ARCHITECTURAL | BUILDING LIFECYCLE REPORT

PROPOSED RESIDENTIAL DEVELOPMENT, LANDS AT KILGOBBIN ROAD, STEPASIDE, CO. DUBLIN

SEPTEMBER 2025

DOWNEY

Document prepared by

Downey

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On behalf of

Kilgobbin Apartments Ltd,

for lands at

Kilgobbin Road,

Stepaside,

Co. Dublin

September 2025

DOWNEY

01|INTRODUCTION

Section 6.12 of the "Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities 2022" 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 6.12 of Apartment Guidelines 2022.

Project Description:

"The proposed Large-Scale Residential Development (LRD) will provide 120 no. apartment units within 2 no. blocks ranging in height from 4- to 6-storeys. The development will consist of; Block A, consisting of 44 no. units (27 no. 1 bed (2-person), 13 no. 2 bed (3-persons), 1 no. 2 bed (4-persons) and 3 no. 3 bed (5-persons) of 4- to 5-storeys height and of Block B, consisting of 76 no. units (40 no. 1 bed (2-persons), 12 no. 2 bed (3-persons), 16 no. 2 bed (4-persons) and 8 no. 3 bed (4-persons) of 5- to 6-storeys height.
The proposed development will provide all associated public open space and play area, 54 no. car parking spaces including accessible parking and Electric Vehicle parking, 273 no. bicycle parking spaces, 3 no. motorcycle parking spaces, bin/waste store and a plant room at ground floor level, 1 no. detached ESB substation and 1 no. detached bicycle store for Block A residents. The proposed development will also provide for all associated site development and infrastructural works including foul and surface water drainage, roads, footpaths, landscaping, boundary treatment and a pedestrian and cycling pathway connecting Belarmine Vale and Kilgobbin Road. Vehicular access to the development will be via Belarmine Vale."

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

Property Management Company and Owners Management Company (OMC)

1.1 Property Management of the development

A property management company will be engaged at an early stage of the development to ensure that all property management functions are dealt with for the development and that the running and maintenance costs of the common areas of the development are kept within the agreed Annual operational budget.

The property management company will enter into a contract directly with the OMC for the ongoing management of the built development. Note This contract will be for a maximum period of 3 years and in the form prescribed by the PSRA.

The Property Management Company also has the following responsibilities for the development once constructed:

- 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
- Transfer of documentation in line with Schedule 3 of the MUD Act
- Estate Management
- Third Party Contractors Procurement and management
- Accounting Services
- Corporate Services
- Insurance Management
- After Hours Services
- Staff Administration

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. 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.

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<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></table>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><td>Lower U-values and improved air tightness is being 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>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>

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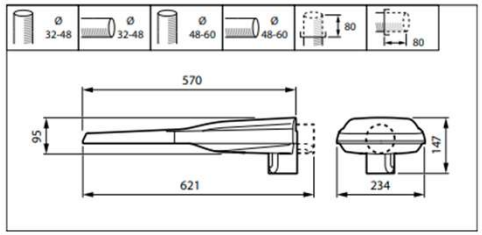
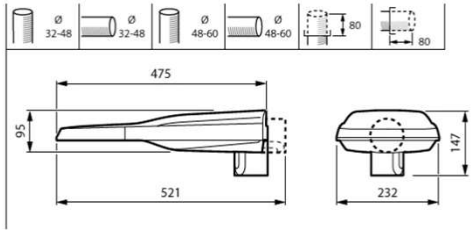
Measure	Description	Benefit
External Lighting	The design proposes to use 4 types of luminaire: TYPE A (17 units): Luminaire A BGP291 DW50 BL1 Lamp LED-HB 5.2S 730 MF 0.80	Provides a safe environment for pedestrians, cyclists and moving vehicles, to deter anti-social behaviour and to limit the environmental impact of artificial lighting on existing flora and fauna in the area.



Light Technical	
Luminaire light beam spread	150° - 43° x 67°
Light source colour	740 neutral white
Correlated Colour Temperature (Nom)	4000 K
Colour rendering index (CRI)	70
Optic type outdoor	Distribution extra-wide 10
Upwards light output ratio	0

TYPE B (8 units):
Luminaire B BGP291 DM11 BL1 Lamp
LED-HB 5.2S 730 MF 0.80



Light Technical

Upwards light output ratio	**0**	Light source colour	**740 neutral white**
Luminous Flux	**4,350 lm**	Luminaire light beam spread	**160° - 42° x 54°**
Correlated Colour Temperature (Nom)	**4000 K**	Optic type outdoor	**Distribution medium 11**
Luminous efficacy (rated) (nom.)	**145 lm/W**	Effective projected area	**0.0235 m²**
Colour rendering index (CRI)	**70**		

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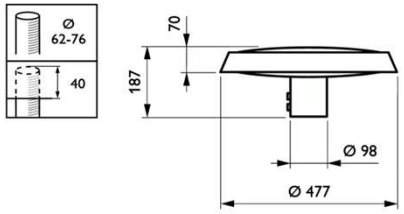
Measure	Description	Benefit
External Lighting	TYPE C (5 units): Luminaire C BGP291 DRXN1 Lamp LED-HB 5.2S 730 MF 0.80  TYPE D (2 units): Luminaire D BDP260 DS50 LED35/- Lamp LED35-4S/730 MF 0.80 	Provides a safe environment for pedestrians, cyclists and moving vehicles, to deter anti-social behaviour and to limit the environmental impact of artificial lighting on existing flora and fauna in the area.

Supplier	Philips
Type	BGP291 DRXN1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	1.00
File Name	LumiStreet Gen2 Micro_BGP291_DRXN1_1000_6LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	1155.3, 26.3, 0.0
No. in Project	2



Light Technical	
Upward light output ratio	0
Luminous Flux	3,550 lm
Correlated Color Temperature (Nom)	4000 K
Luminous Efficacy (rated) (Nom)	115 lm/W
Color rendering index (CRI)	70
Light source color	740 neutral white
Luminaire light beam spread	152° x 155°
Optic type outdoor	Distribution symmetrical 50
Effective projected area	0.042 m²

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The following are low energy technologies that are being considered for the development and during the design stage of the development the specific combination from the list below will be decided on and then implemented to achieve the A2 BER Rating**.**

Measure	Description	Benefit
Heating & Hot water	An Exhaust Air Heat pump EAHP solution shall be designed for the apartments. It extracts energy from the warm air as it leaves the home via the ventilation system and uses it to heat the radiators and domestic hot water. The installation of an EAHP is self-contained within each apartment and only requires an ESB connection and standard mains water connection.	An exhaust air heat pump can provide for the heating requirements of a well-insulated apartment in some of the coldest conditions. When working efficiently, it can reduce consumption for heating by up to 50% when compared to conventional heating systems
Space Heating	The units will be heated with steel, horizontal panel radiators in each room of the units and designed for the operating temperature of the heat pump. Each unit shall have two heating zones, the first zone will be the main open plan kitchen / living room and the second zone will be the bedrooms.	Smart technology can be used to control the system by phone app.
Ventilation	The ventilation for the apartments shall be provided by the EAHP and be classed as mechanically ventilated. The central extract shall operate on the principle of mechanical extract ventilation (MEV). MEV will be commissioned with two dedicated extract flow rates for the unit, one for background ventilation and one for boost ventilation.	Optimum levels of ventilation and air quality will be maintained 24/7 for the health and comfort of residents.

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Measure	Description	Benefit
Smart Building Technology	The Developer anticipates providing significant Resident controls on various aspects including smart heating systems facilities* booking systems and integration with external services providers	

2.2 Materials

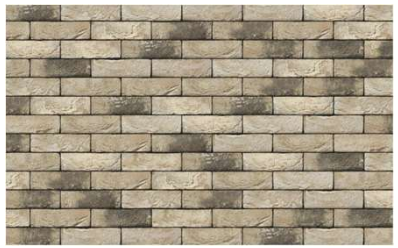
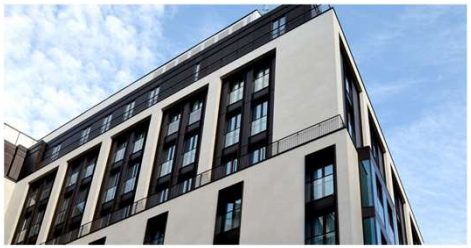
The practical implementation of the Design and Material principles has informed design of building facades, internal layouts and detailing of the proposed apartment buildings.

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
Secure ground floor level cycle and refuse storage areas. Refuse is collected from a surface level collection point.	Avoids access lifts and any handling/moving equipment.
External paved and landscaped areas	All of these require low/minimal maintenance

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 stone to envelope  Light Brown Brick or Similar  Portland Limestone or Similar	Requires minimal on-going maintenance.

2.2 Material Specification

Measure Description	Benefit
  Standing Seam Cladding Anodized Dark Grey and Light Grey or similar  Use of glass balustrades	Requires minimal ongoing maintenance
Use of factory finished and Aluminium frame windows and doors.	Requires no ongoing maintenance

2.3 Landscape

	Measure Description	Benefit
Green/Blue Roofs	Use of Green/ Blue 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	 Permeable block paving – grey or similar  Proposed washed aggregate concrete footpath  Proposed Block Paving – Beige or similar	Robust, hard wearing materials that require little to no maintenance.

2.3 Landscape

	Measure Description	Benefit
Paving and Decking Materials	 Proposed Tarmacadam paving  Proposed grasscrete  Proposed play safety surface	Robust, hard wearing materials that require little to no maintenance.
Materials	Sustainable, robust materials, with high slip resistance to be used for paving. Durable and hardwearing equipment (e.g. benches, movable furniture, natural play elements etc.) to be used throughout.   	Robust materials and elements reduce the frequency of required repair and 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 block of apartments have been designed to optimise 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 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

2.6 Management

Measure	Description	Benefit
Residents Guide	Once a purchaser completes their sale, a homeowner box will be provided which will include: • 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. • 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 clearly informed of their obligations in regard to the use of the property and other residents at the outset so that any issues can be addressed in a timely and efficient manner. Residents are encouraged to engage with each other and their immediate environment in order to develop a sense of community that contributes to positive social environments

2.6 Transport

Measure	Description	Benefit
Access to Public Transport (Bus Services)	The proposed development site, located immediately north of Kilgobbin Castle, offers excellent connectivity. A key feature is a new pedestrian link across the southern part of the site, reducing walking times to the Gallops Luas Station from 26 minutes to just 15 minutes for residents of the adjoining Belarmine Estate and Stepaside Educate Together National School. The Gallops Luas Station provides regular Green Line services to Sandyford, Dundrum, and Dublin City Centre. The site is also served by Dublin Bus routes 44 and 47, connecting Enniskerry, Belarmine, UCD, and Dublin City Centre. Planned improvements under the BusConnects initiative will enhance bus frequency and reliability in the area. Additionally, the site benefits from proximity to the M50 and N11, offering convenient access for private vehicles.	The proximity, frequency and range of destinations served by these local bus services enhance the accessibility levels of the proposed residential development in addition to providing a viable and practical sustainable alternative to journeys undertaken by the private motor car.
Bicycle Storage	The provision of high quality secure bicycle parking facilities, for both short term and long-term parking requirements.	Accommodates the uptake of cycling and reduces the reliance on the private motor vehicle.

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 felt roof covering incl. insulation to main roofs	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

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	Building Investment Fund (Sinking Fund)	
Ref	Element	Life Expectancy
4.00	Basement Car Park	
	Check drains for accumulation of debris and other sediments	6
4.02	Repaint parking spaces and numbering	7
5.00	M&E Services	
5.01	Central Boilers	12
5.02	CHP Engine	12
5.03	Circulating Pumps	15
5.04	HIU Apartment Heat Exchangers	10
5.05	Exhaust Air Heat Pump	10
5.06	Replace internal light fittings	18
5.07	Replace External light fittings	18
5.08	Replace smoke detector heads	18
5.09	Replace manual break glass units	18
5.10	Replace Fire alarm panel	18
5.11	Replace lift car and controls	25
5.12	Replace AOV's	25
5.13	Replace security access control installation	15
5.14	External Mains water connection	20
5.15	Electrical Mains and Sub Mains distribution	20
5.16	Emergency Lighting	20

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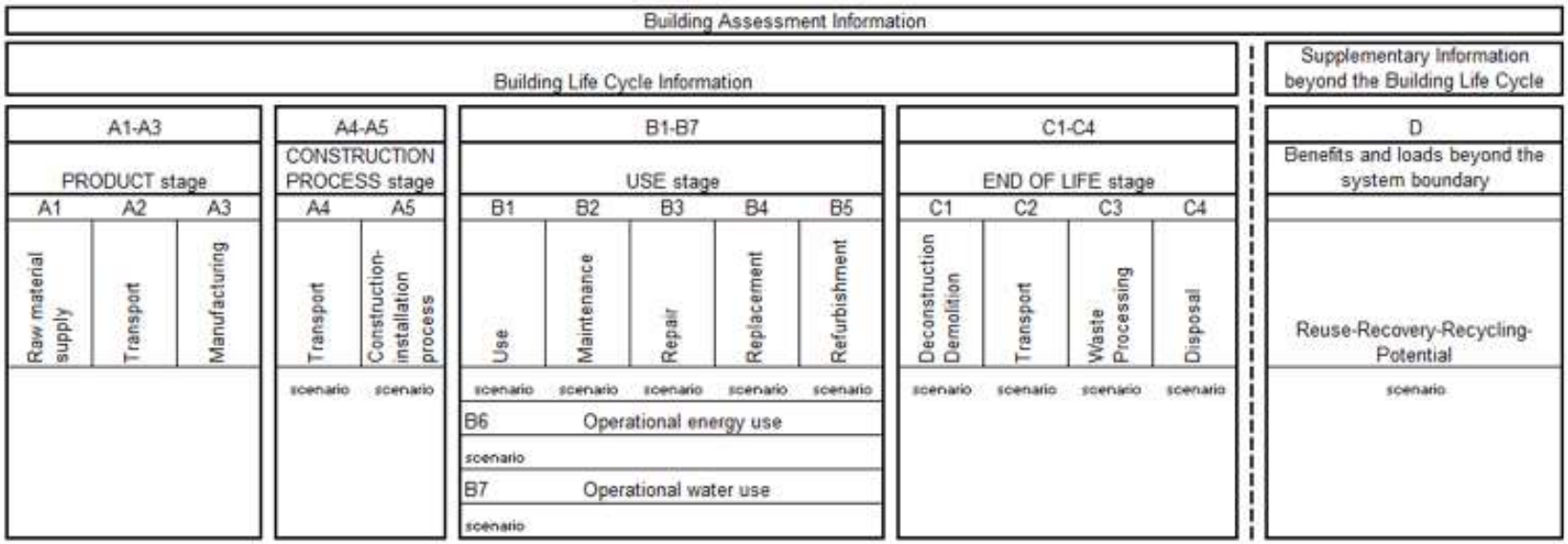
	Building Investment Fund (Sinking Fund)	
Ref	Element	Life Expectancy
6.00	Exterior	
6.01	External boundary treatments –Recoat powder coated finishes to railings	60
6.02	15 year cutback of trees. Overhaul landscaping generally	20
6.03	Replace CCTV system	12
6.04	External handrails and balustrade	18

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