PROPOSED STRATEGIC HOUSING DEVELOPMENT

FORMER BAILEY GIBSON SITE

326-328 South Circular Road, Dublin 8

BUILDING LIFE CYCLE REPORT

DOCUMENT HISTORY

ISSUE NO:	1	2	3
STATUS:	DRAFT	DRAFT	FINAL ISSUE
DATE:	26/03/2020	21/04/2020	13/05/2020
PREPARED BY:	ALAN MURPHY DAVID FEIGHERY	ALAN MURPHY DAVID FEIGHERY	ALAN MURPHY DAVID FEIGHERY
CHECKED BY:	AODHÁN KING	AODHÁN KING	AODHÁN KING
APPROVED BY:	AODHÁN KING DARREN DAVIDSON	AODHÁN KING DARREN DAVIDSON	AODHÁN KING DARREN DAVIDSON

ISSUE NO:	4		
STATUS:	FINAL ISSUE -		
DATE:	15/05/2020		
PREPARED BY:	ALAN MURPHY DAVID FEIGHERY		
CHECKED BY:	AODHÁN KING		
APPROVED BY:	AODHÁN KING DARREN DAVIDSON		

TABLE OF CONTENTS

1.0. INTRODUCTION

Aramark Property were instructed by DBTR- SCR1 Fund, a sub-fund of CWTC Multi Family ICAV to provide a Building Lifecycle Report for their proposed residential scheme at the former Bailey Gibson site, 326-328 South Circular Road, Dublin 8.

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) under Section 28 of the Planning and Development Act 2000 (as amended). Within the new guidelines, new guidance is being provided on residential schemes.

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, as well as demonstrating what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of the residents."*

2.0. DESCRIPTION OF DEVELOPMENT

The development will consist of;

i. the demolition of all buildings and structures on the site, including 9 no. buildings (11,234.42 sq.m GFA) and 1 no. ESB substation (21sq.m) to make way for development of the site;

ii. the construction of 416 no. residential units in 5 no. blocks, with a cumulative gross floor area of 31,117 sq.m for the residential component comprising;

   a. 404 no. apartments in 4 no. blocks (BG1-4) ranging in height from 2 storeys to 16 storeys, over single level basement on part of the site, incorporating 19 no. studio units; 251 no. 1 bed and 134 no. 2 bed, all with private amenity space in the form of balconies;

   b. 2 no. 2-storey 2-bedroom duplex apartments all with private amenity space in the form of balconies contained in BG3.

   c. 6 no. 3-storey 3-bedroom triplex apartments all with private amenity space in the form of terraces contained in BG1;

   d. 4 no. 3-storey 4-bedroom townhouses all with private amenity space in the form of back gardens and 4 no. car parking spaces contained in BG5;

iii. the construction of tenant amenities with a cumulative gross floor area of 812 sq.m comprising; in BG1, a concierge office (86 sq.m at ground floor level); in BG2, gymnasium (260 sq.m), combined concierge/marketing/coworking space (191 sq.m) at ground floor and communal living/ kitchen (166 sq.m) and residents lounge (29 sq.m) at first floor level; and in BG3, a resident's lounge (24 sq.m) that connects with the communal garden.

iv. provision of 2,618 sq.m of communal open space distributed as follows; in BG1, central courtyard area (774 sq.m) and roof terrace (60 sq.m); in BG2, roof terrace (926 sq.m); in BG3, courtyard (545 sq.m); and in BG4, courtyard (313 sq.m).

v. the construction of a childcare facility with a gross floor area of 233 sq.m and associated play areas of 50 sq.m and 3 no. set-down parking spaces;

vi. the construction of 164 sq.m of commercial floorspace to facilitate a restaurant/café/bar at ground level in Block BG2 and 224 sq.m of commercial floorspace at ground floor level in Block BG1 to facilitate a range of uses including Class 1 (shop), Class 2 (financial/professional services) , Class 8 (health services), Class 10 (community/arts) and Class 11 (bingo hall);

vii. the construction of a single storey ESB sub-station (14 sq.m GFA) and a double ESB sub-station (28 sq.m GFA);

viii. partial realignment and widening of Rehoboth Place to provide a new carriageway width of 5m, enabling fire tender and refuse truck access, and minimum footpath widths of 2m on both sides of the street.

ix. at basement level, the provision of 106 no. car parking spaces including 10 no. dedicated disabled parking spaces. 10% of the spaces will be fitted with electric charging points. 12 no. motorcycle spaces will also be provided at basement level.

x. at podium level, the provision of 12 no. car parking spaces, including 1 no. disabled parking space (10 no. reserved for car sharing scheme 'Go Car') and 15 no. on street visitor car parking

spaces (4 no. of which will be reserved for 'Go Cars'), including 1 no. dedicated disabled parking space, together with 3 no. set down parking spaces for taxis and crèche drop offs and a loading bay to service the commercial units.

xi. the provision of 543 no. long-stay bicycle parking spaces, comprising 315 no. spaces at basement level, accessed via a dedicated cycle stairway, and 228 no. spaces at surface level. 84 no. short stay visitor cycle spaces are provided at surface level

xii. vehicular access will be via Rehoboth Place and vehicular exit will be via the existing access on South Circular Road. Provision of 3 no. pedestrian access points; 1 no. from the South Circular Road; 1 no. from Rehoboth Place; and 1 no. from Rehoboth Avenue. Improvement works to the existing entrance on South Circular Road, removal of existing uncontrolled pedestrian crossing and provision of a new signalised pedestrian crossing is proposed on South Circular Road to facilitate improved access for existing and future residents of the area to bus stops along with improvement to the footpath provision along South Circular Road opposite Rehoboth Place entry.

xiii. all ancillary site development works, plant, waste storage, meter rooms, rooftop solar photovoltaics, landscaping, boundary treatment and lighting.

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 the former Bailey Gibson site, 326-328 South Circular Road, Dublin 8 and explores the practical implementation of the design and material principles which has informed the design of the buildings, 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 drawing pack and outline architectural specification received 23rd March 2020, and pre-application design statement, dated January 2020.

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.

4.0. EXTERNAL BUILDING FABRIC SCHEDULE

4.1. Roofing

4.1.1. Green Roofs

Location	All flat roof areas
Description	Green roof sedum on a built-up insulated bituminous membrane base
Lifecycle	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.
Required maintenance	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.
Year	Quarterly
Priority	Medium
Selection process	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 bio-diversity. 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.
Reference	N/A

4.1.2 Roof Terraces

Location	Roof terraces
Description	• Light weight precast concrete / stone paving slabs on support system, or • Timber decking, or • Resin bound gravel surfacing. • Roof deck build up to architects' and engineers' instructions.
Lifecycle	• Average lifecycle of 30 years for paving slabs. • Average lifecycle of 10-20 years for timber. • Average lifecycle of 10-20 years for gravel surfacing.
Required maintenance	Quarterly maintenance visits to include: • Inspection of drainage layer and outlets and removal of any blockages to prevent water build up. • Inspection of all metalwork and fixings for loosening or degradation including railings, planters, flashings, decking, drainage channels and repair/replace as necessary. • Check for displacement of slabs and mortar decay and remove organic matter. • Power-washing of hard surfaces.

	• Timber decking requires cleaning, sanding and recoating with proprietary wood stain on an annual basis to ensure safety, longevity and maintained aesthetic value.
Year	Quarterly / annual
Priority	Medium
Selection process	Paving slabs provide a robust and long-lasting roof terrace surface, requiring considerably less maintenance when compared to timber decking or gravel surfaces.
Reference	N/A

4.1.3 **Fall Arrest System for Roof Maintenance Access**

Location	Roofs
Description	• Latchways Constant Force B1 Fall Restraint System/B2 Fall Arrest System • Installation in accordance with BS 7883 by the system manufacturer or a contractor approved by the system manufacturer
Lifecycle	25-30 years. Generally steel finishes to skyward facing elements can be expected to maintain this life expectancy.
Required maintenance	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.
Year	Annually
Priority	High
Selection process	Fall protection systems are a standard life safety system, provided for safe maintenance of roofs and balconies where there is not adequate parapet protection. A FPS must comply with relevant quality standards.
Reference	N/A

4.1.4 **Roof Cowls**

Location	Roofs
Description	• Roof Cowl System to be supplied with weather apron for flat roofs. • Stainless Steel goose neck tube to facilitate power supply to external roof level bolted to roof and weathered using proprietary weather apron.
Lifecycle	25-35 years
Required maintenance	Check fixings annually, inspect for onset of leading edge corrosion if epoxy powder coat finish and treat.
Year	Annually
Priority	Low
Selection process	Standard fitting for roof termination of mechanical ventilation system
Reference	N/A

4.1.5 **Flashings**

Location	Roof abutments, roof penetrations and upstand details
Description	Lead to be used for all flashing and counter flashings
Lifecycle	Typical life expectancy of 70 years recorded for lead flashings. Recessed joint sealing will require regular inspections.
Required maintenance	Check joint fixings for lead flashing, ground survey annually and close up inspection every 5 years. Re-secure as necessary.
Year	Ground level inspection annually and close up inspection every 5 years
Priority	Medium
Selection process	Lead has longest life expectancy of comparable materials such as copper (60 years) and zinc (50 years). Lead is easily formed into the required shapes for effective weathering of building junctions according to Lead Sheet Association details.
Reference	N/A

4.1.6 **Smoke Vents and Access Hatches**

Location	Roofs
Description	Companionway Access Roof Hatches hinged to act as Automatic Opening Vent in the event of the activation of the fire alarm system
Lifecycle	25-35 years
Required maintenance	Check fixings annually, inspect for onset of leading edge corrosion if epoxy powder coat finish and treat
Year	Annually
Priority	Medium
Selection process	Manufactured with anti-corrosive composite materials to give long low maintenance life
Reference	N/A

4.2. **Rainwater Drainage**

Location	All buildings
Description	• *Rainwater outlets:* Suitable for specified roof membranes • *Pipework:* Cast aluminium downpipes/uPVC downpipes • *Below ground drainage:* To M&E/ Structural Engineers design and specification • *Disposal:* To surface water drainage to Structural Engineers design • *Controls:* To M&E/ Structural Engineers design and specification • *Accessories:* allow for outlet gradings, spigots, downspout nozzle, hopper heads, balcony and main roof outlets
Lifecycle	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.

Required maintenance	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).
Year	Annually, cleaning bi-annually
Priority	High
Selection process	As above, aluminium fittings compare well against cast iron (in terms of cost) and plastic (in terms of lifespan and aesthetic)
Reference	N/A

4.3. **External Walls**

4.3.1. **Brick**

Location	Façades
Description	Facing brickwork infills to selected colour
Lifecycle	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.
Required maintenance	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.
Year	Annual
Priority	Low
Selection process	Aesthetic, lightweight, cost-efficient and low maintenance cladding option, indistinguishable from traditional brick construction.
Reference	N/A

4.3.2. **Render**

Location	Façades
Description	Selected render finish
Lifecycle	Renders in general are expected to have a lifecycle of circa 25 years
Required maintenance	Regular inspections to check for cracking and de-bonding. Most maintenance is preventative. Coloured render requires less maintenance than traditional renders.
Year	Annually
Priority	Medium
Selection process	Appropriate detailing will contribute to a long lifespan for this installation. Acrylic render is a durable and low-maintenance finish with the added benefit of this product being BBA certified against other render systems.
Reference	N/A

4.3.3 **Curtain Walling**

Location	Façades
Description	Aluminium thermally broken stick curtain wall system with double glazed units restrained by aluminium pressure plates covered by aluminium cover caps.
Lifecycle	Aluminium curtain walling should give a typical life expectancy of 40-45 years.
Required maintenance	Regular cleaning with non-aggressive pH neutral agents. Annual overhaul and lubrication of fittings. Check strength and positioning of screws in aluminium profiles. Loose or damaged screws should be fixed or replaced
Year	Annual
Priority	Low
Selection process	Curtain walling provides a long life low maintenance external envelope allowing high levels of natural daylighting together with wind and watertight thermally efficient construction .
Reference	N/A

4.4. **External Windows & Doors**

Location	Façades
Description	• Aluminium double glazed fixed and openable units with thermally broken frames • 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.
Lifecycle	Aluminium has a typical lifespan of 45-50 years.
Required maintenance	Check surface of windows and doors regularly so that damage can be detected at early stage and remedial action taken. Silicone seals and gaskets should be checked to ensure they are intact and secure. Check fixings and furniture and lubricate at least once a year. Ensure regular cleaning regime. Check for condensation on frame from window and ensure ventilation louvres are operable.
Year	Annual
Priority	Medium
Selection process	Aluminium is low maintenance with good effective lifespan
Reference	N/A

4.5. **Balconies**

4.5.1. **Structure**

Location	Façades
Description	• Concrete balcony system to engineer's detail, or • Powder-coated steel frame balcony system to engineer's detail • Thermally-broken farrat plate connections to main structure of building.
Lifecycle	• Metal structure has a typical life expectancy of 70 years dependent on maintenance of components. • Concrete structures have a high embodied energy, however it is an extremely durable material. Concrete frame has a typical life expectancy of over 80 years.
Required maintenance	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.
Year	Annual
Priority	High
Selection process	Engineered detail; designed for strength and safety.
Reference	N/A

4.5.2. **Balustrades and Handrails**

Location	Balconies
Description	• Clear glass / metal balustrades • Fixing in accordance with manufacturer's details
Lifecycle	General glass and metal items with a 25-45 year lifespan
Required maintenance	Regular visual inspection of connection pieces for impact damage or alterations
Year	Annual
Priority	High
Selection process	Long low maintenance lifespan versus timber options
Reference	N/A

5.0. INTERNAL BUILDING FABRIC SCHEDULE

5.1. Floors

5.1.1. Common Areas

Location	Entrance lobbies / Reception areas / corridors
Description	• Selected large format anti-slip porcelain or ceramic floor tile • Inset matwell with Forbo Nuway Tuftiguard or similar
Lifecycle	Lifespan expectation of 20-30 years in heavy wear areas, likely requirement to replace for modernisation within this period also
Required maintenance	Visual inspection, intermittent replacement of chipped / loose tiles
Year	Annual
Priority	Low
Selection process	Durable, low maintenance floor finish. Slip rating required at entrance lobby, few materials provide this and are as hard wearing.
Reference	N/A

Location	Stairwells, landings / half landings
Description	Selected carpet tiled covering. Approved anodised aluminium nosings to stairs.
Lifecycle	• 10-15 year lifespan for carpet. Likely requirement to replace for modernisation within this period also. Using carpet tiles allows for localised replacement thus extending the life of the overall installation • 20 year lifespan for aluminium nosings.
Required maintenance	Visual inspection with regular cleaning.
Year	Quarterly inspection and cleaning as necessary.
Priority	Low
Selection process	Using carpet allows flexibility to alter and change as fashions alter and change providing enhanced flexibility.
Reference	N/A

Location	Lifts
Description	Tiles to match adjacent apartment lobbies.
Lifecycle	Lifespan expectation of 20-25 years in heavy wear areas for the tiling.
Required maintenance	Visual inspection, intermittent replacement of chipped / loose tiles.
Year	Annual
Priority	Low
Selection process	Slip rating required for lifts, few materials provide this and are as hard wearing.
Reference	N/A

5.1.2. **Tenant Amenity Areas**

Location	Gym
Description	Selected timber flooring with selected underlay, weights area to receive selected raised designated zone, where the flooring can be built-up locally to accommodate this use and reduce potential impact sound with selected rubber matting or similar approved.
Lifecycle	Timber flooring with selected underlay has an expected life expectancy of 10-15 years dependent on use. A gym would be a high-use area which can significantly shorten timber floor lifespan.
Required maintenance	Sweep clean regularly ensuring to remove any dirt. Clean up spills immediately and use only recommended floor cleaners.
Year	Quarterly
Priority	Medium
Selection process	Appropriate use of timber floors, specifically in gym areas controls acoustic impact.
Reference	N/A

Location	Concierge & co-working space
Description	• Timber laminate / parquet flooring, or • Carpet covering • Provide for inset matwell
Lifecycle	• 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
Required maintenance	Visual inspection. Sweep clean regularly ensuring to remove any dirt. Clean up spills immediately and use only recommended floor cleaners.
Year	Annual
Priority	Low
Selection process	Materials chosen for aesthetics, durability and low maintenance.
Reference	N/A

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

Location	Apartments and Townhouses
Description	• Timber laminate • Carpet covering
Lifecycle	• Timber laminated 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
Required maintenance	Visual inspection. Sweep clean regularly ensuring to remove any dirt. Clean up spills immediately and use only recommended floor cleaners
Year	Annual
Priority	Low
Selection process	Materials chosen for aesthetics, durability, hygiene and acoustic performance. Relatively low maintenance and long effective life.
Reference	N/A

5.2. **Walls**

5.2.1. **Common Areas**

Location	Entrance lobbies / Reception areas
Description	Selected contract vinyl wall paper feature, or; Selected paint finish with primer to skimmed plasterboard
Lifecycle	2-10 years for finishes; 40 years for plasterboard
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish.
Reference	N/A

Location	Lobbies / corridors / stairs
Description	Selected contract vinyl wallpaper, class O rated, or Selected paint finish with primer to skimmed plasterboard
Lifecycle	2-10 years for finishes; 40 years for plasterboard
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish.
Reference	N/A

5.2.2. **Tenant Amenity Areas**

Location	Gym
Description	Selected paint finish with primer to skimmed plasterboard.
Lifecycle	2-10 years for finishes; 40 years for plasterboard.
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish.
Reference	N/A

Location	Concierge & co-working space
Description	Selected contract vinyl wall paper feature, or Selected paint finish with primer to skimmed plasterboard.
Lifecycle	2-10 years for finishes; 40 years for plasterboard.
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish.
Reference	N/A

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

Location	Apartments, Townhouses
Description	• Emulsion paint finish with primer to skimmed plasterboard • Selected ceramic wall tile to plasterboard (moisture board to wet areas).
Lifecycle	2-10 years for finishes; 40 years for plasterboard, 30 years for ceramic tiles
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged. Replace mastic sealant when damaged
Year	Bi-annually
Priority	Low
Selection process	Decorative, durable and hygienic finish.
Reference	N/A

5.3. **Ceilings**

Location	Common areas & tenant amenity areas
Description	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.
Lifecycle	2-10 years for finishes; 40 years for plasterboard
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish
Reference	N/A

Location	Tenant amenity wet areas (e.g. gym changing areas & WCs)
Description	Selected paint finish with primer to skimmed moisture board ceiling.
Lifecycle	2-10 years for finishes; 40 years for plasterboard.
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish.
Reference	N/A

Location	Apartments and Townhouses
Description	emulsion paint finish with primer to skimmed plasterboard ceiling on M/F frame. Moisture board to wet areas.
Lifecycle	2-10 years for finishes; 40 years for plasterboard
Required maintenance	Regular maintenance required, damp cloth to remove stains and replacement when damaged
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish
Reference	N/A

5.4. Internal Handrails & Balustrades

Location	Stairs & landings
Description	• Proprietary glazed panel system face fixed to stairs stringer / landing slab to manufacturer's details and specifications, or • Metal balustrade option
Lifecycle	25-30 years typical lifecycle
Required maintenance	Regular inspections of holding down bolts and joints
Year	Annually
Priority	High
Selection process	Hard wearing long life materials against timber options
Reference	N/A

5.5. Carpentry & Joinery

5.5.1. Internal Doors and Frames

Location	All buildings
Description	• 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
Lifecycle	30 years average expected lifespan
Required maintenance	General maintenance in relation to impact damage and general wear and tear
Year	Annual
Priority	Low, unless fire door High
Selection process	Industry standard
Reference	N/A

5.5.2. **Skirtings & Architraves**

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

5.5.3. **Window Boards**

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

5.5.4 **Kitchen Fittings**

Location	Apartments and Townhouses
Description	18 mm MFC carcasses and units
Lifecycle	30 years average expected lifespan
Required maintenance	General maintenance in relation to impact damage and general wear and tear. Overhaul and lubricate hinges and fixings on annual basis
Year	Annual
Priority	Low
Selection process	MFC offers good resistance to scouring and impact damage.
Reference	N/A

5.6 Sanitary Ware

Location	Apartments and Townhouses
Description	• High quality acrylic sheet with glass reinforced polymer reinforcement bath and shower bases • Vitreous china ceramic wash basins and W.C's • Chrome plated brass taps and wastes
Lifecycle	30 years average expected lifespan
Required maintenance	Regular cleaning with non-aggressive pH neutral agents. Annual overhaul and lubrication of fittings. Replacement of valves and seals when defective
Year	Annual
Priority	Low
Selection process	Robust and durable products offering low maintenance and long effective life incorporating water saving design and features.
Reference	N/A

6.0. BUILDING SERVICES

6.1. Mechanical Systems (Residential)

6.1.1. Mechanical Plant

Location	Roof
Description	**Space Heating & Domestic Hot Water:** High efficiency Exhaust Air Heat Pumps (EAHPs) will be utilised in order to satisfy the space heating load of each dwelling and provide the domestic hot water demand.
Lifecycle	Annual Maintenance / Inspection to EAHP System Annual Maintenance / Inspection to Heating and Water Pumps. Annual Maintenance / Inspection to Water Tanks. Annual Maintenance / Inspection to 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.
Required maintenance	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium

Selection process	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.
Reference	N/A

6.1.2 Soils and Wastes

Location	All Areas – Residential
Description	PVC Soils and Wastes Pipework
Lifecycle	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.
Required maintenance	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium
Selection process	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.
Reference	N/A

6.1.3. **Water Services**

Location	All Areas – Residential
Description	Exhaust Air Heat Pump for Domestic Hot Water Copper Water Services Pipework and associated fittings and accessories.
Lifecycle	Annual Maintenance / Inspection of EAHP. 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.
Required maintenance	Annual Inspections, including legionella testing to be included as part of Development Planned Preventative Maintenance Programme
Year	Annually
Priority	High
Selection process	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.
Reference	N/A

6.1.4. **Ventilation Services**

Location	All Areas – Residential
Description	Mechanical Whole House Extract Ventilation System, Ducting & Grilles (MVHR)
Lifecycle	Annual inspection of Extract Ventilation System and grilles Annual Inspection of operation of fan and boost / setback facility. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
Required maintenance	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium
Selection process	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.
Reference	N/A

6.2. **Electrical / Protective Services**

6.2.1. **Electrical Infrastructure**

Location	Switch rooms / Risers
Description	Maintenance of Electrical Switchgear
Lifecycle	Annual Inspection of Electrical Switchgear and switchboards. Thermographic imagining 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.
Required maintenance	Annual / Every three years to be included as part of Development Planned Preventative Maintenance Programme
Year	Annually
Priority	High
Selection process	All equipment to meet and exceed ESB, ETCI , CIBSE recommendations and be code compliant in all cases.
Reference	N/A

6.2.2. **Lighting Services internal**

Location	All Areas – Residential - Internal
Description	Lighting – LED throughout with Presence detection in circulation areas and locally controlled in apartments.
Lifecycle	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.
Required maintenance	Annual / Quarterly Inspections certification as required per above remedial works.
Year	Annually / Quarterly
Priority	High
Selection process	All equipment to meet requirements and be in accordance with the current IS3217, Part M and DAC Requirements.
Reference	N/A

6.2.3. **Lighting Services External**

Location	All Areas – Residential - External
Description	Lighting – All LED with Vandal Resistant Diffusers where exposed.
Lifecycle	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.
Required maintenance	Annual / Quarterly Inspections certification as required as per the PPM schedule.
Year	Annually / Quarterly
Priority	High
Selection process	All equipment to meet requirements and be in accordance with the current IS3217, Part M and DAC Requirements.
Reference	N/A

6.2.4. **Protective Services – Fire Alarm**

Location	All Areas – Residential
Description	Fire alarm
Lifecycle	Quarterly Inspection of panels and 25% testing of devices as per IS3218 requirements. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
Required maintenance	Annual / Quarterly Inspections certification as required as per the PPM schedule.
Year	Annually / Quarterly
Priority	High
Selection process	All equipment to meet requirements and be in accordance with the current IS3218 and the Fire Cert
Reference	N/A

6.2.5. **Protective Services – Fire Extinguishers**

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

6.2.6. **Protective Services – Apartment Sprinkler System**

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

6.2.7. **Protective Services – Dry Risers**

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

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

Location	Common Area Lobby's
Description	Smoke Extract / Exhaust Systems
Lifecycle	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.
Required maintenance	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
Year	Weekly / Annually
Priority	Medium
Selection process	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.
Reference	N/A

6.2.9. **Sources of Renewable Energy**

Location	Roof
Description	PV Array on roof supply each residential unit with renewable electrical energy, supporting the Part L / NZEB requirements in conjunction with Exhaust Air Source Heat Pumps . Full Details to be provided at detailed stage.
Lifecycle	Quarterly Clean Annual Inspection Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
Required maintenance	Quarterly / Annual
Year	Annually
Priority	Medium
Selection process	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.
Reference	N/A