



Building Lifecycle Report

OMN-JFA-ZZ-XX-RP-A-P7003

Omni Plaza SHD

Omni Park Shopping Centre, Santry, Dublin 9

On Behalf of Serendale Ltd



John Fleming Architects

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Disclaimer

Without Prejudice to the generality of this Building Lifecycle report, provides information which is indicative and subject to change following a review when a more detailed specification of scope of works becomes available and it is intended that this study would form the basis of a planning application to the relevant authorities.

0.0 Introduction

The adopted *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, 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 to matters of the long-term running costs and the manner of compliance of the proposal should 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 6.13 of the Apartment Guidelines 2018 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:

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

The lands primarily comprise the former Molloy & Sherry Industrial / Warehouse premises and lands generally to the north west corner of the Omni Park Shopping Centre including revisions to part of existing surface carpark to facilitate a new public plaza. The site is c.2.5 ha in size and located primarily to the west of Lidl and to the north and east of the IMC Cinema within the Omni Park Shopping Centre and east of Shanliss Avenue.

The proposed development comprises:

- The demolition of existing buildings (including 2 no. ESB sub stations) and the construction of a mixed use residential (457 apartments) and commercial development ranging in height from 4 to 12 storeys over basement in four blocks, with internal residential amenity space, childcare facility, community building and two retail/café/restaurant units.
- The overall residential unit mix proposed comprises: 1 no. studio apartment (c.0.2%), 221 no. 1-bed apartments (c.48%), 211 (c.46%) no. 2-bed apartments and 24 (c.5%) no. 3-bed apartments.
- The residential Blocks are broken down as follows:
 - Block A: comprises 83 No. units from 4 to 8 storeys in height;
 - Block B: comprises 76 No. units from 4 to 8 storeys in height;
 - Block C: comprises 165 No. units from 9 to 12 storeys in height;
 - Block D: comprises 133 No. units from 10 to 11 storeys in height;
- The proposed development will also provide for:
 - 2 no. retail/café/restaurants totalling 430.9 sq.m;
 - no residential amenity space of 604.9 sq.m;
 - 1 no. creche of 225.7 sq.m. (plus playground of 210 sq.m.);
 - 1 no. community space of 195.3 sq.m.
- Public realm improvements and amenity facilities to include:
 - Upgrade of existing footpaths to provide 2 no. new shared surface access routes through the existing Omni Park Shopping Centre development providing direct access for pedestrians and cyclists to the subject development from the Swords Road and Omni Park Shopping Centre.
 - Provision of a new public plaza to the northeast corner of Omni Park Shopping Centre, providing access to the Swords Road including pedestrian and cyclist access route
 - Provision of a new public plaza to the northwest corner of existing Omni Park Shopping Centre integrating the proposed development with the existing district centre lands, provision of which shall require amendments to existing carpark layout and a reduction of 104 no. existing commercial car parking spaces.
 - Public and communal open spaces (incl. 2 no. playgrounds) and internal communal residential amenity for the residential development and private residential amenity in the form of terraces and balconies to all elevations.

The development will include provision of access to a basement via a ramp to be located within the Omni Park Shopping Centre development proximate to the IMC Cinema. The provision of 768 no. bicycle parking spaces (504 at basement and 264 at surface). The provision of 213 no. basement car parking spaces including 11 No. accessible spaces and 22 No. EV charging points. In addition, 7 no. motorcycle parking spaces are provided at basement.

The development also entails the reconfiguration of existing car parking to the northwest of Omni Park Shopping Centre with a net reduction of 104 no. commercial car parking spaces to allow for the provision of a new public plaza. Reconfiguration shall provide for the provision of 7 no. creche drop-off spaces and 6 no. carshare spaces to facilitate the proposed development.

Emergency services / servicing access to the rear of existing retail premises at Omni Park Shopping Centre from the Swords Road.

Provision of 5 no. ESB Substations including the relocation of an existing substation.

All associated and ancillary site development, demolition and clearance works, hoarding during construction, revisions to car parking within the Omni Park Shopping Centre, soft and hard landscaping, public realm works, public lighting and signage, ancillary spaces, plant including photovoltaic panels, water infrastructure, utilities and services.

Section 01

The following section comprises of 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 Company (PMC)

Serendale Ltd. will anticipate maintenance costs for the operators from the commencement of the design process, and establish a Property Management Company from the outset, with the aim to manage and minimise potential unnecessarily high running costs for expenditure on a per residential unit basis. This will result from the study from previously undertaken residential projects by related companies and the application of changes in the standards arising from the new apartment guidelines.

6.14 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) and:*
- *Establishment and ongoing maintenance of a sinking fund commensurate with the facilities in a development that require ongoing maintenance and renewal.*

Outline Omni Park Residential Scheme Management Plan

The residential development at Omni Park will be managed by the operational management team with a residential manager available during the working hours of a typical week. Emergency out-of-hours services will also be available to residents who will be provided with details of same.

Access Control to Residential Blocks

Each Resident will be provided with a door entry fob registered to their name and address which can be cancelled remotely in the event they are lost or stolen. Residents will also be provided with keys for their apartments. Visitors to the building will be asked to dial directly to the apartments via the door entry system and will not be permitted access into the Residential areas without this access being permitted.

Resident Amenity Facilities

The proposed residential amenity facilities will be the responsibly of the management operator who will manage the booking of facilities where required. Cleaning of this space will be organised and managed by the management operator.

The proposed amenity facilities are located within the ground floors of Block B and include:

- Screening room
- Shared work spaces
- Residents Lounge
- Gym

The mini screen room will provide multi-media facilities to residents. It will be the responsibility of the managing operators to organise events and screenings which take place or to manage private bookings by residents.

The shared work spaces will be available through key fob access for all residents and meeting rooms will also be available for booking for private use by residents.

The residents' lounge will be available through key fob access for all residents. The lounge will be an area for residents to relax and meet friends.

A gym for the use of residents will have high-quality equipment. Information will be made available regarding the correct use of gym equipment. It will be the responsibility of the management operator to manage and organize gym inductions for residents' safety when using the equipment.

Outdoor Spaces

Extensive outdoor green areas will be provided for resident amenity, including a dedicated playground. A Public Plaza will also be provided

The Operator will appoint an approved landscape maintenance contractor to maintain landscaped areas on site.

Car Parking

Car parking will be managed by the management operator who will control access to ensure that spaces are utilised only by designated persons. It is not proposed that the ownership of any car parking spaces will be included in the sale or leasing of any apartment unit. It is intended that residents will apply to the management operator in order to lease a space for a specified length of time. This will ensure that all residents who require a car space can avail of one whilst spaces are not needlessly assigned to those who do not require one.

Cycle Parking

The scheme will provide approximately 300 no. spaces which will be located within a range of internal bicycle stores and external bike stands. The management operator will have responsibility for the maintenance of bike storage areas with CCTV in operation to improve safety and security.

1.2 Service Charge Budget

The property management company (PMC) has a number of 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)

1.3 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.

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.

Section 02

The following section comprises of 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 <i>quantitative performance approaches to daylight provisions 'outlined in guides like the BRE guide 'Site Layout Planning for Daylight and Sunlight' (2nd edition) or BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting' when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision</i> .	Reduces the requirement for continuous daylighting, thus reducing the expense of artificial lighting
Daylighting to circulation areas		Reduces the requirement for continuous daylighting
External Lighting	External lighting will comply with the latest standards and achieve: • Low level lighting • Utilise low voltage LED lamps • Minimum upward light spill • Be pre-approved by / in accordance with the Dublin City 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

2.2 Landscape

Measure	Description	Benefit
<i>Paving and Decking materials</i>	Use of robust high-quality materials and detailing to be durable for play, etc.	Ensures longevity of materials

Site Layout & landscaping design	High quality landscaping with landscape, cycles and pedestrians prioritised over car. An increase in soft landscaping. Please refer to Landscaping Report prepared by Murray Associates	Improves overall attenuation of water, provides natural shading and offers improved biophilia for residents
Balconies & openable windows	Use of balconies & openable windows allow individuals to clean accessible windows themselves	Reduces the cost of 3 rd party contractors

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 – 50-75 kwh/m2/yr with CO2 emissions circa 12kgCO2/m2 /year	A BER rating is a rating given based on the overall energy efficiency of the building.
Fabric Energy Efficiency	Proposed U-Values will be in line with the requirements set out by the current Part L Technical Guidance Documents including Nearly Zero Energy Buildings targets. Thermal bridging at junctions between construction elements and at other locations to be minimised in accordance Paragraphs 1.3.4.2 and 1.3.4.3 within the Technical Guidance Documents Part L. See Table 1 of Part L, Building Regulations (Appendix A).	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.
Energy Labelled White Goods	High standard white goods with high energy efficiency ratings will be supplied to all units. It is expected to install appliances of the following ratings: Oven – A+ Fridge Freezer – A+ Dishwasher – AAA Washer / Dryer – B	Highly energy efficient rated appliances reduce 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 Dublin City Council public lighting standards and shall include: • Low level lighting • Utilise low voltage LED lamps • Minimum upward light spill • Be pre-approved by / in accordance with the Dublin City 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

2.4 Low energy technologies considered:

Measure	Description	Benefit
Air Source Heat Pumps (ASHPs)	Air Source Heat Pumps (ASHPs) are to be implemented.	This will achieve reduction in Gas central heating requirements.
Low energy LED Lighting	Shall be designed and specified in each unit and in the landlord areas in accordance with Part L requirements.	Lower consumption of energy and therefore lower carbon emissions.
MVHR (Mechanical Ventilation with Heat Recovery)	Ventilation for the development will be provided by means of MVHR (Mechanical Ventilation with Heat Recovery) with Extract Fans serving WCs/En-Suites	Improved air quality and reduced costs in providing alternative heating etc.

2.5 Materials & Materials Specification:

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 aluminium double-glazed windows. Based on comparison with similar schemes developed, the proposed materials are durable and would not require regular replacement or maintenance.

To improve on building standards there has been an increase in the expected build cost. 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 includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Improved longevity, durability and low maintenance of materials
Brickwork to the building envelope	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Requires minimal maintenance and does not require regular replacement
Fibre Cement cladding to selected areas of the facade	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Requires minimal maintenance and does not require regular replacement
Installation of factory finished and alu-clad windows and doors	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Requires minimal maintenance and does not require regular replacement
Installation of factory finished powder coated steel balconies	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and includes reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Requires minimal maintenance and does not require regular replacement

2.6 Waste Management:

Measure	Description	Benefit
Resource and Waste Management Plan	The final application will be accompanied by a Resource and Waste Management Plan	Will demonstrate how construction & demolition waste will be managed to maximise recycling and reuse rates, while minimising waste for disposal to landfill.
Operational Waste Management Plan	The final application will be accompanied by an Operational Waste Management Plan	Will demonstrate how waste will be managed during the operational phase of the development to maximise recycling rates, while minimising waste for disposal to landfill.

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 development has been optimised to achieve a good quality of natural daylight to the units	Reduction in overall energy use, can be linked to improved health outcomes.
Security	Passive surveillance is incorporated into the design	Access to all residents to reduce risk of littering within the scheme and reduces potential waste charges
Accessibility	All units, egress routes and stair cores to comply with the requirements of Technical Guidance Documents Part M/K	Ensures easy access for all and safe egress in emergency situations
Amenity	Provision of both internal and external public and communal amenity space	Facilitates socialising and community interaction
Private Open Space	Provision of private open space	Facilitates interaction with outdoors

2.8 Transport & Accessibility

The following sets out 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 (QBC/Future Bus Connect)	Bus routes 16D, 16, 33, 33E, 41,41B, 41C, 41D, 101 currently serve the site via Swords Road in the east. Bus Connects Spine A2 and A4 is proposed to run along Swords Road at intervals of every 7-8 minutes all day. Metro North will serve Ballymun and Northwood to the west providing fast, high capacity links to the city centre and Dublin Airport.	Availability, proximity to quality bus routes and reliable public transport reduces the reliance on private motor.
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	768 no. bicycle parking spaces are provided within the scheme. This is in line with the new apartment guidelines for Build-to-sell requirements 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/m ² K) ^{1, 2}		
Column 1 Fabric Elements	Column 2 Area-weighted Average Elemental U-value (U _m)	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	0.18	0.6
Ground floors ³	0.18	0.6
Other exposed floors	0.18	0.6
External doors, windows and rooflights	1.4 ^{4,5}	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 1.4 W/m ² K. 5. The NSAI Window Energy Performance Scheme (WEPS) provides a rating for windows combining heat loss and solar transmittance. The solar transmittance value g_{perp} measures the solar energy through the window.		

Appendix B

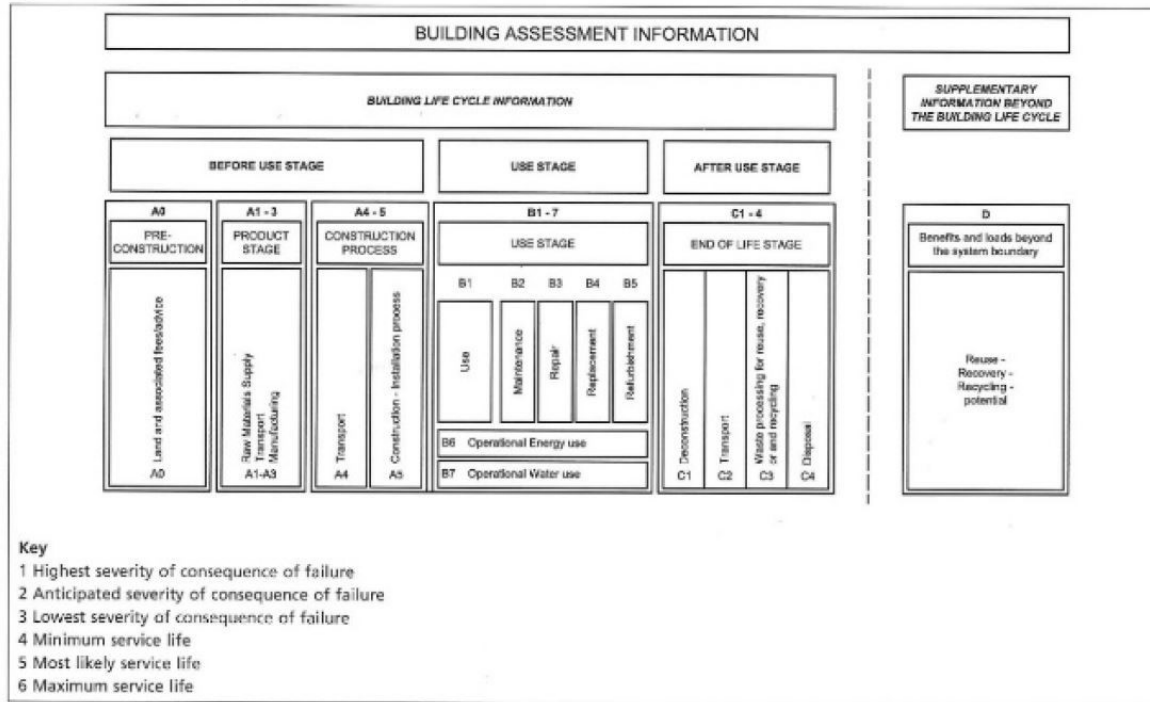
Figure 1- TGD Part L Conservation of Fuel & Energy – Dwellings 2021, Table 1

			103 Upper Leeson Street, Dublin, D04 TN84 Ireland. Tel: (+353 1) 668 9888 Web: w w w .jfa.ie
BUILDING INVESTMENT FUND (BIF) SINKING FUND CALCULATIONS			
REF.	ELEMENT	LIFE EXPECTANCY	AMOUNT
1.00	Roof		
1.01	Replacement / Repairs Covering		
1.02	Replacement / Repairs Insulation		
1.03	Replacement / Repair Parapet Details		
1.04	Replacement / Repair fascia		
1.05	Replacement / Repair Fall Arrest		
1.06	Replacement / Repair waterproofing		
1.07	Replacement / Repair access hatches		
1.08	Replacement / Repair Parapet Details		
2.00	Elevations		
2.01	Replacement / Repair Render		
2.02	Replacement / Repair Cladding		
2.03	Replacement / Repair Rainwater Goods		
2.04	Replacement / Repair Entrance / Exit Doors		
2.05	Replacement / Repair Balconies		
2.06	Replacement / Repair Finishes		
2.07	Replacement / Repair External Fixings		
2.08	Replacement / Repair Balcony Floors		
2.09	Replacement / Repair Windows		
2.10	Replacement / Repair Curtain Walling		
3.00	Staircores & Lobbies		
3.01	Replacement / Repair Fire Doors		
3.02	Replacement / Handrails / Balustrades		
3.03	Replace Carpets / Floor Finishes		
3.04	Replace Entrance Mats		
3.05	Replace Nosings		
3.06	Decorate Walls		
3.07	Decorate Ceilings		
3.08	Decorate Joinery		
4.00	M&E Services		
4.01	General - Internal rewiring		
4.02	General - Replace Internal light fittings		
4.03	General - Replace External light fittings		
4.04	Replace Smoke Detector Heads		
4.05	Replace Fire Alarm Control Panel		
4.06	Replace lift Car & Controls		
4.07	Replace AOV's		
4.08	Replace Manual Break Glass Units		
4.09	Replace Disabled Refuge Call Points		
4.10	Replace Disabled Refuge Call Points		
4.11	Replace Security system		
4.12	Upgrades to external mains water connection		
4.13	Upgrades to internal mains water connection		
4.14	upgrades to electrical mains and sub mains distribution		
4.15	replace emergency lighting		
4.16	overhaul and / or replace waste pipes, stacks and vents		
5.00	Basement & Car Parking		
5.01	Remove / Replace ceiling insultaion		
5.02	Repaint parking spaces & numbering		
5.03	Replace store doors, ironmongery & digi-locks		
5.04	Replace basement access control at entrance & core entrances		
6.00	Exterior		
6.01	Updates to External boundary treatments		
6.02	Replace external signage		
6.03	Replace cobblelock areas		
6.04	overhaul of landscaping		
6.05	Replace CCTV provision		
6.06	External Handrails and balustrades		

Figure 2 – Example of a Building Investment Fund Sinking Fund Calculator

Appendix C

Figure 4 Phases of the life cycle



BRITISH STANDARD

BS 7543:2015

Figure 3 – Extract from BS 7543:2015 - Figure 4 Phases of a Building Life Cycle