2 – 25-50 kWh/m2/yr with CO2 emissions circa 10kgCO2/m2 year A3 – 51-75 kWh/m2/yr with CO2 emissions circa 12kgCO2/m2 /year	A BER rating is a reduction in energy consumption and running costs
Fabric Energy Efficiency	<p>Proposed U-Values will be in line with the requirements set out by the current & proposed Part L including Nearly Zero Energy Buildings targets.</p> <p><i>“Conservation of Fuel and Energy Buildings other than Dwellings”.</i></p> <p>Thermal bridging at junctions between construction elements and at other locations to be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L. See Table 1 of Part L, Building Regulations (Appendix C).</p>	Lower u-values and improved airtightness will be achieved to reduce the amount of heat loss throughout the building fabric, and lower the consumption of energy and therefore carbon emissions.

External Lighting	<p>Low energy LED public lighting shall be designed and specified in accordance with CIBSE lighting guide and Kildare County Council public lighting standards and shall:</p> <ul style="list-style-type: none"> • Provide Low-level lighting • Utilise low voltage LED lamps • Minimum upward light spill <p>Each light fitting is to be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile.</p>	Lighting will be designed to achieve the required standards, provide a safe environment for pedestrians, cyclists, and vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna.
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2.4 Low energy technologies considered:

Measure	Description	Benefit
Exhaust Air Heat Pump	<p>An exhaust air heat pump can cover up to 100% of the heating requirements of a well-insulated apartment.</p> <p>Can also work in conjunction with underfloor heating.</p>	Modern heat pumps will typically provide 4 to 5 times more heat energy to the dwelling than the electrical energy they consume. They have a lower consumption of energy and therefore lower carbon emissions.
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.
Mechanical Demand Control Ventilation (DCV)	The ventilation for the apartments shall be provided by a mechanical system with central extract and operating on the principle of Demand Control Ventilation (DCV)	Improved air quality and reduced costs in providing alternative heating etc.
E-car Charging Points	Ducting to be provided to designated car parking spaces for future provision of E-car charging points	Facilitating residents & visitors move to EV motoring
Renewable Energy	In accordance with the proposed part L amendments, the balance of renewable energy requirements shall be satisfied with roof-mounted photovoltaic panels.	Reducing electrical loads for each resident

2.5 Materials & Materials Specification:

Implementation of the Design and Material principles to the design of the building envelope, internal layouts, facades and detailing has informed the materiality of the proposed development.

The proposed envelope of the building is a mix of brick and pressed metal cladding with high-performance double-glazed aluminium windows. Based on comparison with similar schemes developed, the proposed materials are considered durable and would not require regular replacement or maintenance.

Materials have been selected with a view to longevity, durability and low maintenance. Consideration has been given to Building Regulations and includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'.

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

Measure	Description	Benefit
Implementation of the Design and Material principles to the design of the proposed development.	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and include reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Longevity, durability and low maintenance of materials
Brickwork to the building envelope		Requires minimal maintenance and does not require regular replacement
Installation of factory finished double glazed aluminium windows and doors		Requires minimal maintenance and does not require regular replacement

<p>Installation of factory finished Precast steel balconies</p>		<p>Requires minimal maintenance and does not require regular replacement</p>
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2.6 Waste Management:

Measure	Description	Benefit
<p>Construction and Operational Waste Management Plan</p>	<p>This application is accompanied by a Construction Management Plan prepared by JOR Consulting Civil & Structural Engineers</p> <p>A Construction and Operational Waste Management Plan will be prepared by JOR Consulting Civil & Structural Engineers and submitted to Dublin County Council prior to commencement of the development.</p>	<p>Demonstration of how the scheme has been designed to comply with best practice.</p>
<p>Storage of non-recyclable waste and recyclable household Waste</p>	<p>The inclusion of a centralised bin storage area.</p> <p>Domestic waste management strategy in place:</p> <ol style="list-style-type: none"> 1) Grey, Brown and Green bin distinction 2) Regular tendering for waste management collection 	<p>Access to all residents to reduce the risk of littering within the scheme and reduces potential waste charges.</p>
<p>Additional Recycling Centre</p>	<p>39 No. 1100 litre dry mixed recyclable containers and 10 No. 240 litre glass containers provided for weekly collection.</p>	<p>Helps to reduce waste charges and the amount of waste going to landfill.</p>
<p>Composting</p>	<p>22 No. 240 litre organic waste containers provided for weekly collection</p>	<p>Helps to reduce waste charges and the amount of waste going to landfill.</p>

2.7 Human Health & Well Being

How human health and well-being is been considered:

Measure	Description	Benefit
Natural daylight	Design of the layout of the building has been optimised to achieve a good quality of natural daylight to the units.	Reduces reliance on artificial lighting.
Security	Passive surveillance is incorporated into the design	Reduction in security management.
Accessibility	All units, egress routes and stair cores to comply with the requirements of Technical Guidance Documents Part M/ Part K	Reduces the level of adaptation required by residents.
Amenity	Provision of private external communal amenity space	Facilitates socialising & community interaction. Creates a high quality of living.
Private Open Space	Provision of private open space in the form of balconies and loggias	Facilitates interaction with outdoors, increasing potential health benefits.

2.8 Transport & Accessibility

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

Measure	Description	Benefit
Access to Public Transport	<p>Dublin Bus operates service number 15, 27, 42 and 43 along the Malahide Road R107 corridor adjacent to the subject site. This service connects Clongriffin station (North of the subject site) with Knocklyon, also serving Coolock, Artane, Connolly Station and Dublin City centre. This service is highly accessible with the closest Bus stop opportunity located immediately in front of the proposed Block A on the Malahide Road.</p> <p>The closest train station to the subject site is the Howth Junction and Donaghmede Station located approximately 3.1Km east of the subject site. It is 11minutes cycle, 40 minutes' walk and 9 minutes by car from the subject site. There are several high frequency peak period services operating daily to/from the Station serving</p>	Availability, proximity to bus and railway services reduces the reliance on the private motor.

	Belfast/ Dundalk and to Connolly station Dublin city centre which in turn serves Galway, Waterford and Cork. The Dart stops at Howth Junction and serves Howth to Greystones in Wicklow.	
Pedestrian Permeability	<p>There is provision of dedicated pedestrian and cycle infrastructure within the site. The Malahide Road is subject to a speed limit of 60kph with street lighting available along both sides of the route. There are good quality pedestrian and cyclist facilities available along the route, which alternate between Bus lanes and cycle tracks. Immediately to the north of the site there is a pedestrian crossing provided. In addition, there is a further pedestrian crossing provided at the Road junction as located to the North of Malahide Road.</p> <p>Clare Hall shopping centre and a Tesco Petrol station are located immediately north east of the site.</p>	<p>Ensures long-term attractiveness of walking, and cycling to a range of local facilities.</p> <p>This strong infrastructure ensures that there will be a balance of transport modes used by future residents of the proposed development.</p>
Bicycle Storage	468 No. secure bicycle parking spaces are provided internally within the scheme along with 166 No. external bicycle spaces. This is in line with the new apartment guidelines and promotes sustainable transport modes.	Accommodates the uptake of cycling and reduces the reliance on the private motor vehicle.

Appendix A

Table 1 Maximum elemental U-value (W/m²K)^{1, 2}		
Column 1 Fabric Elements	Column 2 Area-weighted Average Elemental U-Value (Um)	Column 3 Average Elemental U-value – individual element or section of element
Roofs		
Pitched roof		
- Insulation at ceiling	0.16	0.3
- Insulation on slope	0.16	
Flat roof	0.20	
Walls	0.21	0.6
Ground floors ³	0.21	0.6
Other exposed floors	0.21	0.6
External doors, windows and rooflights	1.6 ⁴	3.0
Notes:		
1. The U-value includes the effect of unheated voids or other spaces.		
2. For alternative method of showing compliance see paragraph 1.3.2.3.		
3. For insulation of ground floors and exposed floors incorporating underfloor heating, see paragraph 1.3.2.2.		
4. Windows, doors and rooflights should have a maximum U-value of 1.6 W/m ² K when their combined area is 25% of floor area. However areas and U-values may be varied as set out in Table 2.		

Figure 1- TGD Part L 2011, Table 1

Appendix B

Figure 4 Phases of the life cycle

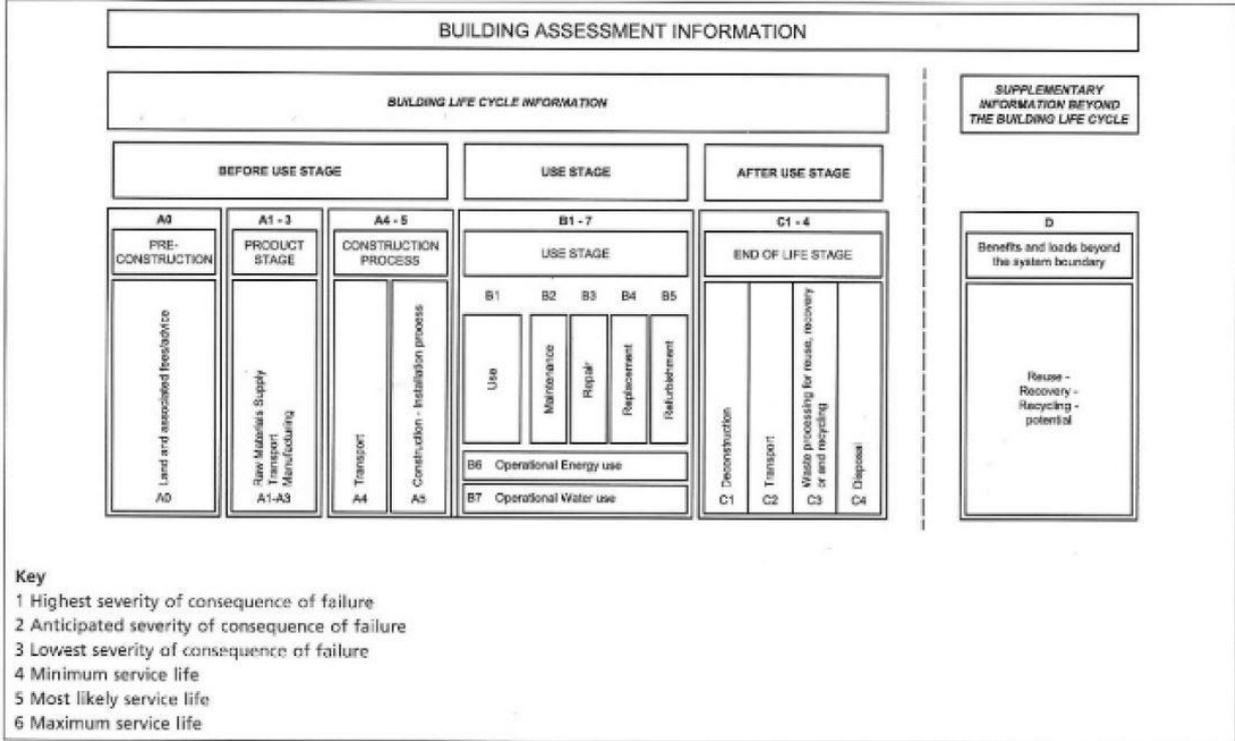


Figure 2 - BS 7543:2015 Figure 4