BUILDING MAINTENANCE REPORT

Paintworld, 1 - 2 Ballymount Road Lower, Dublin 12

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Contents

Document prepared by

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01 INTRODUCTION

Section 6.13 of the "Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities 2018" requires that planning applications for apartment development:

"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 Lifecycle Report document sets out to address the requirements of Section 6.13 of Apartment Guidelines 2018.

02 SECTION ONE

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 Property Management of the development

The development will be managed by an Operational Team with an on site Residents Service Manager (RSM) during working hours.

The RSM is supported by an Asset management team who will control the following;

1.2 Service Charge Budget

The property management company (MC) has a number of key responsibilities with first and foremost being the compiling of the **service charge budget** for the development which forms part of . 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** and this allowance is determined following the review of the Building Investment Fund (BIF) report prepared by for the MC. The BIF report once adopted by the MC, 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.

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

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

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 has not been included in this document.

03 SECTION TWO

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

2.1 Energy and Carbon Emissions

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

Measure	Description	Benefit
BER Certificates	A Building Energy Rating (BER) certificate will be provided for each dwelling in the proposed development 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. 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	Higher BER ratings reduce energy consumption and running costs.

<table>
<tr><th>Measure</th><th>Description</th><th>Benefit</th></tr>
<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, titled “Conservation of Fuel and Energy Buildings other than Dwellings”.
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 Documents Part L. See below Table 1 of Part L, Building Regulations.

Table 1 Maximum elemental U-value (W/m^2K)[1, 2]
<table><tr><th>Column 1 Fabric Elements</th><th>Column 2 Area-weighted Average Elemental U-Value (Um)</th><th>Column 3 Average Elemental U-value – individual element or section of element</th></tr><tr><td>Roofs

Pitched roof
- Insulation at ceiling
- Insulation on slope

Flat roof</td><td>

0.16
0.16

0.20</td><td>

0.3

</td></tr><tr><td>Walls</td><td>0.21</td><td>0.6</td></tr><tr><td>Ground floors[3]</td><td>0.21</td><td>0.6</td></tr><tr><td>Other exposed floors</td><td>0.21</td><td>0.6</td></tr><tr><td>External doors, windows and rooflights</td><td>1.6[4]</td><td>3.0</td></tr><tr><td colspan="3">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</td></tr></table></td><td>Lower U-values and improved air tightness is being considered.
considered to help minimise heat losses through the building fabric, lower of energy consumption and thus minimise carbon emissions to the environment.</td></tr>
<tr><td>Energy Labelled White Goods</td><td colspan="2">The white good package planned for provision in the apartments will be of a very high standard and have a high energy efficiency rating. It is expected that the below appliance ratings will be provided:
• Oven - A plus
• Fridge Freezer - A plus
• Dishwasher - AAA
• Washer/Dryer - B</td><td>The provision of high rated appliances in turn reduces the amount of electricity required for occupants.</td></tr>
</table>

2.2 Materials

The practical implementation of the Design and Material principles has informed design of building facades, internal layouts and detailing of the proposed apartment buildings.

2.2.1 Buildings

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
Daylighting to circulation areas	Avoids the requirement for continuous artificial lighting
Natural/Passive ventilation system to circulation areas	Avoids costly mechanical ventilation systems and associated maintenance and future replacement
External paved and landscaped areas	All of these require low/minimal maintenance

2.2.2 Material Specification

Measure Description	Benefit
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. Entrance stair hall of the proposed Apartment buildings 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: Annex A Climatic Agents affecting Durability Annex B Guidance on materials and durability Annex C Examples of UK material or component failures Annex D Design Life Data sheets	Ensures that the long-term durability and maintenance of Materials is an integral part of the Design and Specification of the proposed development.
Use of brickwork and cladding systems to envelope  	Requires no on-going maintenance.

2.2.2 Material Specification

Measure Description	Benefit
Stone cladding to the Retail on ground floor.  	Requires no ongoing maintenance
Use of self coloured render on rear elevation	Requires minimal on going maintenance

2.3 Landscape

	Measure Description	Benefit
Green Roofs	Use of Green roofs and traditional roof coverings with robust and proven detailing to some roof elements. 	Attenuation reduces the burden on vulnerable rainwater goods, resulting in fewer elements that could require replacement or repair. Green roofs are energy efficient. In summer the green roof protects the building from direct solar gain and in winter the green roof minimises heat loss. Energy conservation translates into fewer greenhouse gas emissions. Green roofs improve air quality. Plants trap dust particles from the air and evapotranspiration cools ambient temperatures.
Paving and Decking Materials	Use of high quality and durable paving and decking materials. 	Require no on-going maintenance.

2.4 Waste Management

Measure	Description	Benefit
Storage of Non-Recyclable Waste and Recyclable Household Waste	Domestic waste management strategy: 1) Grey, Brown and Green bin distinction 2) Competitive tender for waste management collection	Helps reduce potential waste charges.
Composting	Organic waste bins to be provided throughout	Helps reduce potential waste charges

2.5 Health and Well being

Measure	Description	Benefit
Natural/Daylight	The design, separation distances and layout of the apartment blocks have been designed to optimise the ingress of natural daylight/ sunlight to the proposed dwellings to provide good levels of natural light. All units are dual aspect.	Reduces reliance on artificial lighting thereby reducing costs.
Accessibility	All units will comply with the requirements of Part M/K.	Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances.
Security	The scheme is designed to incorporate passive surveillance with the following security strategies likely to be adopted: • CCTV monitoring at security sensitive areas of the development • Routine access fob audits	Help to reduce potential security/management costs.
Fire Safety	The Operator will be responsible for the preparation of a comprehensive fire risk assessment and the maintenance and servicing of the fire alarm panel and communal sprinkler system in the development including plant in individual apartments.	Ensures ongoing compliance with Part B

04 APPENDIX A

ITEMS INCLUDED IN A TYPICAL BIF

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

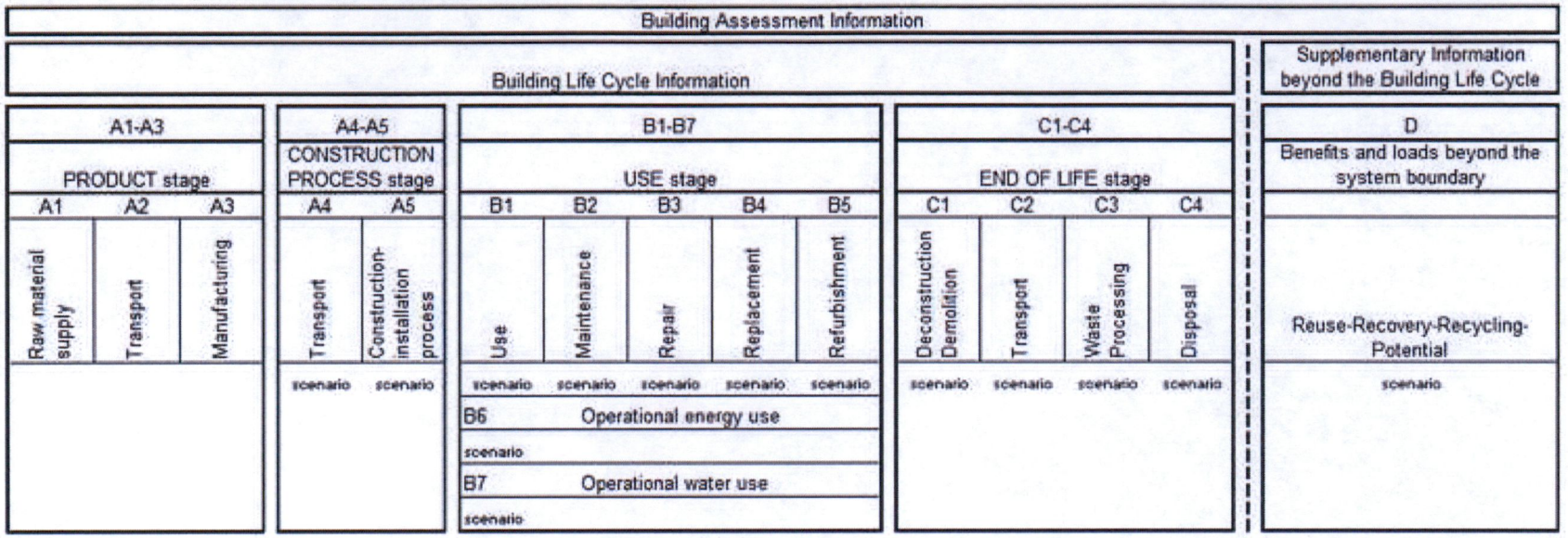
	Building Investment Fund (Sinking Fund)	
Ref	Element	Life Expectancy
1.00	Roofs	
1.01	Replacement of insulation to main roof	18
1.02	Replacement parapet details	18
1.03	Replace roof access hatches	25
1.04	Specialist Roof Systems - Fall arrest	25
2.00	Elevations	
2.01	Replace exit/entrance doors	25
2.02	Replace rainwater goods	25
2.03	Repair render	18
2.04	Periodic replacement and overhauling of external fixings	5
3.00	Stair Cores and 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 and lobbies)	12
3.06	Replace entrance mats	10
3.07	Replace nosings	12
3.08	Fixed furniture and Equipment	18

04 APPENDIX A

	Building Investment Fund (Sinking Fund)	
Ref	Element	Life Expectancy
4.00	M&E Services	
4.01	Central Boilers	12
4.02	Circulating Pumps	15
4.03	HIU Apartment Heat Exchangers	10
4.04	Exhaust Air Heat Pump	10
4.05	Replace internal light fittings	18
4.06	Replace External light fittings	18
4.07	Replace smoke detector heads	18
4.08	Replace manual break glass units	18
4.09	Replace Fire alarm panel	18
4.10	Replace lift car and controls	25
4.11	Replace AOV's	25
4.12	Replace security access control installation	15
4.13	External Mains water connection	20
4.14	Electrical Mains and Sub Mains distribution	20
4.15	Emergency Lighting	20
5.00	Exterior	
5.01	External boundary treatments –Recoat powder coated finishes to railings	60
5.02	Replace CCTV system	12
5.03	External handrails and balustrade	18

05 APPENDIX B

Phases of the Life Cycle of BS7543;2015



KEY

1. Highest severity of consequence of failure
2. Anticipated severity of consequence of failure
3. Lowest severity of consequence of failure
4. Minimum service life
5. Most likely service life
6. Maximum service life