

## CLAREMONT DEVELOPMENT

Howth, Co. Dublin

### BUILDING LIFE CYCLE REPORT



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## 1.0. INTRODUCTION

Aramark Property were instructed by Marlet Property Group (Atlas GP Limited) to provide a Building Lifecycle Report and Estate Management Strategy for their proposed strategic housing development in Howth, Co. Dublin.

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 establishing an Estate Management Strategy and Building Lifecycle Analysis.

The Building Lifecycle Report has been developed on foot of newly 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). These guidelines supersede the previous 2015 document.

Within the new guidelines, new guidance is being provided on build-to-rent.

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 proposed development will occur at a site bounded to the south by the Howth Road, to the east by a private dwelling, to the north by the DART line, and to the west by Local Authority lands. The site incorporates the former Techrete manufacturing facility, the former Beshoff's Motors showroom, and the former Howth Garden Centre.

The proposed development will include the demolition of all structures on site (c.8,162sqm GFA) and excavation of a basement. The proposed development comprises of the provision of a mixed use development of residential, retail/restaurant/cafe uses and a creche in 4 no. blocks (A to D), over part basement. Blocks A, B, C and D with a height up to a maximum of seven storeys of apartments over lower ground floor and basement car parking levels (a total of eight storeys over basement level). The residential component will consist of 512 no. residential units. The proposed development includes the provision of two vehicular entrances on to Howth Road, excavation of basement to provide for car parking, plant, waste storage and ancillary use. Additional car parking spaces shall be provided at lower ground floor level. A total of 439 no. car parking spaces and 1,335 no. bicycle parking spaces, including 49 no. bicycle spaces to cater for the retail units and creche shall be provided. One vehicular access is located at Block A, serving car parking spaces. The second is at Block C, providing access to the basement, residential and retail parking, and a service area for the retail units. A service route will be provided along part of the northern perimeter of the site with access from the western end of the site at a junction with Howth Road and at the main vehicular entrance at Block C;

A publicly accessible walkway/cycleway to the north of the site shall be provided at podium level. A civic plaza will be provided between Blocks D and C, and a landscaped park to the west of Block A. A channel to the sea for the Bloody Stream with associated riparian strip shall be incorporated as a feature within a designed open space between Blocks A and B. Communal gardens will be provided for Blocks A, B and C;

The residential component consists of 512 no. residential units, which includes 4 no. studio, 222 no. one bed, 276 no. two bed, 10 no. three bed apartments, and communal facilities of 708 sqm. Ground floor units onto the Howth Road will have own door access. The units will be served by balconies or terraces on all elevations;

Block A, with a maximum height of seven storeys of apartments over lower ground level car park (a total of eight storeys), will provide for 234 residential units, with residents' amenities to include a gym, residents' lounge, residents' support office, and 2 no. residents' multi-purpose rooms. Block B,

with a maximum height of seven storeys of apartments over lower ground floor and basement car park (a total of eight storeys over basement), shall provide for 154 no. units, residents' lounge, residents' multi-purpose room, and creche of 236 sqm with outdoor play area. Own door access will be provided at ground floor. Block C, with a maximum height of seven storeys over basement car parking (a total of seven storeys) will provide for 83 no. residential units in two wings over a retail unit and Block D, with a maximum of 6 storeys over basement, shall provide for 41 no. residential units over retail units;

The commercial component in Blocks C and D consists of 4 no. units with 2,637 sqm gross floor area. In Block C, it consists of a 1,705 sqm anchor unit, accessed from the civic plaza. In Block D, it consists of a restaurant (243 sqm) and retail unit (603 sqm) and café (86 sqm). The restaurant and retail units are accessed from Howth Road, and the café is accessed from the upper level of the civic plaza.

The proposed development includes the provision of public and communal open space, green roofs, landscaping, boundary treatments, set down locations, substations, meter rooms, waste management and all ancillary site works, including upgrading of the public paths along Howth Road and relocation of bus stop in new setback with a bus shelter. Two set down areas are provided at either end of the site;

The gross floor area of the proposed development is 48,252 sqm (excluding enclosed car parking) on a site of 2.68 ha.

### 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 Claremont residential development 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 block 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 such as brickwork, reconstituted stone, concrete and aluminium and hardscape in the public 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 information available to Aramark Property at the date of this issue. Where applicable, typical examples have been provided of building materials and services used for schemes of this nature and their associated lifespans and maintenance requirements.**

As the building design develops 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

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

##### 4.1.1. Green roof

<i>Location</i>	Flat roof areas to all blocks (maintenance access only)
<i>Description</i>	Extensive sedum roof system to engineer's specification.
<i>Lifecycle</i>	Average lifecycle of 15-35 years on most green roofs. Lifecycle will be extended with robust proven detailing to adjoining roof elements and appropriate and regular maintenance of the roof materials.
<i>Required maintenance</i>	Quarterly maintenance visits to include inspection of drainage layer and outlets and removal of any blockages to prevent water build up. Inspection of vegetation layer for fungus and decay. Carry out weeding as necessary. No irrigation necessary with sedum blankets.
<i>Year</i>	Quarterly every year
<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 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.
<i>Reference</i>	HJL drawing nos. CLR-HJL-01-08-DR-A-1017A to LR-HJL-03-00-DR-A-1017CD (May 2019)

##### 4.1.2. Fall arrest system for roof maintenance access

<i>Location</i>	All roofs
<i>Description</i>	<ul style="list-style-type: none"> <li>• Fall Protection System on approved anchorage device.</li> <li>• Installation in accordance with BS 7883 by the system manufacturer or a contractor approved by the system manufacturer.</li> </ul>
<i>Lifecycle</i>	20-30 years dependent on quality of materials purposed. Generally steel finishes to skyward facing elements can be expected to maintain this life expectancy.
<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 no adequate parapet protection. A FPS must comply with relevant quality standards.
<i>Reference</i>	N/A



#### 4.1.3. Roof cowls

<i>Location</i>	All roofs
<i>Description</i>	<ul style="list-style-type: none"> <li>• Roof Cowl System to be supplied with weather apron for flat roofs.</li> <li>• Stainless Steel goose neck tube to facilitate power supply to external roof level bolted to roof and weathered using proprietary weather apron.</li> </ul>
<i>Lifecycle</i>	25-35 years
<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

#### 4.1.4. Flashings

<i>Location</i>	All flashing locations
<i>Description</i>	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.
<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). Lead is easily formed into the required shapes for effective weathering of building junctions according to Lead Sheet Association details.
<i>Reference</i>	N/A

#### 4.2. Rainwater drainage

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

<i>Location</i>	All roofs
<i>Description</i>	<ul style="list-style-type: none"> <li>• Internal rainwater drainage system</li> <li>• <i>Rainwater outlets:</i> Suitable for asphalt roof membranes.</li> <li>• <i>Pipework:</i> Cast Aluminium/uPVC downpipes</li> <li>• <i>Below ground drainage:</i> To M&amp;E/ Structural Engineers design and specification.</li> <li>• <i>Disposal:</i> To surface water drainage to Structural Engineers design.</li> <li>• <i>Controls:</i> To M&amp;E/ Structural Engineers design and specification.</li> <li>• <i>Accessories:</i> allow for outlet gradings, spigots, downspout nozzle, hopper heads, balcony and main roof outlets.</li> </ul>

<i>Lifecycle</i>	Aluminium gutters and downpipes have an expected life expectancy of 40 years in rural and suburban conditions (25 years in industrial and marine conditions), this is comparable to cast iron of 50 years and plastic, less so at 30 years.
<i>Required maintenance</i>	As with roofing systems routine inspection is key to preserving the lifecycle of rainwater systems. Regular cleaning and rainwater heads and gutters, checking joints and fixings and regularly cleaning polyester coated surfaces (no caustic or abrasive materials).
<i>Year</i>	Annually, cleaning bi-annually.
<i>Priority</i>	High
<i>Selection process</i>	As above, aluminium fittings compare well against cast iron (in terms of cost) and plastic (in terms of lifespan and aesthetic).
<i>Reference</i>	HJL

#### 4.3. External walls

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

##### 4.3.1. Brickwork

<i>Location</i>	Façades
<i>Description</i>	Textured brick from selected palette (light/medium/dark grey and light red colour at various façade locations).
<i>Lifecycle</i>	While bricks have a high embodied energy, they are an extremely durable material. Brickwork in this application is expected to have a lifespan of 80 years or more. The mortar pointing however has a shorter lifespan of 25-50 years.
<i>Required maintenance</i>	In general, given their durability, brickwork finishes require little maintenance. Most maintenance is preventative: checking for hairline cracks, deterioration of mortar, plant growth on walls, or other factors that could signal problems or lead to eventual damage.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Brickwork is an attractive material that bears well against other finishing products such as render to blockwork wall in terms of lifespan (80 vs 50 years). The brickwork does require re-pointing however at 25-50 years.
<i>Reference</i>	HJL Draft Design Statement (May 2019)

##### 4.3.2. Reconstituted stone

<i>Location</i>	Façades at floor slab levels
<i>Description</i>	Polished reconstituted stone cladding panels on support system on rigid insulation layer with waterproof layer on concrete blockwork/reinforced concrete inner leaf.
<i>Lifecycle</i>	Stone cladding is expected to have a lifespan in excess of 30 years.

<i>Required maintenance</i>	In general, given its durability, stone 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.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Reconstituted stone cladding is a naturally derived and highly durable material offering a robust aesthetic, offering a cost-effective and adaptable cladding option when compared to natural stone cladding. It has the high durability associated with natural stone, with similar mechanical properties to precast concrete.
<i>Reference</i>	HJL Draft Design Statement (May 2019)

#### 4.3.3. Ceramic cladding

<i>Location</i>	Façades at floor slab levels
<i>Description</i>	Ceramic cladding panels with white gloss finish on support system on rigid insulation layer with waterproof layer on concrete blockwork/reinforced concrete inner leaf.
<i>Lifecycle</i>	Ceramic cladding when used as a rainscreen requires minimal maintenance and can have a lifespan between 30-50 years.
<i>Required maintenance</i>	In general, given its durability, ceramic panels require minimal maintenance and weather well. Most maintenance is preventative; checking for hairline cracks or other factors that could signal problems or lead to eventual damage. Generally does not require frequent cleaning.
<i>Year</i>	Annual inspection, cleaning every 5 years.
<i>Priority</i>	Low
<i>Selection process</i>	Chosen for aesthetic appearance, durability and light weight. In rain screen application it does not require joint sealants which typically require maintenance and replacement.
<i>Reference</i>	HJL Draft Design Statement (May 2019)

#### 4.3.4. Concrete

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> <li>• Cast in-situ fair faced concrete columns.</li> <li>• Precast concrete lintels.</li> <li>• External concrete work shall be finished to engineer's specification.</li> </ul>
<i>Lifecycle</i>	While concrete has a high embodied energy, it is an extremely durable material. Concrete frame has a typical life expectancy of 80 years.
<i>Required maintenance</i>	In general concrete requires little maintenance. Most maintenance is preventative: checking for hairline cracks, plant growth on walls, or other factors that could signal problems or lead to eventual damage.
<i>Year</i>	Annual
<i>Priority</i>	Low

<i>Selection process</i>	Concrete is a durable product which is chosen for its structural properties, aesthetic, cost efficiency and rapid construction.
<i>Reference</i>	HJL Draft Design Statement (May 2019) HJL elevation drawings (May 2019)

#### 4.3.5. Render

<i>Location</i>	Balcony soffits
<i>Description</i>	<ul style="list-style-type: none"> <li>• White painted rendered soffits.</li> <li>• Acrylic finish render system OR sand/cement render system.</li> </ul>
<i>Lifecycle</i>	Renderers in general are expected to have a lifecycle of circa 25 years.
<i>Required maintenance</i>	Regular inspections to check for cracking and de-bonding. Most maintenance is preventative.
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	Acrylic render is a durable and low-maintenance finish with the added benefit of this product being BBA certified against other render systems. Appropriate detailing will contribute to a long lifespan and lower maintenance for this installation
<i>Reference</i>	HJL Draft Design Statement (May 2019)

#### 4.3.6. Aluminium cladding

<i>Location</i>	Façades
<i>Description</i>	Polyester powder coated aluminium cladding system to select finish.
<i>Lifecycle</i>	Typical life expectancy of over 40 years.
<i>Required maintenance</i>	Aluminium cladding requires little maintenance and is resistant to corrosion. It can contribute to lower ongoing maintenance costs in comparison to exposed porous materials which may be liable to faster deterioration. Long term cleaning requirements should be taken into consideration.
<i>Year</i>	Inspection annually; cleaning 5 yearly.
<i>Priority</i>	Low
<i>Selection process</i>	Aluminium cladding protects the building's structure from rainwater and weathering. Metal cladding systems are also chosen for their aesthetic impact, durability and weathering properties.
<i>Reference</i>	HJL elevation drawings (May 2019)

#### 4.4. External windows & doors

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> <li>• Composite aluminium frame window system to select finish.</li> <li>• All units to be double/triple glazed with thermally-broken frames, re-enforced to take account of the dynamic pressures in relation to the height of the installation within the building.</li> <li>• 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.</li> </ul>
<i>Lifecycle</i>	Aluminium has a typical lifespan of 45-60 years in comparison to uPVC which has a typical lifespan of 30-40 years. Timber windows have a typical lifespan of 35-50 years, aluminium cladding can extend this lifespan by 10-15 years.
<i>Required maintenance</i>	Check surface of windows and doors regularly so that damage can be detected. Vertical mouldings can become worn and require more maintenance than other surface areas. Lubricate at least once a year. Ensure cleaning and regular painting regime. Check for condensation on frame from window and ensure ventilation.
<i>Year</i>	Annual
<i>Priority</i>	Medium
<i>Selection process</i>	Aluminium is a durable and low maintenance material 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.
<i>Reference</i>	HJL Draft Design Statement (May 2019) HJL elevation drawings (May 2019)

#### 4.5. Balconies

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

##### 4.5.1. Structure

<i>Location</i>	Façades
<i>Description</i>	<ul style="list-style-type: none"> <li>• Powder-coated steel frame balcony system to engineer's detail OR precast concrete structure (<i>to be confirmed at detail design stage</i>).</li> <li>• Thermally-broken farrat plate connections to main structure of building.</li> </ul>
<i>Lifecycle</i>	<ul style="list-style-type: none"> <li>• Metal structure has a typical life expectancy of 70 years dependent on maintenance of components.</li> <li>• 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.</li> </ul>

<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>	HJL Draft Design Statement (May 2019) HJL elevation drawings (May 2019)

#### 4.5.2. Balcony balustrades & handrails

<i>Location</i>	Balconies
<i>Description</i>	<ul style="list-style-type: none"> <li>• Polyester powder coated steel balustrade to select finish.</li> <li>• Steel including fixings in accordance with manufacturer's details.</li> </ul>
<i>Lifecycle</i>	General metal items have a 25-45 year lifespan.
<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>	Steel option will have a longer lifespan and require less maintenance than timber options (10-20 years).
<i>Reference</i>	HJL Draft Design Statement (May 2019) HJL elevation drawings (May 2019)

## 5.0. INTERNAL BUILDING FABRIC SCHEDULE

### 5.1. Floors

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

#### 5.1.1. Common areas

<i>Location</i>	Entrance lobbies
<i>Description</i>	<ul style="list-style-type: none"> <li>Selected anti-slip porcelain or ceramic floor tile.</li> <li>Provide for inset matwell.</li> </ul>
<i>Lifecycle</i>	Lifespan expectation of 20-30 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. Tiling chosen for durability and low maintenance.
<i>Reference</i>	N/A

<i>Location</i>	Lift core and corridors
<i>Description</i>	<ul style="list-style-type: none"> <li>Selected carpet finish on underlay, or</li> <li>Selected anti-slip porcelain or ceramic floor tile.</li> </ul>
<i>Lifecycle</i>	Lifespan expectation of 20-25 years in heavy wear areas for the tiling, 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.
<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. Tiling chosen for aesthetics, durability and low maintenance.
<i>Reference</i>	N/A

<i>Location</i>	Stairs
<i>Description</i>	Selected carpet finish on underlay with approved nosings.
<i>Lifecycle</i>	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.

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

#### 5.1.2. Tenant amenity areas

<i>Location</i>	Gym (Block A)
<i>Description</i>	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.
<i>Lifecycle</i>	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.
<i>Required maintenance</i>	Sweep clean regularly ensuring to remove any dirt. Clean up spills immediately and use only recommended floor cleaners.
<i>Year</i>	Quarterly
<i>Priority</i>	Medium
<i>Selection process</i>	Appropriate use of timber floors, specifically in gym areas controls acoustic impact.
<i>Reference</i>	N/A

<i>Location</i>	Residential amenity rooms (Block A)
<i>Description</i>	<ul style="list-style-type: none"> <li>• Selected anti-slip porcelain or ceramic floor tile, or</li> <li>• Selected parquet timber flooring with selected underlay, or</li> <li>• Selected carpet inlay on underlay.</li> <li>• Provide for inset matwell.</li> </ul>



<i>Lifecycle</i>	<ul style="list-style-type: none"> <li>• Lifespan expectation of 20-30 years for tiling in heavy wear areas, likely requirement to replace for modernisation within this period also.</li> <li>• Parquet timber flooring has an expected life expectancy of 25-35 years dependent on use.</li> <li>• 10-15 year lifespan for carpet. Likely requirement to replace for modernisation within this period also.</li> </ul>
<i>Required maintenance</i>	Visual inspection, intermittent replacement of chipped / loose tiles. 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>	Meeting room (Block A)
<i>Description</i>	Selected carpet finish on underlay.
<i>Lifecycle</i>	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
<i>Year</i>	Quarterly inspection and cleaning as necessary.
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable floor finish.
<i>Reference</i>	N/A

<i>Location</i>	Crèche (Block B)
<i>Description</i>	Linoleum floor sheeting. Provide for inset matwell.
<i>Lifecycle</i>	Linoleum has a lifespan expectancy of 15-25 years. Matwell to be replaced every 10 years.
<i>Required maintenance</i>	Regular cleaning as necessary with recommended products as per manufacturer's instructions. Inspect annually for damage/wear.
<i>Year</i>	Annual
<i>Priority</i>	Low
<i>Selection process</i>	Durable, low maintenance floor finish. Slip rating required at entrance lobby.
<i>Reference</i>	N/A

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

## 5.2. Walls

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

### 5.2.1. Common areas

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

<i>Location</i>	Lift core/corridors/stairs
<i>Description</i>	Selected contract vinyl wallpaper, class O rated, or Selected paint finish with primer to skimmed plasterboard on metal stud system.
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
<i>Year</i>	Bi-annually
<i>Priority</i>	Low

<i>Selection process</i>	Used as feature in common areas against paint. Decorative and durable finish.
<i>Reference</i>	N/A

### 5.2.2. Tenant amenity areas

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

<i>Location</i>	Changing areas/Toilets (Block A/B)
<i>Description</i>	Selected ceramic wall tile to plasterboard (moisture board to wet areas) on metal stud system.
<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>	Tiling chosen for aesthetics, durability, low maintenance and hygienic purposes. Wet room application requires moisture board and tiling.
<i>Reference</i>	N/A

<i>Location</i>	Residential amenity rooms/Meeting room/Crèche (Block A/B)
<i>Description</i>	Selected contract vinyl wall paper feature, or Selected paint finish with primer to skimmed plasterboard on metal stud system.
<i>Lifecycle</i>	2-10 years for finishes; 40 years for plasterboard.
<i>Required maintenance</i>	Regular maintenance required, damp cloth to remove stains and replacement when damaged.
<i>Year</i>	Bi-annually
<i>Priority</i>	Low
<i>Selection process</i>	Decorative and durable finish.
<i>Reference</i>	N/A

### 5.3. Ceilings

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

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

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

### 5.4. Internal balustrades & handrails

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

<i>Location</i>	Residential blocks
<i>Description</i>	<ul style="list-style-type: none"> <li>• Proprietary glazed panel system fixed to stairs stringer / landing slab to manufacturer's details &amp; specifications, or</li> <li>• Metal balustrade option.</li> <li>• Varnished timber/stainless steel handrails.</li> </ul>
<i>Lifecycle</i>	25-30 years typical lifecycle.
<i>Required maintenance</i>	Regular inspections looking are 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

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

### 5.5.1. Internal doors and frames

<i>Location</i>	Residential blocks
<i>Description</i>	<ul style="list-style-type: none"> <li>Selected white primed and painted/varnished solid internal doors, or hardwood veneered internal doors.</li> <li>All fire rated doors and joinery items to be manufactured in accordance with B.S. 476. Timber saddle boards.</li> <li>Brushed aluminium door ironmongery or similar.</li> </ul>
<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, unless fire door High
<i>Selection process</i>	Industry standard
<i>Reference</i>	N/A

### 5.5.2. Skirtings & architraves

<i>Location</i>	Residential blocks
<i>Description</i>	Painted timber/MDF skirtings and architraves.
<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

### 5.5.3. Window boards

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

## 6.0. BUILDING SERVICES

### 6.1. Mechanical systems

*(SPECIFICATION TBC AT DETAILED DESIGN STAGE)*

#### 6.1.1. Mechanical plant

<i>Location</i>	Plant Rooms
<i>Description</i>	Centralised Heating Plant – Specification to be further detailed by at detailed design stage.
<i>Lifecycle</i>	<p>Annual Maintenance / Inspection to Boilers / CHP / Air source Heatpump.            Annual Maintenance / Inspection to Pumps.            Annual Maintenance / Inspection to Water Tanks.            Annual Maintenance / Inspection to Booster-sets.            Annual Maintenance / Inspection to DHS Tanks.            Annual Maintenance / Inspection of district heating system pipework, valves, accessories and insulation.</p> <p>Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.</p> <p>Replacement of equipment at (End of Life) EOL to be determined at detailed design stage.</p>
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	n/a for this item.

### 6.1.2. Soils and waste

<i>Location</i>	All Areas
<i>Description</i>	PVC / Cast iron Soils and Wastes Pipework
<i>Lifecycle</i>	Annual inspections required for all pipework within landlord areas.  Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	n/a for this item.

### 6.1.3. Water services

<i>Location</i>	All Areas
<i>Description</i>	Copper Water Services Pipework and associated fittings and accessories.
<i>Lifecycle</i>	Annual inspections required for all pipework within landlord areas.  Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual Inspections, including legionella testing to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	n/a for this item.

#### 6.1.4. Gas services

<i>Location</i>	Plant Rooms
<i>Description</i>	Gas Detection Systems.
<i>Lifecycle</i>	Annual Maintenance / Inspection Gas detection systems within landlord plant rooms.  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, testing and certification to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	n/a for this item.

#### 6.1.5. Heating services

<i>Location</i>	All Units
<i>Description</i>	Heat interface Units (HIU)
<i>Lifecycle</i>	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.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	



#### 6.1.6. Ventilation services

<i>Location</i>	All Units
<i>Description</i>	Extract fan and grilles
<i>Lifecycle</i>	Annual inspection of extract fan and grilles. Annual Inspection of BMS link and 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.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	n/a for this item.

#### 6.1.7. Ventilation services – Service Area

<i>Location</i>	Service Areas – Bin Stores etc
<i>Description</i>	Extract fan & grilles
<i>Lifecycle</i>	Annual inspection of extract fan and grilles. Annual Inspection of fan operation.  Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual Service Inspections to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	Medium
<i>Selection process</i>	All equipment to be detailed as part of the detailed design section of the development. This equipment will be selected in conjunction with the design and management team to meet and exceed the CIBSE recommended lifecycles.
<i>Reference</i>	n/a for this item.

## 6.2. Electrical services

(SPECIFICATION TBC AT DETAILED DESIGN STAGE)

### 6.2.1. Electrical infrastructure

<i>Location</i>	Switch rooms / Risers
<i>Description</i>	Maintenance of Electrical Switchgear
<i>Lifecycle</i>	Annual Inspection of Electrical Switchgear and switchboards. Thermographic imaging of switchgear 50% of switchgear every 3 years.  Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
<i>Required maintenance</i>	Annual / Every three years to be included as part of Development Planned Preventative Maintenance Programme
<i>Year</i>	Annually
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet and exceed ESB, ETCI , CIBSE recommendations and be code compliant in all cases.
<i>Reference</i>	n/a for this item.

### 6.2.2. Lighting services internal

<i>Location</i>	All Areas – Internal
<i>Description</i>	Lighting
<i>Lifecycle</i>	Annual Inspection of All Luminaires Quarterly Inspection of Emergency Lighting.  €8,000 Annual Maintenance Cost.  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
<i>Reference</i>	n/a for this item.

### 6.2.3. Lighting services external

<i>Location</i>	All Areas – Internal
<i>Description</i>	Lighting
<i>Lifecycle</i>	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 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 for this item.

### 6.2.4. Protective services – Fire Alarm

<i>Location</i>	All areas – Internal
<i>Description</i>	Fire alarm
<i>Lifecycle</i>	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.
<i>Required maintenance</i>	Annual / Quarterly Inspections certification as required as per the PPM schedule.
<i>Year</i>	Annually / Quarterly
<i>Priority</i>	High
<i>Selection process</i>	All equipment to meet requirements and be in accordance with the current IS3218
<i>Reference</i>	n/a for this item.

#### 6.2.5. Protective services – Fire Extinguishers

<i>Location</i>	All areas – Internal
<i>Description</i>	Fire Extinguishers.
<i>Lifecycle</i>	Annual Inspection
<i>Required maintenance</i>	Annual with Replacement of all extinguishers at year 10
<i>Year</i>	
<i>Priority</i>	€5,000 Annual Maintenance Costs 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 for this item.

#### 6.2.6. Renewable services

<i>Location</i>	Roof
<i>Description</i>	PV Array / Solar Panel etc to support Part L Requirements.
<i>Lifecycle</i>	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 for this item.