

BUILDING LIFE CYCLE REPORT

Development at Former Blakes and Esmonde Motors Site,
Stillorgan, Co. Dublin



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INTRODUCTION

The Sustainable Urban Housing; Design Standards for New Apartments – Guidelines for Planning Authorities were published in March 2018 (hereafter referred to as the Apartment Guidelines). The Apartment Guidelines introduced a requirement to include details on the management and maintenance of apartment schemes. This is set out in Section 6.11 to 6.14 - “*Operation & Management of Apartment Developments*”, specifically Section 6.13.

Section 6.13 of the Apartment Guidelines 2018 requires that apartment applications shall:

“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 the Apartment Guidelines. The report is broken into two sections as follows:

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

Section 02:

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

PROPOSED DEVELOPMENT

The development will consist of the construction of a mixed use scheme of 377 no. “Built to Rent” BTR apartments, Community Sports Hall (933 sq. m), along with 5 no. restaurant/cafés (c. 841.2 sq.m), creche (c. 215 sq. m), office hub (195.3 sq m) and ancillary residents’ support facilities/services (1,016 sq. m) laid out in 6 no. blocks ranging in height from 3-9 storeys (over basement) comprising 21 no. studio apartments, 189 no. 1 bedroom apartments, 159 no. 2 bedroom apartments & 8 no. 3 bedroom apartments (selected no. with balconies), and public realm upgrades as follows:

Building 01 (Part 3 - 6 & 7 storeys over basement) consists of 77 no. apartments comprising 13 no. studio apartments, 30 no. 1 bedroom apartments, 33 no. 2 bedroom apartments, 1 no. 3 bedroom apartment (with a creche of c. 215 sq. m with associated play area at ground floor);

Building 02 (Part 3 – 5, & 8 storeys over basement) consists of 95 no. apartments comprising 7 no. studio apartments, 57 no. 1 bedroom apartments, 24 no. 2 bedroom apartments, 7 no. 3 bedroom apartments;

Building 03 (Part 7 and 9 storeys over part basement) consists of 54 no. apartments comprising 18 no. 1 bedroom apartments and 36 no. 2 bedroom apartments (and office hub of c. 195.2 sq. m);

Building 04 (7 storeys over basement) consists of 60 no. apartments consists of 42 no. 1 bedroom apartments & 18 no. 2 bedroom apartments;

Building 05 (6 storeys, over basement to Lower Kilmacud Road & 7 storeys to the south and west) consists of 62 no. units comprising 1 no. studio apartment, 26 no. 1 bedroom apartments, & 35 no. 2 bedroom apartments (restaurant/café unit c. 219.2 sq. m at lower ground floor/plaza level & 2 no. restaurant/café units c. 234.1 sq. m and c. 133.9 sq. m respectively at ground floor level onto Lower Kilmacud Road) along with a double height Community Sports Hall including ancillary areas (c. 933 sq. m);

Building 06 (5 & 6 storeys) consists of 29 no. units comprising 16 no. 1 bedroom apartments and 13 no. 2 bedroom apartments (restaurant/café unit c. 185.9 sq. m at lower ground floor/plaza level & 68.1 sq. m restaurant/café unit at ground floor level onto Lower Kilmacud Road);

The BTR development will also include ancillary Residents’ Support Facilities/Services (c. 1,016 sq. m at ground floor of Building 03 and 04) as well as open space areas and improvements to the public realm along the Lower Kilmacud Road and The Hill, new road layout (omission of left turning lane) to The Hill, hard and soft landscaping, set down area on the Lower Kilmacud Road.

Provision of 2 no. vehicular access points from ‘The Hill’ into 2 no. separate basements to include basement car parking spaces (119 no.); 1 no. set down surface car parking space as well as 771 no. cycle spaces (basement and surface levels); pumping station at basement level, along with solar panels and green roofs at roof level, temporary construction phase pedestrian access from N11 (to serve adjacent Dun Fanoir);

All associated site development works, open spaces, landscaping, boundary treatment, plant areas, waste management areas, and services provision (including single storey ESB substation).

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. Property Management of the Common Areas 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, including communal areas of open space, residential amenity facilities and any public areas not taken in charge by the local authority, are kept within the agreed Annual operational budget.

The property management company will enter into a contract directly with the Residents Management Company (RMC) for the ongoing management of the built development. This contract will be for a maximum period of 15 years and in the form prescribed by the PSRA.

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

- Timely formation of a Residents Management Company (RMC) – which will be a company limited by guarantee having no share capital. All future residents will be obliged to become members of this RMC.
- Preparation of annual service charge budget for the development common areas.
- Fair and equitable apportionment of the Annual operational charges in line with the Multi Units Development Act 2011 (MUD Act).
- Engagement of independent legal representation on behalf of the RMC in keeping with the MUD Act - including completion of Developer RMC 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.
- RMC Reporting.
- Accounting Services.
- Corporate Services.
- Insurance Management.
- After Hours Services.
- Staff Administration.

1.2. Service Charge Budget

The property management company has a number of key responsibilities, primarily the compiling of the service charge budget for the development for agreement with the RMC. 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 for the RMC. The BIF report once adopted by the RMC, 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 RMC 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.

SECTION 02

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	<p>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 A3 rating for the apartments this will equate to the following emissions.</p> <p>A3 – 50-75 kwh/m2/yr with CO2 emissions circa 10kgCO2/m2 year</p>	Higher BER ratings reduce energy consumption and running costs.																				
Fabric Energy Efficiency	<p>Building Fabric Performance</p> <p>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 “Conservation of Fuel and Energy Buildings other than Dwellings”. The current building regulation is Part L 2019. The dwellings built under this planning permission will be designed and constructed to meet the relevant regulation, as may be appropriate, in accordance with the transitional period.</p> <p>U-values</p> <p>The U-Values that will be targeted for the dwellings in this development will exceed the minimum targets set out in Part L 2019. The table below sets out the minimum requirements of each of these standards and the targets range that will be adopted for the site.</p> <table border="1"> <thead> <tr> <th>U-Values</th> <th>Range of Target Values Proposed</th> <th>Part L 2011 Compliant Values</th> <th>Part L 2019 Compliant Values</th> </tr> </thead> <tbody> <tr> <td>Floor</td> <td>0.15 W/m2K</td> <td>0.21W/m2K</td> <td>0.18 W/m2K</td> </tr> <tr> <td>Roof (Flat)</td> <td>0.10 W/m2K</td> <td>0.20 W/m2K</td> <td>0.20 W/m2K</td> </tr> <tr> <td>Walls</td> <td>0.18 W/m2K</td> <td>0.21 W/m2K</td> <td>0.18 W/m2K</td> </tr> <tr> <td>Windows</td> <td>1.2 W/m2K</td> <td>1.6 W/m2K</td> <td>1.4 W/m2K</td> </tr> </tbody> </table> <p>Thermal Bridging</p> <p>Thermal bridges occur at junctions between planar elements of the building fabric and are typically defined as areas where heat can escape the building fabric due to a lack of continuity of the insulation in the adjoin elements.</p>	U-Values	Range of Target Values Proposed	Part L 2011 Compliant Values	Part L 2019 Compliant Values	Floor	0.15 W/m2K	0.21W/m2K	0.18 W/m2K	Roof (Flat)	0.10 W/m2K	0.20 W/m2K	0.20 W/m2K	Walls	0.18 W/m2K	0.21 W/m2K	0.18 W/m2K	Windows	1.2 W/m2K	1.6 W/m2K	1.4 W/m2K	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.
U-Values	Range of Target Values Proposed	Part L 2011 Compliant Values	Part L 2019 Compliant Values																			
Floor	0.15 W/m2K	0.21W/m2K	0.18 W/m2K																			
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Windows	1.2 W/m2K	1.6 W/m2K	1.4 W/m2K																			

Measure	Description	Benefit
	<p>Careful design and detailing of the manner in which insulation is installed at these junctions can reduce the rate at which the heat escapes. Standard good practice details are available and are known as Acceptable Construction Details (ACDs). Adherence to these details is known to reduce the rate at which heat is lost.</p> <p>The rate at which heat is lost is quantified by the Thermal Bridging Factor of the dwelling which is entered into the overall dwelling Part L calculation. It is intended that all building junctions will be designed to reduce any risk of condensation or mould growth and in accordance with the Acceptable Construction Details (issued by The Department of the Environment) or that thermal modelling will be carried out for all thermal bridges on the dwellings within proposed development. The resultant Thermal Bridging Factor target will be 0.08W/m²K.</p> <p>Air Tightness</p> <p>A major consideration in reducing the heat losses in a building is the air infiltration. This essentially relates to the ingress of cold outdoor air into the building and the corresponding displacement of the heated internal air. This incoming cold air must be heated if comfort conditions are to be maintained. In a traditionally constructed building, infiltration can account for 30 to 40 percent of the total heat loss, however construction standards continue to improve in this area.</p> <p>In order to ensure that a sufficient level of air tightness is achieved, air permeability testing will be specified carried out on all dwellings. A design air permeability target of 3 m³/m²/hr has been identified for the apartments and houses on the site.</p>	
Energy Labelled White Goods	<p>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:</p> <ul style="list-style-type: none"> • Oven - A plus • Fridge Freezer - A plus • Dishwasher - AAA • Washer/Dryer - B 	<p>The provision of high rated appliances in turn reduces the amount of electricity required for occupants.</p>
External Lighting	<p>The proposed lighting scheme within the development consists of range of luminaires, each selected to suit the specific location on the site. All fittings selected will be LED and will be mounted on columns ranging in height from 4m to 6m. There will also be bollards, wall recessed lights and strip lighting recessed into the handrails which will also be LED</p> <ul style="list-style-type: none"> • 3000K CCT LED to minimise impact on wildlife • High efficiency 156 lm/W • Zero Upward Light Output Ratio (ULOR) • Intelligent lighting control systems provided along pedestrian routes in sensitive woodland areas • Shading louvres included on light fittings adjacent to the most sensitive areas of the site. • Meets or exceeds all other DLRCC Specification criteria. <p>Each light fitting shall be controlled via an individual Photoelectric Control Unit</p>	<p>The site lighting will be designed to provide 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.</p>

Measure	Description	Benefit
	(PECU). The operation of the lighting shall be on a dusk-dawn profile.	

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/A3 BER Rating.

Measure	Description	Benefit
Condensing Boilers	If gas fired heating is adopted, condensing boilers will be provided as they have a higher operating efficiency, typically over 90%, than standard boilers and have the benefit of lower fuel consumption resulting from the higher operating efficiencies.	<ul style="list-style-type: none"> Condensing boilers use the heat losses from the boiler flue to preheat the circulating heating water By preheating the heating water, the boiler can achieve efficiencies in excess of 90%
Demand Controlled Mechanical Ventilation	Centralised mechanical ventilation will be provided to all dwellings to ensure that the air quality within the dwellings will be adequate. The system will be designed to respond to occupancy usage patterns and to humidity levels within the dwelling.	<ul style="list-style-type: none"> Mechanical ventilation provides enhanced air quality in modern air tight dwellings which are otherwise designed to minimise unwanted air infiltration
PV Solar Panels	<p>PV Solar Panels will be considered as an option for both houses and apartments in order to meet the renewable energy contribution required by Part L of the Building Regulations. These panels convert sunlight into electricity which can be used within the dwelling.</p> <p>The panels are typically placed on the South facing side of the building to maximise the solar exposure.</p>	<p>PV Solar Panels offer the benefit of reducing fossil fuel consumption and carbon emissions to the environment.</p> <p>They also reduce the overall requirement to purchase electricity from the grid.</p>
Air Source Heat Pump	<p>As part of the overall energy strategy for houses, the use of Air Source Heat Pumps will be assessed to determine their technical and commercial feasibility.</p> <p>These systems extract heat energy from the outside air and, using a refrigerant cycle, raise the temperature of the heat energy using a refrigerant vapour compression cycle.</p>	This heat energy will be utilized to pre-heat the water temperature before it reaches the boilers, to improve the overall efficiency of the heating system.
ECAR Charging Points	Within the basement parking areas, there will be provision of 10% E-car charging car parking spaces. Ducting infrastructure shall be provided for 100% of the car parking spaces from a local landlord distribution board. This will enable the management company the option to install a number of E-car charging points within the basement carpark to cater for E-car 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.	Providing the option of E-car charging points will futureproof the development

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 buildings.




2.2.1. Buildings

All proposed 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
Openable window sections are provided to all stair cores within the development providing natural daylight to circulation areas.	Avoids the requirement for continuous artificial lighting
Openable window sections are provided to all stair cores within the development providing Natural/Passive ventilation to common circulation areas.	Openable window sections are provided to all stair cores within the development providing natural daylight and ventilation throughout all common areas. Avoids costly mechanical ventilation systems and associated maintenance and future replacement.
Natural ventilation through grills, louvres and tree pits are proposed to provide fresh air to basement and sub-basement 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
<p>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.</p> <p>All common parts 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:</p> <ul style="list-style-type: none"> • 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.

<p>The architectural approach to the scheme proposes the extensive use of robust materials of brickwork (predominately) and render to the building envelope. The façade materials will consist of pressed metal to frame certain elements.</p>	 <p>Brick</p>  <p>Metal</p>  <p>Render</p>	<p>These traditional materials will require minimal on-going maintenance and have a longer life-cycle expectancy.</p>
<p>Use of factory finished and alu clad or uPVC windows and doors, and powder coated steel balconies</p>		<p>Requires minimal on-going maintenance.</p>

2.3. Landscape

Measure	Description		Benefit
<p>Site Planning</p>	<p>Generous and high-quality landscape with an ecological corridor designed within the proposed development. Pedestrians prioritized over the car throughout the public realm and courtyards spaces. A new link is provided through the centre of the site from the Hill to the N11 improving the quality of the cyclist and pedestrian network. Significant tree planting and soft landscaping within courtyards and public spaces which use a palette of plants proven to be sustainable with minimal regular maintenance.</p>		<p>Long term local benefits to circulation network. Creation of native habitat and sustainable planting.</p>
<p>Green Roofs</p>	<p>Use of green roofs and traditional roof coverings with robust and proven detailing to roof elements.</p>		<p>Green Roofs</p>
<p>Paving Materials</p>	<p>Use of robust materials with high slip resistance to be used for paving. Durable and robust equipment (e.g. play, exercise, fencing etc.) to be used throughout. Within the newly proposed public plaza, a cohesive and robust suite of paving and furniture materials integrated with a considered soft landscape design are to provide for a flexible and long-lasting public space.</p>		<p>Required ongoing maintenance significantly reduced through use of robust materials installed with proven details.</p>
<p>Planting details</p>	<p>A combination of native and non-native planting have been selected to provide for a seasonal variety of benefit to pollinators. Suitable plant species and specification combined with the provision of adequate soil growing medium, both into ground and over podium, are to ensure a well-established planting scheme.</p>		<p>Correctly installed planting will develop into well established and robust soft landscape reducing future maintenance.</p>

2.4. Waste Management

The following measures illustrate the intentions for the management of Waste.

Measure	Description	Benefit
Construction and Demolition Waste Management Plan	Details regarding Construction and Demolition Waste Management Plan prepared by AWN Consulting.	The Construction and Demolition Waste Management Plan demonstrates how the scheme has been designed to comply with best practice.
Operational Waste Management Plan	The application is accompanied by an Operational Waste Management Plan prepared by AWN Consulting.	The report demonstrates how the scheme has been designed to comply with best practice.
Storage of Non-Recyclable Waste and Recyclable Household Waste	Residential waste storage allows for a weekly (seven day) storage capacity for MDR, food, glass and residual (i.e. nonrecyclable). Residential bins will be provided within dedicated storage rooms within the core of each residential block.	Easily accessible by all residents and minimises potential littering of the scheme
	Domestic waste management strategy: Grey, Brown and Green bin distinction. 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 & Well Being

The following are illustrations of how the health and well-being of future residents are considered.

Measure	Description	Benefit
Natural / Day Light	The design, separation distances and layout of the apartment blocks have been designed to optimize 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 and a universal access statement is provided within the design statement of this submission.	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: <ul style="list-style-type: none"> • CCTV monitoring details • Car registration recognition at entrance gate of basement parking area. • Secure bicycle stands – covered by CCTV • Routine access fob audits 	Help to reduce potential security/management costs.
Natural Amenity	Large public areas of open space are evenly distributed throughout the site where they can be overlooked by surrounding residential units.	Proximity and use of parks promotes a healthy lifestyle

2.6. Management

Consideration has been given to ensuring the residents have a clear understanding of their property:

Measure	Description	Benefit
Home User Guide	A Residents Pack prepared by the Operations and Management Company (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.

2.7. Transport

Measure	Measure Description	Benefit
Access to Public Transport (Bus Services)	<p>Numbers 7b and 7d Dublin Bus route travel along the Stillorgan Road towards Stillorgan Park Road approximately 55m to the northwest of the subject site. Routes 46A, 118, 145, 155, & 84X travel along N11 Stillorgan Road approximately 20m east the site. Bus 47 travels along Old Dublin Road passed Stillorgan shopping centre onto Lower Kilmacud Road heading west, approximate 176m from the site. Route 116 travel along Stillorgan Road approximately 55m north the site and turns onto Lower Kilmacud Road. Bus operated by GoAhead, routes 75 travels east of the site on N11 Stillorgan Road and turns onto Lower Kilmacud Road travelling west and route 155 travel east of the site along Stillorgan Road.</p> <p>Aircoach operated bus has route 700 travels along Old Dublin Road passed Stillorgan shopping centre onto Lower Kilmacud Road heading west, approximate 176m from the site and 702 travels east of the site along Stillorgan Road. The vast majority of these Bus services operate daily and offer relatively frequent services (i.e. every 10 minutes at peak times). Wexford Bus operates service with route 740, provides twice hourly service between Dublin & Wexford along N11 Stillorgan Road.</p> <p>It is expected that a number of these bus services will be enhanced as the N11 corridor develops through Bus Connects planning. Current Bus Connects proposals for the Stillorgan area include the following enhanced services: - Spine Routes E1 and E2 Local Routes L13 and L25 Peak Time Routes P11, P12, P13 and P16</p>	The availability, proximity and ease of access to public transport services contributes to reducing the reliance on the private motor vehicle for all journey types.
Access to Public Transport (DART/Luas)	<p>Blackrock Rail Station is located approximately 3.32km east of the subject site.</p> <p>Existing public transport in the area of Stillorgan Village Centre is primarily bus based with links to the DART. Bus Routes 17, 46A provides link between Blackrock Rail Station and passes the subject site along the east on Stillorgan Road.</p> <p>The site is located within 30 minutes walking distance or 9-minute cycle to the closest train station in Blackrock.</p>	The DART provides an alternative high frequency public transport option to the bus for commuting to the city centre. The availability, proximity and ease of access to high quality public transport services contributes to reducing

	<p>The closest Luas Stop to the proposed development is in Sandyford. The Green Luas runs from north to south, connecting Broombridge to Bride's Glen, running through Dublin City Centre.</p> <p>The Sandyford Luas stop is located approximately 2.2 km from the proposed site and can be reached by walking within 25-30 minutes, by cycle within 8 minutes, or by Dublin Bus Route 47 within 11 minutes. The Green Luas runs at a frequency of every 7 minutes and the journey time to the City Centre is 22 minutes.</p>	<p>the reliance on the private motor vehicle for all journey types.</p> <p>The Luas provides an alternative option to bus for commuting to the city centre. This reduces the reliance on private motor vehicles.</p>
Permeable Connections	<p>Provision and subsequent maintenance of dedicated pedestrian and cycle infrastructure along the N11 and Lower Kilmacud Road.</p> <p>As part of DRLCC Stillorgan Park Road Cycle Track Improvements, the council plans to remove the left turn slip traffic lane Lower Kilmacud Road onto The Hill. This will result in a reduced crossing width at the junction and this will help pedestrians to cross Stillorgan Park Road at the junction and will assist cyclists approaching and crossing the junction with the N11.</p>	<p>Ensure the long-term attractiveness of walking and cycling to a range of local education, retail and community facilities and services.</p>
Bicycle Storage	<p>The provision of high quality secure and sheltered bicycle parking facilities, for both short term and long-term parking requirements. As per the Dun Laoghaire Rathdown County Development Plan, the National Standards (Design Standards for New Apartments) and Draft Development Plan is minimum of 836 No. cycle parking in basement for the residential and 30 No. cycle parking for the non-residential to be provided, 866 No. spaces is provided.</p>	<p>Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle.</p>
Car Share	<p>5 no. dedicated car share spaces are proposed within the basement.</p>	<p>The availability and ease of access to car share facilities contributes to reducing the reliance on the private motor vehicle.</p>
E-car Facilities	<p>Ducting will be provided from a local landlord distribution board to designated E-car charging car park spaces.</p>	<p>To accommodate the growing demand for E-car which assist in de-carbonising society and reducing oil dependency.</p>

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) CALCULATIONS			
Ref	Element	Life Expectancy	Amount
1.00	Roofs		
1.01	Replacement felt roof covering incl. insulation to main roofs/ overhaul to green roofs.	18	
1.02	Replacement parapet details	18	
1.03	Replacement/ repairs to fascias	18	
1.04	Replace roof access hatches	25	
1.05	Specialist Roof Systems - Fall arrest	25	
1.06	Overhaul waterproofing details to penthouse paved areas	12	
2.00	Elevations		
2.01	Recoat metal panels to penthouse apartments	25	
2.02	Minor repairs and preparation for decorations of rendered areas	18	
2.03	Replace exit/ entrance doors	25	
2.04	Replace Rainwater goods	25	
2.05	Recoat powder coated Finishes to balconies / Grills to Basement vents	20	
2.06	Periodic replacement and overhauling of external fixings	5	
2.07	Replace Balcony floor finishes	25	
3.00	Stair cores & lobbies (3No. Cores)		
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 & lobbies)	12	
3.06	Replace entrance mats	10	
3.07	Replace nosing's	12	
3.08	Replace ceramic floors tiles Entrance lobbies	20	
3.09	Fixed Furniture & Equipment - Provisional Sum	18	
4.00	Basement & Car Parking		
4.01	Remove/ Replace ceiling insulation	25	
4.02	Repaint parking spaces & Numbering	7	
4.03	Replace store doors, ironmongery & digi-locks	15	
4.04	Replace Bike stands	25	
4.05	Replace basement access control at entrance & core entrances	12	
5.00	M&E Services		
5.01	General - Internal re-lamping	7	
5.02	Replace Internal light fittings	18	
5.03	Replace External light fittings (lights at entrance lobbies)	18	
5.04	Replace smoke detector heads	18	
5.05	Replace manual break glass units/ disabled refuge call points	18	
5.06	Replace Fire alarm panel	18	
5.07	Replace lift car and controls	25	
5.08	Replace AOV's	25	
5.08	Replace security access control installation	15	
5.09	Sump pumps replacement	15	
5.10	External Mains Water connection	20	
5.12	Electrical Mains and Sub Mains distribution	20	

5.13	Emergency Lighting	20	
5.14	Overhaul and/or replace Waste Pipes, Stacks & Vents	20	
6.00	Exterior		
6.01	External boundary treatments - Recoat powder coated Finishes to railings	60	
6.02	Replace external signage	18	
6.03	Replace cobblelock areas	18	
6.04	15-year cutback & thinning of trees. Overhaul landscaping generally	20	
6.05	Replace CCTV provision	12	
6.06	External Handrails and balustrade	18	

APPENDIX B:
Phases of the Life Cycle of BS7543; 2015

Figure 4 Phases of the life cycle

