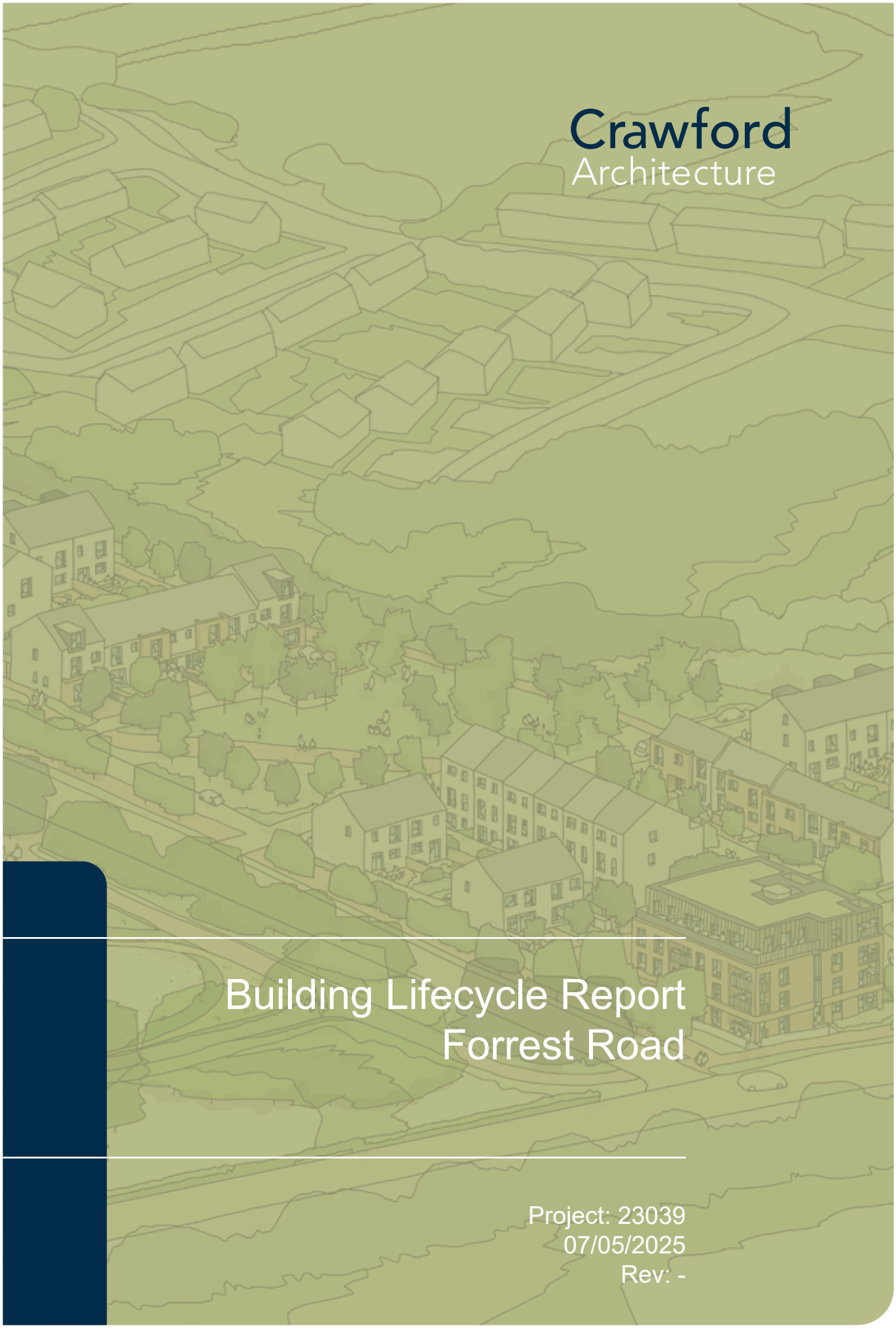
Crawford
Architecture



Building Lifecycle Report
Forrest Road

Project: 23039
07/05/2025
Rev: -

Crawford Architecture

Contents

1.0 Introduction

The Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2023) provide policy guidance on the operation and management of apartment developments, to include a statement of the aim of certainty regarding their long-term management and maintenance structures. This certainty is to be provided via legal and financial arrangements supported by effective and appropriately resourced maintenance and operational regimes.

The Guidelines state that consideration is to be given matters of the long-term running costs and the manner of compliance of the proposal which should now be considered as part of any assessment of a proposed apartment development to achieve this policy objective, planning applications for apartment developments now need to include a Building Lifecycle Report with the Multi- Unit Developments Act, 2011; these are to include an 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 specific measures have been considered to effectively manage and reduce costs for the benefit of residents.

Section 6.12 of the Apartment Guidelines 2023 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 6.12 of Apartment Guidelines 2018, and is divided into 2 sections:

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’

1.1 Project Description

Insert from Downey.

2.0 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).

2.1 Property Management of the Common Areas of the development

2.1.1 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.

2.1.2 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.

2.1.3 The Property Management Company also has the following responsibilities for the apartment 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
- Fair and equitable apportionment of the Annual operational charges in line with the 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
- Transfer of documentation in line with Schedule 3 of the MUD Act
- Estate Management
- Third Party Contractors Procurement and management
- OMC Reporting
- Accounting Services
- Corporate Services
- Insurance Management
- After Hours Services
- Staff Administration

2.2 Service Charge Budget

2.2.1 The property management company (PMC) 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).

2.2.2 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 PMC, 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.

2.2.3 In line with the requirements of the MUD Act, the members of the PMC 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.

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

2.2.5 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.

3.0 Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents

3.1 Building Design

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

The 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 units	Reduces the requirement for continuous daylighting, thus reducing the expense of artificial lighting
Daylighting to circulation areas (stairs and common corridors)	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 level cycle and refuse storage areas. Refuse is collected directly from the bin store	Avoids access lifts and any handling/moving equipment
External paved and landscaped areas	All of these require low or minimal maintenance
External lighting	Lighting will be designed to achieve required standards, provide a safe environment for pedestrians, cyclists, vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna

3.2 Landscape

	Measure Description	Benefit
Blue/Green Roofs	Use of blue/green roof and robust and proven detailing to 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 protectes 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 robust high-quality materials and detailing to be durable for play, etc. 	Requires no on-going maintenance
Site Layout & Landscaping Design	Removal of poor-quality trees, and phased monitored replacement of low-quality trees with high quality native trees. High quality landscaping with landscape, cycles and pedestrians prioritised over car. An increase in soft landscaping.	Natural attenuation and landscaping are preferable.
Balconies & Openable windows	Use of balconies & openable windows allow individuals to clean windows themselves	Reduces the cost of 3rd party contractors

3.3 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, 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 c. 10kg CO2/ m2/yr A3 - 51-75 kwh/m2/yr with CO2 emissions c. 12kg CO2/ M2/yr	Higher BER ratings reduce energy consumption and running costs.
Fabric Energy Efficiency	The U-Values being proposed will be in line with the requirements set out by the current regulatory requirements of the TGD Part L 'Conservation of Fuel and Energy Buildings other than Dwellings'. Thermal bridging at junctions between construction elements and at other locations will be minimised in accorddance with Paragraphs 1.2.4.2 and 1.2.4.3 within TGD Part L.	Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric, lower energy consumptions and this minimise carbon emissions to the environment.

Energy Labelled White Goods	The white goods 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+ Fridge Freezer - A+ Dishwasher - AAA Washer/Dryer - B	The provision of high rated appliances in turn reduces the amount of electricity required for occupants.
External Lighting	Low energy LED public lighting shall be designed and specified in accordance with CIBSE lighting guide and Fingal County Council public lighting standards and shall: • Low level lighting • Utilise low voltage LED lamps • Minimum upward light spill • Be pre-approved by / in accordance with the Fingal County Council 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.	Lighting will be designed to achieve required standards, provide a safe environment for pedestrians, cyclists, vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna

3.4 Low energy technologies considered

Exhaust Air Heat Pump	An Exhaust Air Heat Pump (EAHP), can be considered to be an energy recycling system. It collects energy from the warm air inside as it leaves your home via the ventilation system and re-uses it to heat the radiators and domestic hot water. The installation of an EAHP is self-contained within each apartment and only requires and 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
CMEV (Continuous Mechanical Extract Ventilation)	As part of the EAHP the waste air shall be extracted from the wet rooms and discharged to the façade. This ensures all the residential units remain fresh with an air change in accordance with Part F of the building regulations.	The main advantages of CMEV are: Improved indoor air quality More efficient than intermittent systems because it avoids the energy spikes of turning on/ off Maintains a stable indoor environment Designed to run continuously at low speeds, making them quieter than traditional extract fans Fewer moving parts and no need for user interaction make it reliable and easy to maintain

EV Charging	Ducting shall be provided from a local landlord distribution board to designated EV charging car park spaces. This will enable the management company the option to install a number of EV charging points within the carpark to cater for EV demand of the residence. This system operates on a single charge point access card. A full re-charge can take from one to eight hours using a standard charge point. Other car spaces are adaptable to e-charging installation in future.	Providing the option of EV charging points will allow occupants to avail of the ever-improving efficient electric car technologies.
Photovoltaics	Solar PV collector convetr the energy of the sun into electricity that can be used within the household reducing the amount of electricity imported from the grid. PV collectors can be installed on the roof. While only up to 20% of the sun irradiation available is recovered, this energy form (electricity) comes with the flexibility of being suitable for many uses.	Reduces the reliance on fossil fuels and reduces bills for occupiers.
Water Conservation Measures	The requirements for low flow sanitary ware (water restrictors) in each dwelling shall be considered during the detailed design stage. This is a water conservation initiative and reduces waste by restricting water flowrates to a shower within the dwelling. The shower head fittings could be provided with a reduced flow to allow for the conservation of water use as well as reducing energy used to heat hot water.	Reduces water consumptions for each household.
Low energy LED Lighting	Shall be designed and specified in accordance 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.

3.5 Materials

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

The proposed envelope of the building is brick, with uPVC double-glazed windows. Based on comparison with similar schemes developed, the proposed materials are durable and would not require regular replacement or maintenance. Materials have been selected with a view to longevity, durability and low maintenance.

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
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 metal cladding systems to building envelope 	Requires minimal maintenance and does not require regular replacement
Use of brickwork construction to building envelope 	Requires minimal maintenance and does not require regular replacement

Use of factory finished uPVC windows and doors and stainless steel balconies 	Requires minimal maintenance and does not require regular replacement

3.6 Waste Management

	Measure Description	**Benefit**
Construction Environmental Management Plan, a Resource Waste Management Plan and an Operational Waste Management Plan	The application is accompanied by a Construction Environmental Management Plan and a Resource Waste Management Plan by Barrett Mahony Consulting Engineers and an Operational Waste Management Plan prepared by Wave Dynamics.	The reports demonstrate how the scheme has been designed to comply with best practice.
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	Orgagnic waste bins to be provided throughout. 3 bin system to be provided as part of kitchen	Helps reduce potential waste charges

3.7 Health and Well-being

	Measure Description	**Benefit**
Natural Daylight	The layout, orientation, window arrangement and separation distances of the apartment blocks have been designed to optimise the ingress of natural daylight and 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 and Part K. 81% of Units in Block B comply with Universal Design requirements.	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	Helps to reduce potential security/ management costs
Amenity	Provision of public / communal amenity space	Facilitates socialising, community interaction
Private Open Space	Provision of private open space	Facilitates interaction with outdoors

3.8 Mangement

	Measure Description	**Benefit**
Resident's 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 as informed as possible so that any issues can be addressed in a timely and efficient manner.

3.9 Transport

	Measure Description	**Benefit**
Access to Public Transport (Bus Services)	The proposed development by virtue of its location will be connected into the surrounding area, which benefits from a permeable, legible urban structure. The area is served by the bus line 102. The proposal seeks to extend and improve the existing cycle infrastructure on Forrest Road.	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.
Pedestrian Permeability	Provision of dedicated pedestrian and cycle infrastructure within the site	Ensures long term attractiveness of walking, and cycling to a range of local retail, sports, education and office facilities

Bicycle Storage	The provision of high quality secure bicycle parking facilities, for both short term and long-term parking requirements. This includes an individual locker per apartment, enhancing the attractiveness of the bike parking.	Accommodates the uptake of cycling and reduces the reliance on the private motor vehicle.
Motorcycle Parking	The implementation of secure, attractive, best practice motorcycle parking facilities for residents.	Reduces the reliance on the private motor vehicle in parallel with reducing oil dependency.

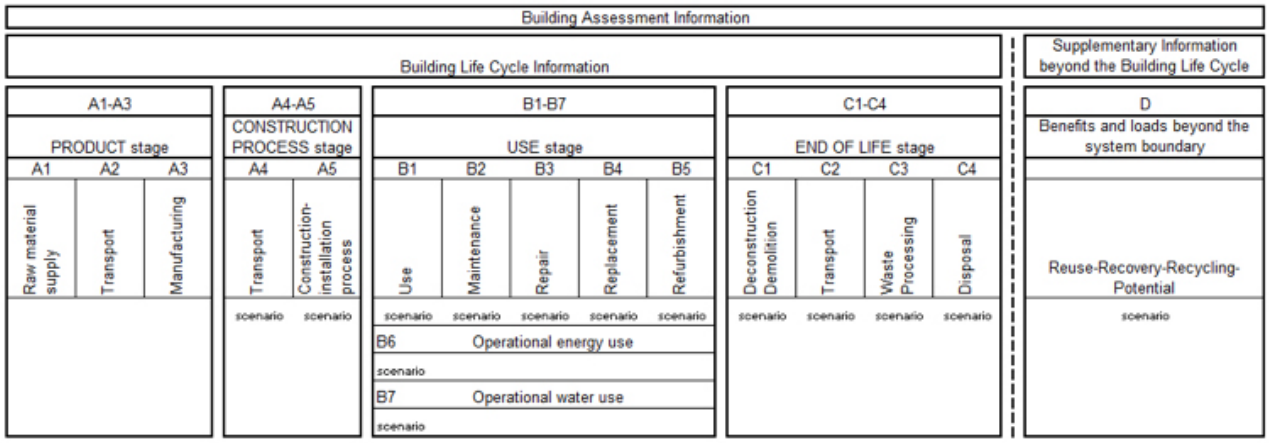
4.0 Appendix A

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

Ref	Element	Life Expectancy
1.00	Roofs	
1.01	Replacement felt roof covering incl. insulaton 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 brickwork	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	12
3.06	Replace entrance mats	20
3.07	Replace nosings	12
3.08	Fixed furniture and equipment	18
4.00	Basement Car Park	
4.01	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	Circulating pumps	15
5.03	HIU Apartment Heat Exchangers	10
5.04	Exhaust Air Heat Pump	10
5.05	Replace internal light fittings	18
5.06	Replace external light fittings	18
5.07	Replace smoke detector heads	18
5.08	Replace manual break glass units	18
5.09	Replace fire alarm panel	18
5.10	Replace lift car and controls	25
5.11	Replace AOVs	25
5.12	Replace security access control installation	15
5.13	External mains water connection	20
5.14	Electrical mains and sub mains distribution	20
5.15	Emergency Lighting	20
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

5.0 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

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