

BUILDING LIFECYCLE REPORT

PROPOSED DEVELOPMENT:

CARMANHALL SHD



CLIENT:
ATLAS GP
LIMITED

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01
INTRODUCTION

1.0 INTRODUCTION

Aramark Property were instructed by Atlas GP Limited, to provide a Building Lifecycle Report for their proposed residential development comprising of 2 no. apartment blocks (four modules: D, E, F and G), ranging in height from 5 - 16 storeys providing a total of 334 units and include resident support facilities/resident services and amenities, creche and car parking (surfaced and basement) at the Former Avid Technology International Site, at the junction of Blackthorn Road and Carmanhall Road, Sandyford Industrial Estate, Dublin 18.

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, Apartments and the Development Management Process, of the Sustainable Urban Housing: Design Standards for New Apartments (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.”



02
DESCRIPTION OF
DEVELOPMENT


2.0 DESCRIPTION OF DEVELOPMENT

Atlas GP Ltd, intend to apply to An Bord Pleanála for planning permission for a strategic housing development at this site of c.0.99 ha at the Former 'Avid Technology site', at the junction of Blackthorn Road and Carmanhall Road, Sandyford, Dublin 18.

The development will consist of 334 Build to Rent residential apartment units within 4 no. apartment blocks and as follows:

- 79 No. Studio
- 175 No. 1 bed
- 80 No. 2 bed
- i. All residential units provided with private balconies/terraces to the north/south/east and west elevations.
- ii. Crèche 272 sq.m.
- iii. Residential amenity spaces 893 sq.m. (including a unit of 146.5 sqm open to the public, resident's gym, business centre, multipurpose room, staff facilities, multimedia/cinema room, shared working space, concierge, and games room).
- iv. Height ranging from 5 to 16 storeys (over basement).
- v. Landscaped communal space in the central courtyard.
- vi. Provision of a new vehicular entrance from Carmanhall Road and egress to Blackthorn Road.
- vii. Provision of pedestrian and cycle connections.
- viii. 125 No. Car Parking, 6 No. Motorcycle Parking and 447 cycle spaces at ground floor/undercroft and basement car park levels.
- ix. Plant and telecoms mitigation structures at roof level

The development also includes 2 no. ESB substations, lighting, plant, storage, site drainage works, and all ancillary site development works above and below ground.



03
EXECUTIVE SUMMARY

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 comprising of 2 no. apartment blocks (four modules: D, E, F and G), ranging in height from 5 - 16 storeys providing a total of 334 units and include resident support facilities/resident services and amenities, creche and car parking (surfaced and basement) at the Former Avid Technology International Site, at the junction of Blackthorn Road and Carmanhall Road, Sandyford Industrial Estate, Dublin 18 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 McCauley Daye O'Connell Architects' planning 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



04

EXTERNAL BUILDING
FABRIC SCHEDULE

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 35 years on most green roofs. As used across the industry nationally and in the UK, long lifecycle typically achieved by robust detailing to adjoining roof elements, regular inspection and maintenance regime to ensure the upkeep of roofing product / 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>	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>	McCauley Daye O'Connell Architects' planning drawings & design statement.

4.1.2 Roof Terraces (Manufacturer / Supplier TBC)

<i>Location</i>	Tenant Shared Roof Garden
<i>Description</i>	<ul style="list-style-type: none"> • Intensive green / blue roof system to architects and engineer's specification. • Selected lightweight precast concrete / stone paving slabs on support system.
<i>Lifecycle</i>	Average lifecycle of 25 - 35 years on most green/blue roofs. As used across the industry nationally and in the UK, long lifecycle typically achieved by robust detailing to adjoining roof elements, regular inspection and maintenance regime to ensure the upkeep of roofing product / materials.
<i>Required maintenance</i>	Quarterly maintenance visits to include: <ul style="list-style-type: none"> • Inspection of drainage layer and outlets and removal of any blockages to prevent water build up. • Inspection of metalwork and fixings including railings, planters, flashings, decking and repair/replace as necessary. • Check for displacement of slabs and mortar decay and remove organic matter. Power-washing of hard surfaces.
<i>Year</i>	Quarterly / annual
<i>Priority</i>	Medium

<i>Selection process</i>	Paving slabs provide a robust and long-lasting roof terrace surface, requiring considerably less maintenance when compared to timber decking or gravel surfaces.
<i>Reference</i>	McCauley Daye O'Connell Architects planning drawings & 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 and pressed metal 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>	McCauley Daye O'Connell Architects' planning drawings and design statement.

4.1.4 Fall Arrest System for Roof Maintenance Access

<i>Location</i>	Flat roof areas (maintenance access only)
<i>Description</i>	210 Guided Type Fall Protection System; Latchways ManSafe for Approved Bituminous Felt Membrane Roofing to various decks. Anchorage device: Latchways Constant Force™ post for Bituminous Felt Membrane. Installation in accordance with BS 7883 by the system manufacturer or a contractor approved by the 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. 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.
<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

4.1.5 Roof Cowls

<i>Location</i>	Selected Flat Roof Areas
<i>Description</i>	Roof Cowl System to be supplied with weather apron for flat roofs.
<i>Lifecycle</i>	25-35 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>	Check fixings annually, inspect for onset of leading-edge corrosion if epoxy powder coat finish and treat.
<i>Year</i>	Annually
<i>Priority</i>	Low
<i>Selection process</i>	Standard fitting for roof termination of mechanical ventilation system.
<i>Reference</i>	N/A

4.1.6 Flashings

<i>Location</i>	All flashing locations
<i>Description</i>	Code 5 lead to be used for all flashing and counter flashings.
<i>Lifecycle</i>	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.
<i>Required maintenance</i>	Check joint fixings for lead 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>	Lead has longest life expectancy of comparable materials such as copper (60 years) and zinc (50 years). Provided appropriate safety precautions are taken, lead is the recommended choice for large residential, commercial or industrial builds. Lead is easily formed into the required shapes for effective weathering of building junctions according to standard Lead Sheet Association details.
<i>Reference</i>	N/A

4.2 Rainwater Drainage

<i>Location</i>	All buildings
<i>Description</i>	<ul style="list-style-type: none"> • Rainwater outlets: Suitable for specified roof membranes. • Pipework: Mixture of zinc/aluminium/uPVC downpipes. • Below ground drainage: To Engineers' design and specification. • Disposal: To surface water drainage to Engineers' design. • Controls: To Engineers' design and specification. • <i>Accessories</i>: allow for outlet gradings, spigots, downspout nozzle, hopper heads, balcony and main roof outlets.
<i>Lifecycle</i>	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.
<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, metal 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

<i>Location</i>	Contrasting light and dark tone brickwork
<i>Description</i>	Selected colour 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>Lifecycle</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>Required maintenance</i>	Annual
<i>Year</i>	Low
<i>Priority</i>	Aesthetic, lightweight, cost-efficient and low maintenance cladding option, indistinguishable from traditional brick construction.
<i>Selection process</i>	Facing brickwork infills to selected colour
<i>Reference</i>	McCauley Daye O'Connell Architects' planning drawings & design statement.

4.3.2 Metal Cladding

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> • Featured metal framework system. • Light Grey metal cladding panel.
<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>	Metal frame and panel 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>	Metal side panel protects the building's structure from rainwater and weathering. Metal panels are also chosen for their aesthetic impact, durability and weathering properties.
<i>Reference</i>	McCauley Daye O'Connell Architects' planning drawings & design statement.

4.4 External Windows & Doors

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> • Powder Protective Coating (PPC) aluminium window and door frames to approved colour. • Selected units to be double/triple glazed with thermally efficient framework. • 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>	McCauley Daye O'Connell Architects' planning drawings & design statement.

4.5 Balconies

4.5.1 Structure

<i>Location</i>	Façades (Balcony and Juliet Balcony Systems)
<i>Description</i>	<ul style="list-style-type: none"> • 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.
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Metal structure has a typical life expectancy of 70 years dependent on maintenance of components. • 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. <p>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.</p>
<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 and Juliet Balconies
<i>Description</i>	<ul style="list-style-type: none"> • Frameless tempered glass (safety glass) • Glass supported on framing system positioned behind glass. • Approved toughened safety glass and steel including fixings in accordance with manufacturer's details. • 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. Glazed finishes are chosen for their aesthetic impact, durability and weathering properties.
<i>Reference</i>	N/A



05

INTERNAL BUILDING
FABRIC SCHEDULE

5 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 complete with inset matwell. Selected loop pile carpet tiles.
<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 with regular cleaning, intermittent replacement of chipped / loose tiles
<i>Year</i>	<ul style="list-style-type: none"> Annual for floor tiles. Quarterly inspection and cleaning of carpets as necessary
<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. Using carpet allows flexibility to alter and change as fashions alter and change providing enhanced flexibility.
<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 with regular cleaning, 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. Using carpet allows flexibility to alter and change as fashions alter and change providing enhanced flexibility.
<i>Reference</i>	N/A

5.1.2 Tenant Amenity Areas

<i>Location</i>	Shared residential amenity (Concierge, Multi-Purpose Rooms, etc)
<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. Gymnasium, WC's)
<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 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>	Lift cores / 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 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>	Shared residential amenity (Concierge, Multi-Purpose Rooms, etc)
<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 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. Gymnasium, WC's)
<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 Metal Frame (MF) system. 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 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
<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 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>	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



06

BUILDING SERVICES

6.0 BUILDING SERVICES

6.1 Mechanical Systems

6.1.1 Mechanical Plant

<i>Location</i>	Residential - Centralised
<i>Description</i>	Water Heating plant is proposed to consist of either a centralised district heating scheme with Air to Water Source Heat Pumps (ASHP) with CHP or a De-centralised system with Exhaust Air Heat Pumps (EAHP) supplemented by Photovoltaic (PV) panels. 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 Heating System. • Annual Maintenance of Air Source or Exhaust Air Heat Pumps. • Annual Maintenance of CHP System. • Annual Maintenance / Inspection to Heating and Water Pumps. • Annual Maintenance / Inspection to Water Tanks. • Annual Maintenance / Inspection to Water Booster - sets. • 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 (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's (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 High-Density Polyethylene (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 (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's (CIBSE) recommended lifecycles.
<i>Reference</i>	N/A

6.1.3 Water Services

<i>Location</i>	Residential / Apartments
<i>Description</i>	<p>Exhaust Air Heat Pump (EAHP) for domestic hot water.</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 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.
<i>Required maintenance</i>	Annual Inspections, including legionella testing to be included as part of Development Planned Preventative Maintenance (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's (CIBSE) recommended lifecycles.
<i>Reference</i>	N/A

<i>Location</i>	Retail/Café Areas
<i>Description</i>	The hot water strategy within the Retail and Café Areas is dependent on Tenant fit-out.
<i>Lifecycle</i>	Annual Inspection and required replacement form part of Tenant's routine maintenance.
<i>Required maintenance</i>	Annual Inspections, including legionella testing form part of Tenant's routine maintenance.
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to be detailed / selected as part of tenant's design section of the fitout. All proposed equipment are to meet and exceed the Chartered Institution of Building Services Engineers of Ireland's (CIBSE) recommended lifecycles.
<i>Reference</i>	N/A

6.1.4 Ventilation Services

<i>Location</i>	Apartments
<i>Description</i>	All-in-one Exhaust Air Heat Pump <ul style="list-style-type: none"> • Continuous mechanical extract system in apartments.
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Annual inspection of extract fan / 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 (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's CIBSE recommended lifecycles.
<i>Reference</i>	N/A

<i>Location</i>	Retail / Café Areas
<i>Description</i>	Heating and Cooling plant is proposed to consist of Variable Refrigerant Flow (VRF) multi-split Air-conditioning systems. The Ventilation strategy within the Retail and Café Areas is dependent on Tenant fit-out. Mechanical Ventilation shall be used and sized according to purpose.
<i>Lifecycle</i>	Annual Inspection and required replacement form part of Tenant's routine maintenance.
<i>Required maintenance</i>	Annual Inspections, including legionella testing form part of Tenant's routine maintenance.
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to be detailed / selected as part of tenant's design section of the fitout. The proposed equipment are 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 Maintenance of Life Safety System Emergency Back-up Generator
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Annual Inspection of Electrical Switchgear and switchboards. • Annual Inspection of Emergency Back-up Generator. • Thermographic imaging of switchgear 50% of Medium Voltage (MV) Switchgear Annually and Low Voltage (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 (PPM) Programme
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet and exceed Electricity Supply Board (ESB), IS10101:2020, Chartered Institution of Building Services Engineers of Ireland's (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 Disability Access Certification (DAC) Requirements.
<i>Reference</i>	N/A

6.2.3 Lighting Services External

<i>Location</i>	All Areas – External
<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 Planned Preventative Maintenance (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>	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>	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
<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 automatic opening vents (AVO's) • 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 (PPM) 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>	Apartment
<i>Description</i>	Heat Pump
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Annual Maintenance of Exhaust Air Source Heat Pumps • Annual Maintenance of CHP System • 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 (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's CIBSE recommended lifecycles.
<i>Reference</i>	N/A

<i>Location</i>	Roof
<i>Description</i>	PV / Solar Thermal Array on roof Supporting the Part L / NZEB requirements in conjunction with Exhaust Air Source Heat Pumps. Full Details to be provided at detailed stage.
<i>Lifecycle</i>	<ul style="list-style-type: none"> • Quarterly Clean • Annual Inspection • Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Quarterly / Annual
<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



07
CONCLUSION &
CONTACT DETAILS

7.0 CONCLUSION & CONTACT DETAILS

Based on the information provided, Aramark Property have considered the schemes proposals. From our experience to date of similar schemes we manage, we have set out an overview of how we believe the overarching management of the scheme can be successfully managed in best practice for the benefit of the owners of this scheme, the future occupiers, and the wider community.

With reference to Aramark Property's Building Lifecycle Report, following receipt of Planning Drawings and Architectural Design Statement, the Applicant / Design Team have considered and addressed Section 6.13, Apartments and the Development Management Process, of the Sustainable Urban Housing: Design Standards for New Apartments (December 2020).

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DOCUMENT CONTROL SHEET

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