

BUILDING LIFECYCLE REPORT

STAPOLIN GROWTH AREA 1 – PROPOSED RESIDENTIAL DEVELOPMENT

Baldoyle-Stapolin, Dublin 13



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TABLE OF CONTENTS

1.0. INTRODUCTION	3
2.0. DESCRIPTION OF DEVELOPMENT	4
3.0. EXECUTIVE SUMMARY – Building Life Cycle Report	5
4.0. EXTERNAL BUILDING FABRIC SCHEDULE	6
4.1. Roofing	6
4.2. Rainwater Drainage (Manufacturer / Supplier TBC)	9
4.3. External Walls	9
4.4. External Windows & Doors	10
4.5. Balconies	11
5.0. INTERNAL BUILDING FABRIC SCHEDULE	14
5.1. Floors	14
5.2. Walls	15
5.3. Ceilings	17
5.4. Internal Handrails & Balustrades	17
5.5. Carpentry & Joinery	18
6.0. BUILDING SERVICES	20
6.1. Mechanical Systems	20
6.2. Electrical / Protective Services	22

1.0. INTRODUCTION

Aramark Property were instructed by The Shoreline Partnership, to provide a Building Lifecycle Report for their proposed residential scheme at Stapolin Growth Area 1, Baldoyle, Dublin 13.

The purpose of this report is to provide an initial 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 measures have been specifically considered to effectively manage and reduce costs for the benefit of the residents. This is achieved by producing a Building Lifecycle Report.

This Building Lifecycle Report has been developed on foot of the revised guidelines for Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities issued under Section 28 of the Planning and Development Act 2000 (as amended) December 2020. Within the new guidelines, new guidance is being provided on residential schemes.

Section 6.13 of the Operation and Management of Apartment Development Guidelines (December 2020) 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, as well as demonstrating what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.”

2.0. DESCRIPTION OF DEVELOPMENT

The development will consist of alterations to the permitted development, as permitted under FCC Reg. Ref. 16A/0412, ABP Reg. Ref. ABP-248970 (as amended by F20A/0258 and F21A/0046) of 544 no. residential units (385 no. apartments and 159 no. houses), retail and a crèche, to the development of 882 no. new residential dwellings (747 no. apartments, 135 no. houses), residential tenant amenity, retail, crèche, parking, and public realm, over a total site area of c. 9.1 ha, and site development area of c. 8.89 ha. Landscaping will include extensive communal amenity areas, and significant public open space provision.

3.0. EXECUTIVE SUMMARY – BUILDING LIFE CYCLE REPORT

Measures to effectively manage and reduce costs for the benefit of residents

The following document reviews the outline specification set out for the proposed residential development at Stapolin Growth Area 1, Baldoyle, Dublin 13 and explores the practical implementation of the design and material principles which has informed design of building roofs, façades, internal layouts and detailing of the proposed development.

Building materials proposed for use on elevations and in the public realm achieve a durable standard of quality that will not need regular fabric replacement or maintenance outside general day to day care. The choice of high quality and long-lasting materials, as well as both soft and hardscape in the public, semi-public and private realm will contribute to lower maintenance costs for future residents and occupiers.

Please note that detailed specifications of building fabric and services have not been provided at this stage. This report reflects the outline material descriptions contained within Henry J. Lyons Architects planning drawing package received.

For any elements where information was not available, typical examples have been provided of building materials and services used for schemes of this nature and their associated lifespans and maintenance requirements. All information is therefore indicative subject to further information at detailed design stage.

As the building design develops this document will be updated and a schedule will be generated from the items below detailing maintenance and replacement costs over the lifespan of the materials and development constituent parts in a summary document. This will enable a robust schedule of building component repair and replacement costs which will be available to the property management company so that running, and maintenance costs of the development are kept within the agreed Annual operational budget, this will take the form of a Planned Preventative Maintenance Schedule (PPM)* at operational commencement of the development.

**PPM under separate instruction*

4.0. EXTERNAL BUILDING FABRIC SCHEDULE

4.1. Roofing

4.1.1. Green Roofs (Manufacturer / Supplier TBC)

<i>Location</i>	All flat roof areas (maintenance access only)
<i>Description</i>	Extensive green roof system to engineer's specification.
<i>Lifecycle</i>	Average lifecycle of 15-35 years on most green roofs. Lifecycle will be extended with robust proven detailing to adjoining roof elements and appropriate and regular maintenance of the roof materials.
<i>Required maintenance</i>	Quarterly maintenance visits to include inspection of drainage layer and outlets and removal of any blockages to prevent ponding. Inspection of vegetation layer for fungus and decay. Carry out weeding as necessary. No irrigation necessary with sedum blankets.
<i>Year</i>	Bi-annually
<i>Priority</i>	Medium
<i>Selection process</i>	A green roof will add to the character of the overall scheme, as well as providing attenuation to storm water run-off and less burden on rainwater goods, increased thermal and sound insulation to the building and increased biodiversity. Natural soft finishes can provide visual amenity for residents where roof areas are visible or accessible from within areas of the scheme. Sedum roofs are a popular and varied choice for green roofs requiring minimal maintenance.
<i>Reference</i>	Henry J. Lyons Architects planning drawings and design statement.

4.1.2. Roof Terraces (Manufacturer / Supplier TBC)

<i>Location</i>	Communal Terraces
<i>Description</i>	<ul style="list-style-type: none"> • Paving with light weight slabs on; • Patent pads on; • Cushion layer on; • Roof deck build up to architects' and engineers' instructions. <p>As used across the industry nationally and the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.</p>
<i>Lifecycle</i>	Average lifecycle of 30 years. As used across the industry nationally and the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular maintenance visits to include inspection of drainage outlets under decking and removal of any blockages. General repair works, watching out for displacement of slabs, mortar decay and removal of organic matter.
<i>Year</i>	Quarterly
<i>Priority</i>	Medium
<i>Selection process</i>	Paving slabs provide a robust and long-lasting roof terrace surface, requiring considerably less maintenance.
<i>Reference</i>	Henry J. Lyons Architects' planning drawings and design statement.

4.1.3. Roof (Manufacturer / Supplier TBC)

<i>Location</i>	Selected Flat Roof Areas (maintenance access only)
<i>Description</i>	<ul style="list-style-type: none"> Single layer membrane roof system to engineer's specification. Selected membrane, mixture of metal coping and brick cappings.
<i>Lifecycle</i>	Average lifecycle of 15-25 years on most membrane roofs. Lifecycle will be extended with robust proven detailing to adjoining roof elements and appropriate and regular maintenance of the roof materials.
<i>Required maintenance</i>	Half-yearly maintenance visits to include inspection of membrane material for puncture / cracks on sheeting; seams and flashing details; around drainage and ventilation outlets and removal of any vegetation/moss blockages to prevent ponding.
<i>Year</i>	Half-Yearly / Annual
<i>Priority</i>	Medium
<i>Selection process</i>	A membrane roof with appropriate built up system will provide durability, lacks water permeability and easily maintain without shutting down building operations during application.
<i>Reference</i>	Henry J. Lyons Architects' planning drawings and design statement.

4.1.4. Roof Terraces (Manufacturer / Supplier TBC)

<i>Location</i>	Communal Roof Garden (Block D)
<i>Description</i>	Intensive green roof system to engineer's specification.
<i>Lifecycle</i>	Average lifecycle of 15-35 years on most green roofs. Lifecycle will be extended with robust proven detailing to adjoining roof elements plus appropriate and regular maintenance of the roof materials.
<i>Required maintenance</i>	Quarterly maintenance visits to include inspection of drainage layer and outlets and removal of any blockages to prevent ponding. Inspection of vegetation layer for fungus and decay. Carry out weeding as necessary. No irrigation necessary with sedum blankets.
<i>Year</i>	Quarterly
<i>Priority</i>	Medium
<i>Selection process</i>	Intensive green roof planting will add to the character of the overall scheme and visual amenity for residents, providing a variety of size and species of planting. Green roofs provide attenuation to storm water run-off and less burden on rainwater goods, increased thermal and sound insulation to the building and increased biodiversity.
<i>Reference</i>	Henry J Lyons' Architects planning drawings and design statements.

4.1.5. Pitched roofs

<i>Location</i>	Blocks B1 + B2
<i>Description</i>	Roof tiles to select finish
<i>Lifecycle</i>	Lifecycle of 80 -100 years for concrete roof tiles, which can be extended further if correctly maintained. As used nationwide and in the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Annual inspection internally and externally for slipped/cracked tiles and flashings, leaks etc. Carry out localised repairs as required.
<i>Year</i>	Annual
<i>Priority</i>	Medium

<i>Selection process</i>	Concrete tile is chosen for its aesthetic qualities and is a durable and long-lasting material which few other roofing materials can achieve. Pitched roofs by design ensure run-off of rainwater and therefore less deterioration to roofing materials.
<i>Reference</i>	Henry J Lyons' Architects planning drawings and design statements.

4.1.6. Fall Arrest System for Roof Maintenance Access (Manufacturer / Supplier TBC)

<i>Location</i>	Selected Flat Roof Areas
<i>Description</i>	<ul style="list-style-type: none"> Fall Protection System on approved anchorage device. Installation in accordance with BS 7883 by system manufacturer or a contractor approved by system manufacturer.
<i>Lifecycle</i>	25-30 years dependent on quality of materials. Generally steel finishes to skyward facing elements can be expected to maintain this life expectancy. Typically, longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Check and reset tension on the line as per manufacturer's specifications. Check all hardware components for wear (shackles, eye bolts, turn buckles). Check elements for signs of wear and/or weathering. Lubricate all moving parts. Check for structural damage or modifications.
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	Fall protection systems are a standard life safety system, provided for safe maintenance of roofs and balconies where there is not adequate parapet protection. Fall protection systems must comply with relevant quality standards.
<i>Reference</i>	N/A

4.1.7. Flashings (Manufacturer / Supplier TBC)

<i>Location</i>	All flashing locations
<i>Description</i>	Metal/Lead to be used for all coping, trims and flashing to selected finish.
<i>Lifecycle</i>	Typical life expectancy of 70 years recorded for metal/lead flashings. Recessed joint sealing will require regular inspections. Typically, longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Check joint fixings for metal/lead coping, trims and flashing, ground survey annually and close-up inspection every 5 years. Re-secure as necessary.
<i>Year</i>	Ground level inspection annually and close-up inspection every 5 years
<i>Priority</i>	Medium
<i>Selection process</i>	Metal/Lead has longest life expectancy of comparable materials such as copper (60 years) and zinc (50 years). Metal/Lead is easily formed into the required shapes for effective weathering of building junctions according to Lead Sheet Association details.
<i>Reference</i>	N/A

4.2. Rainwater Drainage (Manufacturer / Supplier TBC)

<i>Location</i>	All buildings
<i>Description</i>	<ul style="list-style-type: none"> • <i>Rainwater outlets:</i> Suitable for specified roof membranes • <i>Pipework:</i> Cast aluminium downpipes/uPVC downpipes • <i>Below ground drainage:</i> To M&E/ Structural Engineers design and specification • <i>Disposal:</i> To surface water drainage to Structural Engineers design • <i>Controls:</i> To M&E/ Structural Engineers design and specification • <i>Accessories:</i> allow for outlet gradings, spigots, downspout nozzle, hopper heads, balcony and main roof outlets
<i>Lifecycle</i>	Aluminium gutters and downpipes have an expected life expectancy of 40 years in rural and suburban conditions (25 years in industrial and marine conditions), this is comparable to cast iron of 50 years and plastic, less so at 30 years. As used nationwide and in the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	As with roofing systems routine inspection is key to preserving the lifecycle of rainwater systems. Regular cleaning and rainwater heads and gutters, checking joints and fixings and regularly cleaning polyester coated surfaces (no caustic or abrasive materials).
<i>Year</i>	Annually, cleaning bi-annually
<i>Priority</i>	High
<i>Selection process</i>	As above, aluminium fittings compare well against cast iron (in terms of cost) and plastic (in terms of lifespan and aesthetic).
<i>Reference</i>	N/A

4.3. External Walls

4.3.1. Brick (Manufacturer / Supplier TBC)

<i>Location</i>	Façades
<i>Description</i>	Selected facing brickwork and brick capping at various locations including soldier orientation laid on every second floor.
<i>Lifecycle</i>	While bricks have a high embodied energy, they are an extremely durable material. Brickwork in this application is expected to have a lifespan of 50-80 years. The mortar pointing however has a shorter lifespan of 25-50 years. Longer lifecycle achieved by regular inspection and maintenance regime.
<i>Required maintenance</i>	In general, given their durability, brickwork finishes require little maintenance. Most maintenance is preventative: checking for hairline cracks, deterioration of mortar, plant growth on walls, or other factors that could signal problems or lead to eventual damage.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Aesthetic, lightweight, cost-efficient and low maintenance cladding option, indistinguishable from traditional brick construction.
<i>Reference</i>	Henry J Lyons' Architects planning drawings and design statements.

4.3.2. Metal Cladding (Manufacturer / Supplier TBC)

<i>Location</i>	Façades
<i>Description</i>	Metal cladding to selected finish on walls and balconies.
<i>Lifecycle</i>	Typical life expectancy of over 40 years. As used nationwide and in the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Selected cladding requires little maintenance and is resistant to corrosion. It can contribute to lower ongoing maintenance costs in comparison to exposed porous materials which may be liable to faster deterioration. Long term cleaning requirements should be taken into consideration.
<i>Year</i>	Inspection annually; cleaning 5 yearly
<i>Priority</i>	Low
<i>Selection process</i>	Selected cladding protects the building's structure from rainwater and weathering. Metal cladding systems are also chosen for their aesthetic impact, durability and weathering properties.
<i>Reference</i>	Henry J Lyons' Architects planning drawings and design statements.

4.4. External Windows & Doors

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> • uPVC window and door frames to approved colour. • All units to be double/triple glazed with thermally broken frames re-enforced to take account of the dynamic pressures in relation to the height of the installation within the building. • All opening sections in windows to be fitted with suitable restrictors. Include for all necessary ironmongery; include for all pointing and mastic sealant as necessary; fixed using stainless steel metal straps screwed to masonry reveals; include for all bends, drips, flashings, thermal breaks etc.
<i>Lifecycle</i>	uPVC has a typical lifespan of 20-30 years. Longer lifecycle can be achieved by regular inspection and maintenance regime as per manufacturer's recommendation.
<i>Required maintenance</i>	Check surface of windows and doors regularly so that damage can be detected. Vertical mouldings can become worn and require more maintenance than other surface areas. Lubricate at least once a year. Ensure regular cleaning regime. Check for condensation on frame from window and ensure ventilation.
<i>Year</i>	Annual
<i>Priority</i>	Medium
<i>Selection process</i>	uPVC is durable, energy efficient, sound-proof, resistant to corrosion and require low maintenance.
<i>Reference</i>	Henry J Lyons' Architects planning drawings and design statements.

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> • Powder Protective Coating (PPC) window and door frames to approved colour. • Selected units to be double/triple glazed with thermally efficient framework.

	<ul style="list-style-type: none"> All opening sections in windows to be fitted with suitable restrictors. Include for all necessary ironmongery; include for all pointing and mastic sealant as necessary; fixed using stainless steel metal straps screwed to masonry reveals; include for all bends, drips, flashings, thermal breaks etc.
<i>Lifecycle</i>	PPC aluminium has a typical lifespan of up to 45 years. Longer lifecycle can be achieved by regular inspection and maintenance regime as per manufacturer's recommendation.
<i>Required maintenance</i>	Check surface of windows and doors regularly so that damage can be detected. Lubricate at least once a year. Ensure regular cleaning regime. Check for condensation on frame from window and ensure ventilation.
<i>Year</i>	Annual
<i>Priority</i>	Medium
<i>Selection process</i>	PPC aluminium is durable, resistant to corrosion, energy efficient and require low maintenance.
<i>Reference</i>	Henry J Lyons' Architects planning drawings and design statements.

<i>Location</i>	Façades – Block A (Ground Level)
<i>Description</i>	<ul style="list-style-type: none"> Full height, powder coated clear glazed curtain walling system. All retail units to be double glazed with thermally broken frames. Any opening sections in panels to be fitted with suitable restrictors. Include for all necessary ironmongery; include for all pointing and mastic sealant as necessary; fixed using stainless steel metal straps screwed to masonry reveals; include for all bends, drips, flashings, thermal breaks etc.
<i>Lifecycle</i>	PCC aluminium has a typical lifespan of up to 45 years. Longer lifecycle can be achieved by regular inspection and maintenance regime as per manufacturer's recommendation.
<i>Required maintenance</i>	Check surface of windows and doors regularly so that damage can be detected. Lubricate at least once a year. Ensure regular cleaning regime. Check for condensation on frame from window and ensure ventilation.
<i>Year</i>	Annual
<i>Priority</i>	Medium
<i>Selection process</i>	PPC aluminium is durable, resistant to corrosion, energy efficient and require low maintenance.
<i>Reference</i>	N/A

4.5. Balconies

4.5.1. Structure

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> Cantilevered and recessed precast concrete balcony system to engineer's details. 'Concrete to concrete connectors' to main structure of building to engineer's detail.
<i>Lifecycle</i>	Precast concrete structures have a high embodied energy; however, it is an extremely durable material. Concrete frame has a typical life expectancy of 80 years. As used across the industry nationally and the

	UK, longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Relatively low maintenance required. Check balcony system as per manufacturer's specifications. Check elements for signs of wear and/or weathering. Check for structural damage or modifications.
<i>Year</i>	Annual
<i>Priority</i>	High
<i>Selection process</i>	Engineered detail; designed for strength and safety.
<i>Reference</i>	N/A

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> • Powder-coated steel frame balcony system to engineer's detail. • Thermally broken farrat plate connections to main structure of building.
<i>Lifecycle</i>	Metal structure has a typical life expectancy of 70 years. As used across the industry nationally and the UK, longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Relatively low maintenance required. Check balcony system as per manufacturer's specifications. Check all hardware components for wear. Check elements for signs of wear and/or weathering. Check for structural damage or modifications.
<i>Year</i>	Annual
<i>Priority</i>	High
<i>Selection process</i>	Engineered detail; designed for strength and safety.
<i>Reference</i>	N/A

4.5.2. Balustrades and Handrails

<i>Location</i>	Balconies
<i>Description</i>	<ul style="list-style-type: none"> • Structural frameless glass balustrade with PPC steel handrail to selected finish. • Approved tempered safety glass and steel including fixings in accordance with manufacturer's details.
<i>Lifecycle</i>	Typical life expectancy of 25 - 40 years. As used across the industry nationally and the UK, longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular visual inspection of connection pieces for impact damage or alterations
<i>Year</i>	Annual
<i>Priority</i>	High
<i>Selection process</i>	Designed for strength and safety.
<i>Reference</i>	N/A

<i>Location</i>	Balconies
<i>Description</i>	<ul style="list-style-type: none"> • Metal balustrade with PPC steel handrail to selected finish. • Fixings in accordance with manufacturer's details.
<i>Lifecycle</i>	Typical life expectancy of over 40 years. As used nationwide and in the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular visual inspection of connection pieces for impact damage or alterations
<i>Year</i>	Annual
<i>Priority</i>	High
<i>Selection process</i>	Designed for strength and safety. Metal finish are chosen for their aesthetic impact, durability and weathering properties.
<i>Reference</i>	N/A

5.0. INTERNAL BUILDING FABRIC SCHEDULE

5.1. Floors

5.1.1. Common Areas

<i>Location</i>	Entrance lobbies / Common corridors
<i>Description</i>	<ul style="list-style-type: none"> Selected anti-slip porcelain or ceramic floor tile Provide for inset matwell
<i>Lifecycle</i>	<ul style="list-style-type: none"> Lifespan expectation of 20-25 years in heavy wear areas, likely requirement to replace for modernisation within this period also. 10-15 year lifespan for carpet. Likely requirement to replace for modernisation within this period also.
<i>Required maintenance</i>	Visual inspection, intermittent replacement of chipped / loose tiles
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Durable, low maintenance floor finish. Slip rating required at entrance lobby, few materials provide this and are as hard wearing.
<i>Reference</i>	N/A

<i>Location</i>	Stairwells, landings / half landings
<i>Description</i>	Selected carpet covering. Approved anodised aluminium nosings to stairs.
<i>Lifecycle</i>	<ul style="list-style-type: none"> 10-15 year lifespan for carpet. Likely requirement to replace for modernisation within this period also. 20-year lifespan for aluminium nosings.
<i>Required maintenance</i>	Visual inspection with regular cleaning.
<i>Year</i>	Quarterly inspection and cleaning as necessary.
<i>Priority</i>	Low
<i>Selection process</i>	Using carpet allows flexibility to alter and change as fashions alter and change providing enhanced flexibility.
<i>Reference</i>	N/A

<i>Location</i>	Lift Lobbies
<i>Description</i>	Carpet/vinyl and porcelain tiles to match adjacent apartment common lobbies.
<i>Lifecycle</i>	<ul style="list-style-type: none"> Lifespan expectation of 20-30 years in heavy wear areas, likely requirement to replace for modernisation within this period also. 10-15 year lifespan for carpet. Likely requirement to replace for modernisation within this period also.
<i>Required maintenance</i>	Visual inspection, intermittent replacement of chipped / loose tiles.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Slip rating required for lifts, few materials provide this and are as hard wearing.
<i>Reference</i>	N/A

5.1.2. Tenant Amenity Areas

<i>Location</i>	Residential amenity
<i>Description</i>	<ul style="list-style-type: none"> • Timber laminate / parquet flooring, or • Carpet covering • Provide for inset matwell
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Laminated / parquet timber flooring has an expected life expectancy of 25-35 years dependent on use • 10-15 year lifespan for carpet • Likely requirement to replace for modernisation within this period also
<i>Required maintenance</i>	Visual inspection. Sweep clean regularly ensuring to remove any dirt. Clean up spills immediately and use only recommended floor cleaners.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Materials chosen for aesthetics, durability and low maintenance.
<i>Reference</i>	N/A

<i>Location</i>	All wet areas (e.g. WCs)
<i>Description</i>	Selected anti-slip ceramic floor tile.
<i>Lifecycle</i>	Lifespan expectation of 20-25 years in heavy wear areas, likely requirement to replace for modernisation within this period also.
<i>Required maintenance</i>	Visual inspection, intermittent replacement of chipped / loose tiles.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Slip rating required at entrance lobby, few materials provide this and are as hard wearing.
<i>Reference</i>	N/A

5.2. Walls

5.2.1. Common Areas

<i>Location</i>	Entrance lobbies / Corridors
<i>Description</i>	Selected paint finish with primer to skimmed plasterboard
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged
<i>Year</i>	Bi-annually
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable finish.
<i>Reference</i>	N/A
<i>Location</i>	Lobbies / corridors / stairs

<i>Description</i>	Selected paint finish with primer to skimmed plasterboard
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged
<i>Year</i>	Bi-annually
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable finish.
<i>Reference</i>	N/A

5.2.2. Tenant Amenity Areas

<i>Location</i>	Residential Amenity
<i>Description</i>	Selected paint finish with primer to skimmed plasterboard
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
<i>Year</i>	Bi-annually
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable finish.
<i>Reference</i>	N/A

<i>Location</i>	Wet areas (e.g. WCs)
<i>Description</i>	Selected ceramic wall tile to plasterboard (moisture board to wet areas).
<i>Lifecycle</i>	Typical life expectancy of 35-40 years, less in wet room areas to 20-25 years.
<i>Required maintenance</i>	Bi-annual inspection to review damage, local repairs as necessary, particular detailed inspection in wet room areas.
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	Wet room application requires moisture board and tiling.
<i>Reference</i>	N/A

5.3. Ceilings

<i>Location</i>	Common areas & tenant amenity areas
<i>Description</i>	Selected paint finish with primer to skimmed plasterboard ceiling on M/F frame. Acoustic ceiling to lift core and apartment lobbies. Moisture board to wet areas.
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged
<i>Year</i>	Bi-annually
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable finish
<i>Reference</i>	N/A

<i>Location</i>	Tenant amenity wet areas (e.g. Shared Kitchen & WCs)
<i>Description</i>	Selected paint finish with primer to skimmed moisture board ceiling.
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
<i>Year</i>	Bi-annually
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable finish.
<i>Reference</i>	N/A

5.4. Internal Handrails & Balustrades

<i>Location</i>	Stairs & landings
<i>Description</i>	Proprietary glazed panel system face fixed to stairs stringer / landing slab to manufacturer's details and specifications.
<i>Lifecycle</i>	25-30 years typical lifecycle. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular inspections of holding down bolts and joints
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	Hard-wearing long-life materials against timber options
<i>Reference</i>	N/A

<i>Location</i>	Stairs & landings
<i>Description</i>	Mild steel painted balustrade and handrail.
<i>Lifecycle</i>	Over 40 years typical lifecycle. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	Regular inspections of holding down bolts and joints
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	Hard-wearing long-life materials against timber options
<i>Reference</i>	N/A

5.5. Carpentry & Joinery

5.5.1. Internal Doors and Frames

<i>Location</i>	All buildings
<i>Description</i>	<ul style="list-style-type: none"> Selected white primed and painted/varnished solid internal doors, or hardwood veneered internal doors All fire rated doors and joinery items to be manufactured in accordance with B.S. 476. Timber saddle boards. Brushed aluminium door ironmongery or similar
<i>Lifecycle</i>	30 years average expected lifespan. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	General maintenance in relation to impact damage and general wear and tear
<i>Year</i>	Annual
<i>Priority</i>	Low, unless fire door High
<i>Selection process</i>	Industry standard
<i>Reference</i>	N/A

5.5.2. Skirtings & Architraves

<i>Location</i>	All buildings
<i>Description</i>	Painted timber/MDF skirtings and architraves
<i>Lifecycle</i>	30 years average expected lifespan. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
<i>Required maintenance</i>	General maintenance in relation to impact damage and general wear and tear
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Industry standard
<i>Reference</i>	N/A

5.5.3. Window Boards

<i>Location</i>	All Buildings
<i>Description</i>	Painted timber/MDF window boards
<i>Lifecycle</i>	30 years average expected lifespan
<i>Required maintenance</i>	General maintenance in relation to impact damage and general wear and tear
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Industry standard
<i>Reference</i>	N/A

6.0. BUILDING SERVICES

6.1. Mechanical Systems

6.1.1. Mechanical Plant

<i>Location</i>	Residential
<i>Description</i>	Water Heating plant is proposed to consist of Exhaust Air Source Heat Pumps, with Space heating provided by Electrical Panel Heaters. Further details to be provided by the M&E Consultant at detailed design stage.
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Annual Maintenance / Inspection to Electric Panel Heaters • Annual Maintenance / Inspection to Heating System • Annual Maintenance of Exhaust Air Source Heat Pumps • Annual Maintenance / Inspection to Heating and Water Pumps. • Annual Maintenance / Inspection to Water Tanks. • Annual Maintenance / Inspection to Water Booster - sets. • Annual Maintenance / Inspection to DHS Tanks. • Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage. • Replacement of equipment at (End of Life) EOL to be determined at detailed design stage.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	N/A

6.1.2 Soils and Wastes

<i>Location</i>	All Areas / Kitchens / Bathrooms etc
<i>Description</i>	Soils and Wastes Pipework – uPVC above basement and HDPE in basement.
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Annual inspections required for all pipework within landlord areas. • Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	N/A

6.1.3 Water Services

<i>Location</i>	Apartments
<i>Description</i>	<p>Air Source Heat Pump (ASHP)</p> <ul style="list-style-type: none"> The water services installation in the Landlord basement and core areas will be copper. Within the apartments, the water services installation will be completed using a Pre-Insulated Multi Layered Alu-Plex type system.
<i>Lifecycle</i>	<ul style="list-style-type: none"> Annual Inspection of ASHP. Annual inspections required for all pipework within landlord areas. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual Inspections, including legionella testing to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	N/A

6.1.4 Ventilation Services

<i>Location</i>	Apartments
<i>Description</i>	<p>Heat Recovery Ventilation System (HRV) Ducting and Grilles</p> <ul style="list-style-type: none"> Continuous mechanical extract system in apartments. Mechanical Ventilation in Car Park
<i>Lifecycle</i>	<ul style="list-style-type: none"> Annual inspection of extract fan / HRV and grilles Annual Inspection of operation of fan and boost / setback facility if provided on units. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	N/A

6.2 Electrical / Protective Services

6.2.1 Electrical Infrastructure

<i>Location</i>	Switch rooms / Risers
<i>Description</i>	Maintenance of Electrical Switchgear
<i>Lifecycle</i>	<ul style="list-style-type: none"> Annual Inspection of Electrical Switchgear and switchboards. Thermographic imaging of switchgear 50% of MV Switchgear Annually and LV switchgear every 3 years. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual / Every three years to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet and exceed ESB, IS10101:2020, CIBSE recommendations and be code compliant in all cases.
<i>Reference</i>	N/A

6.2.2 Lighting Services internal

<i>Location</i>	All Areas – Internal
<i>Description</i>	Lighting – LED throughout with Presence detection in circulation areas and locally controlled in apartments.
<i>Lifecycle</i>	<ul style="list-style-type: none"> Annual Inspection of All Luminaires Quarterly Inspection of Emergency Lighting. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual / Quarterly Inspections certification as required per above remedial works.
<i>Year</i>	Annually / Quarterly
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet requirements and be in accordance with the current IS3217:2013 + A1 2017, Part M and DAC Requirements.
<i>Reference</i>	N/A

6.2.3 Lighting Services External

<i>Location</i>	All Areas – Internal
<i>Description</i>	Lighting – All LED with Vandal Resistant Diffusers where exposed.
<i>Lifecycle</i>	<ul style="list-style-type: none"> Annual Inspection of All Luminaires Quarterly Inspection of Emergency Lighting Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual / Quarterly Inspections certification as required as per the PPM schedule.
<i>Year</i>	Annually / Quarterly
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet requirements and be in accordance with the current IS3217:2013 + A1 2017, Part M and DAC Requirements.
<i>Reference</i>	N/A

6.2.4 Protective Services – Fire Alarm

<i>Location</i>	All areas – Internal
<i>Description</i>	Fire alarm
<i>Lifecycle</i>	<ul style="list-style-type: none"> Quarterly Inspection of panels and 25% testing of devices as per IS3218:2013 + A1 2019 requirements. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual / Quarterly Inspections certification as required as per the PPM schedule.
<i>Year</i>	Annually / Quarterly
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet requirements and be in accordance with the current IS3218:2013 + A1 2019 and the Fire Cert
<i>Reference</i>	N/A

6.2.5 Protective Services – Fire Extinguishers

<i>Location</i>	All Areas – Internal
<i>Description</i>	Fire Extinguishers and Fire Blankets
<i>Lifecycle</i>	Annual Inspection
<i>Required maintenance</i>	Annual with Replacement of all extinguishers at year 10
<i>Year</i>	Annually
<i>Priority</i>	Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Selection process</i>	All fire extinguishers must meet the requirements of I.S 291:2015 Selection, commissioning, installation, inspection and maintenance of portable fire extinguishers.
<i>Reference</i>	N/A

6.2.6 Protective Services – Apartment Sprinkler System (Where Applicable by Fire Cert)

<i>Location</i>	Apartments only.
<i>Description</i>	Apartment Sprinkler System
<i>Lifecycle</i>	Weekly / Annual Inspection
<i>Required maintenance</i>	Weekly Check of Sprinkler Pumps and plant and annual testing and certification of plant by specialist.
<i>Year</i>	All
<i>Priority</i>	Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Selection process</i>	The Apartment sprinkler system shall be installed in accordance with BS 9251:2005 – Sprinkler Systems for Residential and Domestic Occupancies – Code of Practice
<i>Reference</i>	N/A

6.2.7 Protective Services – Dry Risers

<i>Location</i>	Common Area Cores of apartments
<i>Description</i>	Dry Risers
<i>Lifecycle</i>	Weekly / Annual Inspection
<i>Required maintenance</i>	Visual Weekly Checks of Pipework and Landing Valves with Annual testing and certification by specialist.
<i>Year</i>	
<i>Priority</i>	Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Selection process</i>	The system shall be installed in accordance with BS 5041 & BS 9999
<i>Reference</i>	N/A

6.2.8 Fire Fighting Lobby Ventilation (To Fire Consultants Design and Specification)

<i>Location</i>	Common Area Lobbies of apartments
<i>Description</i>	Smoke Extract / Exhaust Systems
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Regular Tests of the system • Annual inspection of Fans • Annual inspection of automatic doors and AVOs • All systems to be backed up by life safety systems.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Weekly / Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	N/A

6.2.9 Sustainable Services

<i>Location</i>	Roof
<i>Description</i>	Photovoltaics Panels.
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Regular Tests of the system. • Annual inspection of Panels • Annual Clean of Panels.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Weekly / Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	N/A