BUILDING LIFE CYCLE REPORT

PARKGATE STREET SHD – RESIDENTIAL DEVELOPMENT

42A Parkgate Street, Dublin 8

DOCUMENT HISTORY

ISSUE NO:	**1**	**2**	3
STATUS:	**ISSUED**	**FINAL**	**FINAL**
DATE:	**18/05/2021**	**03/06/2021**	**15/06/2021**
PREPARED BY:	**CONOR FAHEY** **DAVID FEIGHERY**	**CONOR FAHEY** **DAVID FEIGHERY**	**CONOR FAHEY** **DAVID FEIGHERY**
CHECKED BY:	**AODHÁN KING**	**AODHÁN KING**	**AODHÁN KING**
APPROVED BY:	**AODHÁN KING** **DARREN DAVIDSON**	**AODHÁN KING** **DARREN DAVIDSON**	**AODHÁN KING** **DARREN DAVIDSON**

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1.0. INTRODUCTION

Aramark Property were instructed by Ruirside Developments Limited to provide a Building Life Cycle Report for the proposed (revised) Block A 'Build-to-Rent' tower building and associated interface works (between Blocks A and B) at 42A Parkgate Street, Dublin 8.

This Building Life Cycle report is provided in response to a split decision made by the board where permission for Block A original planning design (ABP Ref. 306569-20) was refused. This report requires details of a maintenance strategy for materials within the proposed (revised) Block A tower building. The report provides 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.

2.0. DESCRIPTION OF DEVELOPMENT

In brief, permission is sought for Strategic Housing Development, with a life of 8 years, at 42A Parkgate Street, Dublin 8, for development comprising:

A 30-storey residential building ('Block A') (c.14,364 sq m gfa), including residential, café/restaurant, replacement office use and ancillary accommodation and works, located in the eastern apex of the site subject of otherwise consented development under ABP-306569-20.

The proposed new Block A building accommodates:

198no. 'Build To Rent' residential apartments (73no. studios, 97no. 1-bed, 27no. 2-bed & 1no. 3-bed) from 1st to 27th floors inclusive, including 53no. units with 'winter garden' balconies on the building's eastern elevation.

Ancillary internal (c.384 sq m) and external (c.255 sq m) residents' private communal amenity areas and facilities, including ground floor reception/concierge area, lounge bars at mezzanine and 9th floors, and roof gardens at 9th and 28th floors. Also, access to residents' private communal amenity areas within the consented scheme ABP-306569-20.

1no. café/restaurant (c.223 sq m) at ground floor. Replacement office floor area (c.595.6 sq m total) accommodated between 1st and 8th floor levels of Block A.

Ancillary residential bicycle storage (22no. spaces), refuse, circulation and plant, and non-residential back of house and circulation areas at ground and mezzanine floors.

Building Maintenance Unit (BMU) at roof level.

Ancillary and associated site works and other structural and landscape works are proposed to tie the proposed new Block A building in with the consented development (ABP 306569-20). Proposed amendments to the consented scheme, include:

At the interface of proposed Block A with the consented Block B2 office building:

a reduction by c.909 sq m total of office floor area over 6 floors within the consented Block B2 office building;

a reduction by c.35 sq m of external residential amenity and associated minor amendments to landscaping at roof level of consented Block B2; and,

localised changes to the northern Parkgate St façade of the consented Block B2 to include a shadow gap at its junction with proposed Block A.

16no. additional bicycle parking spaces accommodated within consented Block B1 undercroft area.

Minor localised amendments to adjoining consented public realm area to tie in with proposed Block A at ground level.

New telecommunications infrastructure at roof level of consented Block B1, including: 4no. 300mm microwave link dishes mounted on 2no. 2m high steel poles fixed to the consented lift shaft overrun, housed within GRP radio friendly shrouds, to mitigate potential for interference with existing telecommunication channels.

The site within which the proposed works sit, benefits from extant permission for residential-led mixed use strategic housing development under ABP 306569-20 (i.e. the consented development). Permission is not being re-sought for the consented development.

For avoidance of doubt, while the red line site boundary is drawn around the entire planning unit of ABP Ref. 306569-20, the development works for which permission is expressly sought are identified with a green dashed line, within the wider red line planning unit.

The overall site (c.0.82 ha) is principally bounded by Parkgate Street to the north, the River Liffey to the south, an existing electricity substation and the junction of Sean Heuston Bridge and Parkgate Street to the east, existing Parkgate Place office and residential development to the west. The application site includes areas of public footpath and roadway on Parkgate Street and a small landscaped area at the junction of Sean Heuston Bridge and Parkgate Street. There are Protected Structures on site.

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 (revised) Block A 'Build-to-Rent' tower building and associated interface works (between Blocks A and B) at 42A Parkgate Street, Dublin 8 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 new Block A tower building.

Building materials proposed for use on elevations of Block A tower building 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 such as precast concrete cladding complete with mixture of wide and fenestration glazed units, and curtain wall glazed system at lower level will contribute to lower maintenance costs for future residents and occupiers.

This report reflects the material descriptions provided by the project architect. For any element where final details are not yet available, typical examples have been provided of the building materials and services for schemes of this nature and their associated lifespans and maintenance requirements.

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. 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.

4.0. EXTERNAL BUILDING FABRIC SCHEDULE

4.1. Roofing

4.1.1. Roof Terrace (Manufacturer / Supplier TBC)

Location	Block A Communal Terrace
Description	• Light weight precast concrete/stone paving slabs on support system. • Roof deck build up to architects' and engineers' instructions.
Lifecycle	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.
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.
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

4.1.2. Roof (Manufacturer / Supplier TBC)

Location	Block A Flat Roof Area (maintenance access only)
Description	• Single layer membrane roof system to engineer's specification. • Selected membrane, mixture of metal coping and brick cappings.
Lifecycle	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.
Required maintenance	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.
Year	Half-Yearly / Annual
Priority	Medium
Selection process	A membrane roof with appropriate built up system will provide durability, lacks water permeability and easily maintain without shutting down building operations during application.
Reference	N/A

4.1.3. **Fall Arrest System** **(Manufacturer / Supplier TBC)**

Location	Block A Flat Roof Area (maintenance access only)
Description	• Fall Protection System (FPS) on approved anchorage device • Installation in accordance with BS 7883 by the system manufacturer or a contractor approved by the system manufacturer
Lifecycle	Generally, 25-30 years dependent on quality of materials. Generally steel finishes to skyward facing elements can be expected to maintain this life expectancy. As used across the industry nationally and the UK, long lifecycle is typically achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
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	FPS are a standard life safety system, provided for safe maintenance of roofs and balconies where there is not adequate parapet protection. An FPS must comply with relevant quality standards.
Reference	N/A

4.1.4. **Roof Cowls** **(Manufacturer / Supplier TBC)**

Location	Block A Flat Roof Area
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	Generally, 25-30 years dependent on quality of materials. 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.
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** (Manufacturer / Supplier TBC)

Location	All flashing locations
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. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
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

4.2. **Rainwater Drainage** (Manufacturer / Supplier TBC)

Location	Block A
Description	• *Rainwater outlets:* Suitable for specified roof membranes • *Pipework:* Cast aluminium downpipes/uPVC downpipes • *Below ground drainage:* To Engineers design and specification • *Disposal:* To surface water drainage to Engineers design • *Controls:* To Engineers design and specification • *Accessories:* allow for outlet gradings, spigots, downspout nozzle, hopper heads, balcony and main roof outlets
Lifecycle	Metal 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 across the industry nationally and the UK, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
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. Concrete Cladding

Location	Block A Façades
Description	Granite Mix Polished Precast Concrete cladding on support system.
Lifecycle	Concrete has a high embodied energy, are extremely durable material and has a typical life expectancy of 80 years. With the use of a fully powered Building Maintenance Unit (BMU) at roof level, longer lifecycle achieved by regular inspection and maintenance regime.
Required maintenance	In general, given its durability, concrete requires little maintenance and weathers well. 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	Concrete is a durable product which is chosen for its structural properties, aesthetic, cost efficiency and rapid construction.
Reference	Reddy Architecture + Urbanism planning drawings and Design Statement.

4.3.2. Metal Cladding

Location	Block A Façades
Description	Powder coated aluminium micro-louvres.
Lifecycle	Typical life expectancy of between 30 - 40 years. With the use of a fully powered BMU at roof level, longer lifecycle achieved by regular inspection and maintenance regime.
Required maintenance	Louvres require little maintenance and is resistant to corrosion that contributes to lower maintenance costs in comparison to exposed porous materials that's liable to faster deterioration. Long term cleaning requirements should be taken into consideration.
Year	Inspection annually; cleaning 5 yearly.
Priority	Low
Selection process	Louvre systems are chosen for their aesthetic impact, durability and weathering properties.
Reference	Reddy Architecture + Urbanism planning drawings and Design Statement.

4.4. External Windows & Doors

Location	Block A Façades
Description	• Powder-coated aluminium framed windows, doors and curtain wall system to selected colour. • All units to be double / triple glazed 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 45-60 years in comparison to uPVC which has a typical lifespan of 30-40 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.
Required maintenance	With the use of a fully powered BMU at roof level, 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.
Year	Annual
Priority	Medium
Selection process	Aluminium is durable and low maintenance with an average lifespan of 45-60 years, exceeding uPVC (30-40 years). Alu-clad timber windows compare favourably when compared to the above, extending timber windows typical lifespan of 35-50 years by 10-15 years.
Reference	Reddy Architecture + Urbanism planning drawings and Design Statement.

4.5 **Balconies**

4.5.1 **Structure**

Location	Block A 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. With the use of a fully powered BMU at roof level, 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	Block A Balconies
Description	**Winter Gardens:** • Approved balcony glass system (frameless). • Guarding: Manufacturers standard - Frameless tempered glass (safety glass). • Fixing: In accordance with manufacturers details.
Lifecycle	General glass item with a 25 - 45 year lifespan. As used across the industry nationally and the UK, long lifecycle is typically achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	With the use of a fully powered BMU at roof level, regular visual inspection of connection pieces for impact damage or alterations
Year	Annual
Priority	High
Selection process	Glass option will have a longer lifespan and require less maintenance than timber options (10-20 years).
Reference	N/A

5.0. INTERNAL BUILDING FABRIC SCHEDULE

5.1. Floors

5.1.1. Common Areas

Location	Block A Entrance lobby / concierge area / common corridors
Description	• Selected anti-slip porcelain or ceramic floor tile • Provide for inset matwell
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	Block A Stairwells, landings / half landings
Description	Selected carpet covering. Approved anodised aluminium nosings to stairs.
Lifecycle	• 10-15 year lifespan for carpet. Likely requirement to replace for modernisation within this period also. • 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	Block A Lift Lobbies
Description	Carpet/vinyl and porcelain tiles to match adjacent apartment and lobbies.
Lifecycle	• 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.
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

5.2. Walls

5.2.1. Common Areas

Location	Block A Entrance lobbies / Concierge area
Description	Selected paint finish with primer to skimmed plasterboard
Lifecycle	2-10 years for finishes; 40 years for plasterboard. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	Regular maintenance required and replacement when damaged.
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish.
Reference	N/A

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

5.3. Ceilings

Location	Block A Entrance lobby / Concierge area / corridors / stairs
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. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	Regular maintenance required and replacement when damaged.
Year	Bi-annually
Priority	Low
Selection process	Decorative and durable finish
Reference	N/A

5.4. Internal Handrails & Balustrades

Location	Block A Stairs & landings
Description	Mild steel painted balustrade and handrail.
Lifecycle	Over 40 years typical lifecycle. Longer lifecycle achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
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	Block A
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	Block A
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	Block A
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

6.0 BUILDING SERVICES

6.1 **Mechanical Systems**

6.1.1 **Mechanical Plant -**

Location	Block A Plant Room
Description	• Centralised Heating Plant– Specification to be further detailed by the M&E Consultant at detailed design stage. • Heating plant is proposed to consist of Gas fired boilers combined with/or CHP/Air Source Heat Pumps/Exhaust Air Heat Pumps
Lifecycle	• Annual Maintenance / Inspection to Heating System • Annual Maintenance of Air Source Heat Pumps / CHP / Exhaust Air Heat pumps • 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. • Annual Maintenance / Inspection of heating system pipework, valves, accessories and insulation. • 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 to be determined at detailed design stage.
Required maintenance	Annual Service Inspections to be included as part of Block A 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	Block A's Apartments, Kitchens, Pods etc
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	Block A's Apartments, Kitchens, Pods etc
Description	Copper Pipework plus associated fittings and accessories.
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 Inspections, including legionella testing to be included as part of Block A Planned Preventative Maintenance Programme
Year	Annually
Priority	High
Selection process	All equipment to be detailed as part of the detailed design section of Block A. 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 **Gas Services**

Location	Block A's Apartment Plant Rooms – Where Gas Appliances Present
Description	Gas Detection Systems.
Lifecycle	• Annual Maintenance / Inspection Gas detection systems within landlord's plant room. • Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
Required maintenance	Annual Service Inspections, testing and certification to be included as part of Bloc A Planned Preventative Maintenance Programme
Year	Annually
Priority	High
Selection process	All equipment to be detailed as part of the detailed design section of Block A. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
Reference	N/A

6.1.5 **Heating Services**

Location	Block A's Apartments
Description	Heat interface Units (HIU) proposed to be installed at each unit.
Lifecycle	• Annual Inspection of Heat Interface Unit in each unit. • 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 Block A Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium
Selection process	All equipment to be detailed as part of the detailed design section of Block A. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
Reference	N/A

6.1.6 **Ventilation Services**

Location	Block A's Apartments
Description	Heat Recovery Units, Ducting & Grilles (MVHR)
Lifecycle	• Annual inspection of extract fan 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 Block A Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium
Selection process	All equipment to be detailed as part of the detailed design section of Block A. 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	Block A 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 Block A Planned Preventative Maintenance Programme
Year	Annually
Priority	High
Selection process	All equipment to meet and exceed ESB, IS10101:2020, CIBSE recommendations and be code compliant in all cases.
Reference	N/A

6.2.2 Lighting Services Internal

Location	Block A – 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 IS3217:2013 + A1 2017, Part M and DAC Requirements.
Reference	N/A

6.2.3 Lighting Services External

Location	All Areas – Internal
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 IS3217:2013 + A1 2017, Part M and DAC Requirements.
Reference	N/A

6.2.4 **Protective Services – Fire Alarm**

Location	Block A – Internal
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 IS3218:2013 + A1 2019 and the Fire Cert
Reference	N/A

6.2.5 **Protective Services – Fire Extinguishers**

Location	Block A – Internal
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 (Where Applicable by Fire Cert)**

Location	Block A - Apartments
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 / Wet Risers**

Location	Common Area Cores
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	Weekly / Annually
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	Flakt or Colt Type 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 Block A. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
Reference	N/A