BUILDING LIFECYCLE **REPORT**

GALWAY PORT LARGE-SCALE RESIDENTIAL DEVELOPMENT' (LRD)

DOCK ROAD AND LOUGH ATALIA ROAD, GALWAY CITY

AUGUST 2025

CLIENT

THE LAND DEVELOPMENT AGENCY





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EXECUTIVE SUMMARY





1.0 EXECUTIVE SUMMARY – BUILDING LIFE CYCLE REPORT

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

The following document reviews the specification set out for proposed Large-Scale Development (LRD) at a site of 1.621 Ha in Galway Port at Dock Road and Lough Atalia Road, Galway City.

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, and communal open space will contribute to lower maintenance costs for future residents and occupiers.

This report has been prepared on the basis of information available at planning stage. This report reflects the outline material descriptions contained within ALTU Architects' LRD Design Statement and planning drawings 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 confirmation 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.



DESCRIPTION OF DEVELOPMENT





2.0 DESCRIPTION OF DEVELOPMENT

The proposed development comprises the following:

- The demolition of the existing office / bus depot building (370.2 sq m) and ancillary building (26.0 sq m); the partial demolition of the existing ESB sub-station and ancillary building (67.4 sq m); the demolition of existing boundary walls at the south-west and north-west; and the construction of a mixed-use development.
- The proposed mixed-use development primarily comprises: 356 No. residential apartments (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed); crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m); and 1 No. retail unit (156.0 sq m).
- The development has a total floor area of 32,096.0 sq m and is primarily proposed in 4 No. blocks (identified as A–D) that generally range in height from 6 No. to 13 No. storeys: Block A ranges from 6 No. to 9 No. storeys; Block B ranges from 6 No. to 11 No. storeys; Block C is 6 No. storeys; and Block D ranges from 6 No. to 13 No. storeys.
- The proposed development also includes: new internal street and pedestrian network, including a one-way vehicular route at the north-western side of the site and new junctions with Dock Road at the south-west and with the access road from Lough Atalia at the north-west; upgrades to Lough Atalia Road and the access road from it at the north-west of the site, including the provision of a new toucan pedestrian/cycle crossing at Lough Atalia Road; upgrades to the footpath and road interface with Dock Road to the south-west; 37 No. car parking spaces; 1 No. set-down/delivery bay; 741 No. cycle parking spaces; hard and soft landscaping, including as public open spaces and communal amenity spaces; private amenity spaces as balconies and terraces facing all directions; boundary treatments; public lighting; bin stores; double sub-station; plant rooms; green roofs; rooftop lift overruns and plant; rooftop telecommunications, plant and enclosure at Block C; recladding of the existing sub-station and pumping station; and all associated works above and below ground.



INTRODUCTION





3.0 INTRODUCTION

Aramark Property were instructed by The Land Development Agency, to provide a Building Lifecycle Report for their proposed Large-Scale Development (LRD) at a site in Galway Port at Dock Road and Lough Atalia Road, Galway City.

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 Planning Design Standards for Apartments - Guidelines for Planning Authorities (July 2025) issued under Section 28 of the Planning and Development Act, 2000 (as amended). Within the new guidelines, new guidance is being provided on residential schemes.

Section 6.2 of the Operation and Management of Apartment Developments (July 2025) 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."

EXTERNAL BUILDING FABRIC SCHEDULE





4.0 EXTERNAL BUILDING FABRIC SCHEDULE

4.1 Roofing

4.1.1 Green Roofs (Manufacturer / Supplier TBC)

(
Location	Selected Flat Roof Areas (maintenance access only)
Description	Extensive green roof system to engineer's specification.
Lifecycle	Average lifecycle of 15-35 years on most green roofs. Lifecycle will be extended with robust proven detailing to adjoining roof elements and appropriate and regular maintenance of the roof materials.
Required maintenance	Quarterly maintenance visits to include inspection of drainage layer and outlets and removal of any blockages to prevent ponding. Inspection of vegetation layer for fungus and decay. Carry out weeding as necessary. No irrigation necessary with sedum blankets.
Year	Bi-annually
Priority	Medium
Selection process	A green roof will add to the character of the overall scheme, as well as providing attenuation to storm water run-off and less burden on rainwater goods, increased thermal and sound insulation to the building and increased 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.
Reference	ALTU Architects' LRD planning drawings & design statement.

4.1.2 Roof (Manufacturer / Supplier TBC)

Location	Selected Flat Roof Areas (maintenance access only)
Description	Single layer membrane roof system to engineer's specification.
	Selected membrane and pressed metal capping.
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	Half-yearly maintenance visits to include inspection of membrane
maintenance	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	Membrane roof with appropriate built-up system will provide durability,
process	lacks water permeability, and easily maintain without shutting down
	building operations during application.
Reference	ALTU Architects' LRD planning drawings and design statement.



4.1.3 Pitched Roof Structure (Manufacturer / Supplier TBC)

Location	Block C (Centralised Energy Centre)
Description	Metal clad roof structure, clad with glazed screens at either end of roof enclosure.
Lifecycle	Lifespan expectancy generally in excess of 40 years. As used across the industry nationally, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	Metal 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.
Year	Inspection annually; cleaning 5 yearly
Priority	Low
Selection process	Metal cladding generally protects the building's structure from rainwater and weathering. Metal cladding systems are also chosen for their aesthetic impact, durability and weathering properties.
Reference	ALTU Architects' LRD planning drawings and design statement.

4.1.4 Roof Cowls

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



4.1.5 Flashings

Location	All flashing locations
Description	Appropriate materials to be used for all flashing and counter flashings.
Lifecycle	Typical life expectancy of 70 years recorded for flashings. Recessed joint sealing requires regular inspections. Longer lifecycle achieved by regular inspection and maintenance regime to ensure upkeep of materials.
Required maintenance	Check joint fixings for 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	Alternatives to 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.
Reference	N/A

4.2 Rainwater Drainage

Location	All buildings
Description	 Rainwater outlets: Suitable for specified roof membranes Pipework: uPVC downpipes and gutters 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	uPVC 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, 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, uPVC fittings compare well against cast iron (in terms of cost) and plastic (in terms of lifespan and aesthetic).
Reference	N/A



4.3 External Walls

4.3.1 Brick (Manufacturer / Supplier TBC)

Location	Façades
Description	Contrasting brickwork to select locations.
Lifecycle	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.
Required maintenance	In general, given their durability, brickwork finishes require little maintenance. Most maintenance is preventative: checking for hairline cracks, deterioration of mortar, plant growth on walls, or other factors that could signal problems or lead to eventual damage.
Year	Annual
Priority	Low
Selection process	Aesthetic, lightweight, cost-efficient and low maintenance cladding option, indistinguishable from traditional brick construction.
Reference	ALTU Architects' LRD planning drawings & design statement.

4.3.2 Metal (Manufacturer / Supplier TBC)

Location	Façades
Description	Aluminium clad window and door frames to selected colour.
	Metal Railing and Balustrade to selected colour.
	Metal Louvres Screens to selected colour.
	Pressed Metal Box Frame to selected colour.
Lifecycle	Lifespan expectancy generally in excess of 40 years. As used across the
	industry nationally, typically longer lifecycle is achieved by regular
	inspection and maintenance regime to ensure the upkeep of materials.
Required	Metal cladding requires little maintenance and is resistant to corrosion. It
maintenance	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.
Year	Inspection annually; cleaning 5 yearly
Priority	Low
Selection	Metal cladding protects the building's structure from rainwater and
process	weathering. Metal cladding systems are also chosen for their aesthetic
	impact, durability and weathering properties.
Reference	ALTU Architects' LRD planning drawings & design statement.



4.3.3 Stone (Manufacturer / Supplier TBC)

Location	Facades
Description	Stone Band - Light Cream Colour at selected locations.
Lifecycle	Stone finish cladding is expected to have a lifespan in the region of 60-80
	years.
Required	In general, given its durability, stone requires little maintenance and
maintenance	weathers well. Most maintenance is preventative; check for deterioration
	of mortar, plant growth, or other factors that could signal problems or
	lead to eventual damage.
Year	Annual
Priority	Low
Selection	Stone is a natural and highly durable material offering a robust aesthetic.
process	Has a high durability.
Reference	ALTU Architects' LRD planning drawings & design statement.

4.4 External Windows & Doors

Location	Façades
Description	 Mixture of clear and obscure squared profile frame glazed windows with aluminium coated frames to select finish. All units to be double 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 30-40 years. As used nationwide, typically longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	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 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	N/A



4.5 Balconies

4.5.1 Structure

Location	Apartment Block 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. Precast concrete structures have a high embodied energy; however, it is an extremely durable material. Concrete frame has a typical life expectancy of 80 years. As used across the industry nationally and the UK, longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	Relatively low maintenance required. Check balcony system as per manufacturer's specifications. Check all hardware components for wear. Check elements for signs of wear and/or weathering. Check for structural damage or modifications.
Year	Annual
Priority	High
Selection process	Engineered detail; designed for strength and safety.
Reference	N/A

4.5.2 Balustrades and Handrails

Location	Balconies
Description	 Powder-coated Metal Balustrade / Handrailing system including fixings in accordance with manufacturer's details. 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.
Lifecycle	General glass and metal items have a lifespan of 25-45 years. Longer lifecycle is achieved by regular inspection and maintenance regime to ensure the upkeep of materials.
Required maintenance	Annual visual inspection of connection pieces for impact damage or alterations.
Year	Annual
Priority	High
Selection process	Metal and glass options will have a longer lifespan and require less maintenance than timber options (10-20 years).
Reference	N/A

INTERNAL BUILDING FABRIC SCHEDULE





5.0 INTERNAL BUILDING FABRIC SCHEDULE

5.1 Floors

5.1.1 Common Areas

Location	Entrance lobbies / Common corridors
Description	Selected anti-slip porcelain floor tile complete with inset matwell.
	Selected loop pile carpet tiles.
Lifecycle	20-30 years lifespan for floor tiles 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	Visual inspection with regular cleaning, intermittent replacement of
maintenance	chipped / loose tiles
Year	Annual for floor tiles.
	Quarterly inspection and cleaning of carpets as necessary
Priority	Low
Selection	Durable, low maintenance floor finish. Slip rating required at entrance
process	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.
Reference	N/A

Location	Stairwells, landings / half landings
Description	Selected carpet covering. Approved anodised aluminium nosing's to stairs.
Lifecycle	 10–15-year lifespan for carpet. Likely requirement to replace for modernisation within this period also. 20-year lifespan for aluminium nosing.
Required	Visual inspection with regular cleaning.
maintenance	
Year	Quarterly inspection and cleaning as necessary.
Priority	Low
Selection	Using carpet allows flexibility to alter and change as fashions alter and
process	change providing enhanced flexibility.
Reference	N/A

Location	Lift Lobbies
Description	Carpet/vinyl and porcelain tiles to match adjacent apartment common
	lobbies.
Lifecycle	• 20-30 years lifespan for floor tiles 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	Visual inspection with regular cleaning, intermittent replacement of
maintenance	chipped / loose tiles.
Year	Annual
Priority	Low
Selection	Slip rating required for lifts, few materials provide this and are as hard
process	wearing. Using carpet allows flexibility to alter and change as fashions alter
	and change providing enhanced flexibility.
Reference	N/A



5.1.2 Tenant Areas

Location	Resident Amenity (e.g. Creche, etc)
Description	Timber laminate / parquet flooring, or
	Carpet covering
	Provide for inset matwell
Lifecycle	Laminated / parquet timber flooring has an expected life expectancy
	of 25-35 years dependent on use.
	• 10-15 year lifespan for carpet. Likely requirement to replace for
	modernisation within this period also
Required	Visual inspection. Sweep clean regularly ensuring to remove any dirt.
maintenance	Clean up spills immediately and use only recommended floor cleaners.
Year	Annual
Priority	Low
Selection	Materials chosen for aesthetics, durability and low maintenance.
process	
Reference	N/A

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

5.2 Walls

5.2.1 Common Areas

Location	Entrance lobbies / Corridors
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	Regular maintenance required and replacement when damaged.
maintenance	
Year	Bi-annually
Priority	Low
Selection	Decorative and durable finish.
process	
Reference	N/A



Location	Lift cores / 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	Regular maintenance required and replacement when damaged.
maintenance	
Year	Bi-annually
Priority	Low
Selection	Decorative and durable finish.
process	
Reference	N/A

5.2.2 Tenant Areas

Location	Resident Amenity (e.g. Creche, etc)
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	Regular maintenance required and replacement when damaged.
maintenance	
Year	Bi-annually
Priority	Low
Selection	Decorative and durable finish.
process	
Reference	N/A

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



5.3 Ceilings

Location	Common Areas
Description	Selected paint finish with primer to skimmed plasterboard ceiling on
	metal frame ceiling system. 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	Regular maintenance required and replacement when damaged.
maintenance	
Year	Bi-annually
Priority	Low
Selection	Decorative and durable finish
process	
Reference	N/A

Location	Residential + PBSA Amenities (e.g. Cultural / Community Use, etc)
Description	Selected paint finish with primer to skimmed moisture board ceiling.
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	Regular maintenance required and replacement when damaged.
maintenance	
Year	Bi-annually
Priority	Low
Selection	Decorative and durable finish.
process	
Reference	N/A

5.4 Internal Handrails & Balustrades

Location	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	Regular inspections of holding down bolts and joints
maintenance	
Year	Annually
Priority	High
Selection	Hard-wearing long-life materials against timber options
process	
Reference	N/A



5.5 Carpentry & Joinery

5.5.1 Internal Doors and Frames

Location	All buildings
Description	 Selected white primed and painted/varnished solid internal doors, or hardwood veneered internal doors. All fire rated doors and joinery items to be manufactured in accordance with B.S. 476 (Fire Tests). Timber saddle boards. Brushed aluminium door ironmongery or similar
Lifecycle	30 years average expected lifespan. Longer lifecycle achieved by regular
	inspection and maintenance regime to ensure the upkeep of materials.
Required	General maintenance in relation to impact damage and general wear and
maintenance	tear
Year	Annual
Priority	Low, unless fire door High
Selection	Industry standard
process	
Reference	N/A

5.5.2 Skirtings & Architraves

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

5.5.3 Window Boards

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

BUILDING SERVICES





6.0 BUILDING SERVICES

6.1 Mechanical Systems

6.1.1 Mechanical Plant

Location	Residential / Apartments
Description	Space Heating is proposed to consist primarily of Air Source Heat Pumps.
,	(ASHP). Further details to be provided by Mechanical & Electrical (M&E)
	Consultant at detailed design stage.
Lifecycle	Annual Maintenance / Inspection to Heating System
	Annual Maintenance of Air Source Heat Pumps
	Annual Maintenance / Inspection to Heating and Water Pumps.
	Annual Maintenance / Inspection to Water Tanks.
	Annual Maintenance / Inspection to Water Booster - sets.
	Annual Maintenance / Inspection to DHS Tanks.
	Cost for replacement equipment to be updated on completion of
	design matrix of equipment at detailed design stage.
	Replacement of equipment at End of Life (EOL) to be determined at
	detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A

Location	Commercial Units
Description	Space Heating is proposed to consist primarily of Variant Refrigerant Flow Air-Conditioning with Heat Recovery. (HRVRF) Further details to be provided by Mechanical & Electrical (M&E) Consultant at detailed design stage.
Lifecycle	 Annual Maintenance / Inspection to Air-Conditioning System Annual Maintenance of Air Source Heat Pumps Annual Maintenance / Inspection to Heating and Water Pumps. Annual Maintenance / Inspection to Water Tanks. Annual Maintenance / Inspection to Water Booster - sets. Annual Maintenance / Inspection to DHS Tanks. Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage. Replacement of equipment at End of Life (EOL) to be determined at detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A

Location	Landlord / Common Areas
Description	Space Heating is proposed to consist primarily of Low-Pressure Hot
	Water (LPHW) Radiators served by Centralised Air Source Heat Pumps
	(ASHP) Further details to be provided by Mechanical & Electrical (M&E)
	Consultant at detailed design stage.
Lifecycle	Annual Maintenance / Inspection to Air Source Heat Pumps
	Annual Maintenance of Air Source Heat Pumps
	Annual Maintenance / Inspection to Heating and Water Pumps.
	Annual Maintenance / Inspection to Water Tanks.
	Annual Maintenance / Inspection to Water Booster - sets.
	Annual Maintenance / Inspection to DHS Tanks.
	Cost for replacement equipment to be updated on completion of
	design matrix of equipment at detailed design stage.
	Replacement of equipment at End of Life (EOL) to be determined at
	detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A

6.1.2 Soils and Wastes

Location	All Areas / Kitchens / Bathrooms etc
Description	Soils and Wastes Pipework – uPVC and High-Density Polyethylene. (HDPE)
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	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A



6.1.3 Water Services

Location	Residential / Apartments
Description	Water Heating is proposed to consist Primarily of Air Source Heat Pumps
	(ASHP) complete with Plate Heat Exchange Heat Recovery (PHEHR) for
	Domestic Hot Water.
	Further details to be provided by Mechanical & Electrical (M&E)
	Consultant at detailed design stage.
Lifecycle	Annual Maintenance / Inspection of Air Source Heat Pumps
	Annual Inspection required of all pipework within landlord areas.
	Cost for replacement equipment to be updated on completion of
	design matrix of equipment at detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	High
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A

Location	Commercial Units
Description	Water Heating is proposed to consist Primarily of High Temperature Air
	Source Heat Pumps (HTASHP) for Domestic Hot Water.
	Further details to be provided by Mechanical & Electrical (M&E)
	Consultant at detailed design stage.
Lifecycle	Annual Maintenance / Inspection of Air Source Heat Pumps
	Annual Inspection required of all pipework within landlord areas.
	Cost for replacement equipment to be updated on completion of
	design matrix of equipment at detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	High
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A



Location	Landlord / Common Areas
Description	Water Heating is proposed to consist primarily of local Instantaneous
	Water heaters. (IWH) Further details to be provided by Mechanical &
	Electrical (M&E) Consultant at detailed design stage.
Lifecycle	Annual Maintenance / Inspection to Water Heaters
	Cost for replacement equipment to be updated on completion of
	design matrix of equipment at detailed design stage.
	Replacement of equipment at End of Life (EOL) to be determined at
	detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A

6.1.4 Ventilation Services

Location	Residential / Apartments
Description	Demand Controlled Mechanical Supply and Extract Ventilation with Heat Recovery (MEVHR) to M&E Design.
	Continuous Mechanical Extract System within each dwelling
	incorporating Heat Recovery (MVHR) and CO₂ controls.
	Cooker Hoods shall be installed within the Kitchen areas.
Lifecycle	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.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A



Location	Commercial Units
Description	Mechanical ventilation with Plate Heat Exchanger Heat Recovery (PHEHR) to M&E Design.
Lifecycle	 Annual Inspection of Plate Heat Exchange Unit 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.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance Programme
Year	Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A

6.2 Electrical / Protective Services

6.2.1 Electrical Infrastructure

Location	Switch rooms / Risers
Description	Maintenance of Electrical Switchgear
Lifecycle	Annual Inspection of Electrical Switchgear and switchboards.
	Thermographic imagining of switchgear 50% of 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.
Required	Annual / Every three years to be included as part of Development Planned
maintenance	Preventative Maintenance (PPM) Programme
Year	Annually
Priority	High
Selection	All equipment to meet and exceed Electricity Supply Board (ESB),
process	IS10101:2020, Chartered Institution of Building Services Engineers of
	Ireland's (CIBSE) recommendations and be code compliant in all cases.
Reference	N/A



6.2.2 Lighting Services internal

Location	All Areas – Internal
Description	Lighting – Light-Emitting Diode (LED) throughout with Presence detection
	in circulation areas and locally controlled in residential apartments and
	student bedspaces.
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	Annual / Quarterly Inspections certification as required per above
maintenance	remedial works.
Year	Annually / Quarterly
Priority	High
Selection	All equipment to meet requirements and be in accordance with the
process	current National Standards Authority of Ireland (NSAI) Irish Standard for
	Emergency Lighting I.S.3217:2013 + A1 2017, Building Regulations
	Technical Guidance Document Part M and Disability Access Certificate
	(DAC) Requirements.
Reference	N/A

6.2.3 Lighting Services External

Location	All Areas – External
Description	Lighting – All Light-Emitting Diode (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	Annual / Quarterly Inspections certification as required as per the
maintenance	Planned Preventative Maintenance (PPM) schedule.
Year	Annually / Quarterly
Priority	High
Selection	All equipment to meet requirements and be in accordance with the
process	current National Standards Authority of Ireland (NSAI) Irish Standard for
	Emergency Lighting I.S.3217:2023, Building Regulations Technical
	Guidance Document Part M and Disability Access Certificate (DAC)
	Requirements.
Reference	N/A



6.2.4 Protective Services - Fire Alarm

Location	All areas – Internal
Description	Fire alarm
Lifecycle	 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.
Required	Annual / Quarterly Inspections certification as required as per the
maintenance	Planned Preventative Maintenance (PPM) schedule.
Year	Annually / Quarterly
Priority	High
Selection	All equipment to meet requirements and be in accordance with the
process	current National Standards Authority of Ireland (NSAI) Irish Standard for
	Fire Alarm Installations I.S.3218:2013 + A1 2019 and the Fire Cert
Reference	N/A

6.2.5 Protective Services - Fire Extinguishers

Location	All Areas – Internal
Description	Fire Extinguishers and Fire Blankets
Lifecycle	Annual Inspection
Required	Annual with Replacement of all extinguishers at year 10
maintenance	
Year	Annually
Priority	Cost for replacement equipment to be updated on completion of design
	matrix of equipment at detailed design stage.
Selection	All fire extinguishers must meet the requirements of the National
process	Standards Authority of Ireland (NSAI) Irish Standard for Portable Fire
	Extinguishers I.S 291:2015 + A1 2022 in relation to the 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	Purpose-Built Student Accommodation and Residential Apartments
Description	Apartment Sprinkler System
Lifecycle	Weekly / Annual Inspection
Required	Weekly Check of Sprinkler Pumps and plant and annual testing and
maintenance	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	The Apartment sprinkler system shall be installed in accordance with
process	European Standard BS EN 12845:2015 – Fixed firefighting systems.
	Automatic sprinkler systems. Design, installation, and maintenance.
Reference	N/A



6.2.7 Protective Services - Dry Risers (Where Applicable by Fire Cert)

Location	Residential / Apartments
Description	Dry Risers
Lifecycle	Weekly / Annual Inspection
Required	Visual Weekly Checks of Pipework and Landing Valves with Annual testing
maintenance	and certification by specialist.
Year	Annually
Priority	Cost for replacement equipment to be updated on completion of design
	matrix of equipment at detailed design stage.
Selection	The system shall be installed in accordance with the Irish Standard IS
process	391:2020: EN – Fire Hydrant System Equipment & Effective Fire Safety in
	the Design, Management and Use of Buildings.
Reference	N/A

6.2.8 Protective Services – Standby Generators

Location	Residential / Apartments
Description	Standby Diesel Generator to Provide Backup Supply for Life Safety
	Systems
Lifecycle	Quarterly / Annual Inspection.
	Cost for replacement equipment to be updated on completion of design
	matrix of equipment at detailed design stage
Required	Run the Generator (typically on no-load, Verify Automatic Transfer Switch
maintenance	Operation). Verify that the Unit runs with No Alarms or Warnings.
	Ensure Adequate Fuels Levels.
Year	Quarterly / Annually
Priority	Medium.
Selection	The equipment shall meet and exceed the CIBSE Guide M Lifecycle
process	Expectancies.
Reference	N/A

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

Location	Common Area Lobbies
Description	Smoke Extract / Exhaust Systems
Lifecycle	Regular Tests of the system
	Annual inspection of Fans
	Annual inspection of automatic doors and Automatic Opening Vents
	(AOV)
	All systems to be backed up by life safety systems.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) Programme.
Year	Weekly / Annually
Priority	Medium
Selection	All equipment to be detailed as part of the detailed design section of the
process	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.
Reference	N/A



6.2.10 Sustainable Services

Location	Residential / Apartments
Description	Air Source Heat Pumps (ASHP)
Lifecycle	 Annual Maintenance of Air Source Heat Pumps. (ASHP) Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's (CIBSE) recommended lifecycles.
Reference	N/A

Location	Commercial Units
Description	Air Source Heat Pumps (ASHP)
Lifecycle	 Annual Maintenance of Air Source Heat Pumps. (ASHP) Cost for replacement equipment to be updated on completion of design matrix of equipment at detailed design stage.
Required	Annual Service Inspections to be included as part of Development
maintenance	Planned Preventative Maintenance (PPM) 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 Chartered Institution of Building Services Engineers of Ireland's (CIBSE) recommended lifecycles.
Reference	N/A

Location	Car Charging				
Description	Electric Car Charging infrastructure within the development to comply				
	with planning conditions and supporting the Part L / NZEB				
	requirements.				
	Full Details to be provided at detailed stage.				
Lifecycle	Annual Inspection				
	Cost for replacement equipment to be updated on completion of				
	design matrix of equipment at detailed design stage.				
Required	Annual Service Inspections to be included as part of the Development				
maintenance	Planned Preventative Maintenance (PPM) Programme				
Year	Annually				
Priority	Medium				
Selection	All equipment to be detailed as part of the detailed design section of the				
process	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.				
Reference	N/A				



Location	Roof				
Description	Photovoltaic (PV) Solar Panel Thermal Array on roof supporting the Part				
	L / NZEB requirements.				
	Full Details to be provided at detailed stage.				
Lifecycle	Quarterly Clean				
	Annual Inspection				
	Cost for replacement equipment to be updated on completion of				
	design matrix of equipment at detailed design stage.				
Required	Quarterly / Annual Service Inspections to be included as part of the				
maintenance	Development Planned Preventative Maintenance (PPM) Programme				
Year	Annually				
Priority	Medium				
Selection	All equipment to be detailed as part of the detailed design section of the				
process	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.				
Reference	N/A				

APPENDIX 1



7.0 APPENDIX 1 – SCHEDULE FOR COSTS EVALUATION

7.1 Schedule for Cost Evaluation

The Schedule for Costs Evaluation provides a framework to allow costs per apartment, quantified from the development, to be applied. At detailed design stage, schedule of areas and quantity of items is provided by the Architect and Quantity Surveyor to allow quantification of the lifecycle replacement costs during the lifespan of the building.

Further to this, once detailed design is confirmed, annual cost of maintenance will also be calculated to include with the schedule, to complete the overall costs evaluation.

The schedule will be modified to suit when developer's Architect and Quantity Surveyor provide requisite schedules of areas and quantity and cost of items for the development.

The sampled schedule attached lays out all Building Fabric and Building Services Elements, associated specification and locations. These are then quantified as cost per unit, alongside maintenance costs with VAT rate, and broken into Annual Costs, and many specific commentaries, for the eventual end user of the property.





SAMPLE - Life Cycle Costs

Summary of Costs

Element - Building Fabric	Specification	Location(s)	Areas / Quantity	Cost Per Unit	Maintenance Cost	Total Cost	VAT Rate	VAT Inclusive Cost	Anticipated Life Span (Yrs)	Annual Cost	Vat Rate	Vat Inclusive Cost	Comments
Floor Finishes	Carpet	Staircores / Common Areas					13.5%		12		13.5%		
Floor Finishes	Tiles	Common Areas / Apartments					13.5%		25		13.5%		
Floor Finishes	Timber	Apartment					13.5%		12		13.5%		
Wall Finishes	Paint	Staircores / Common Areas					13.5%				13.5%		
Wall Finishes	Paint	Common Areas / Apartments					13.5%				13.5%		
Wall Finishes	Paint	Apartment					13.5%				13.5%		
Roof Coverings	Concrete Roof Tile	Roof					13.5%		25		13.5%		
Common Area Doors	твс	Multiple Locations					13.5%		30		13.5%		
Apartment Doors	твс	Multiple Locations					13.5%		30		13.5%		
External Doors	TBC	Multiple Locations					13.5%		20		13.5%		
Windows	твс	Apartments			_		13.5%		09		13.5%		
External Cladding	TBC	External				- э	13.5%		09		13.5%		
External Walls	TBC	External				е -	13.5%		09		13.5%		
Loose furniture	Loose furniture	Apartments					23.0%		12		23.0%		
Fixtures and Fittings	Kitchens, Wardrobes, etc	Apartments					13.5%		12		13.5%		
White Goods	Kitchen Appliances	Apartments					23.0%		7		23.0%		
External Furniture	Seats, Tables, Playground	External					13.5%		20		13.5%		
Balcony	Flooring, Handrail, Balustrade, etc	External					13.5%		20		13.5%		
Element - Building Services													
Distribution Network	Pipework Distribution	Select Locations					13.5%		09	· -	13.5%		
Gas Fired CHP / ASHP	Gas Fired CHP Units	Select Locations					13.5%		15	е -	13.5%		
Gas Fired Boilers		Select Locations					13.5%		25	е -	13.5%		
Buffer Vessel		Select Locations					13.5%		15	· ·	13.5%		
Main Board	External Main Board	Select Locations					13.5%		30		13.5%		
Erecuted Boards Water Tanks	Replacement Cold Water Mains Water and Select Locations	yairous Levels					13.5%		35 20		13.5%		
Booster Pumps	Booster Pumps associated with the	Select Locations					13.5%		30		13.5%		
Lifts	Lift Replacement	All Cores				· ·	13.5%		40	· •	13.5%		
Lighting - Landlord	Car Park , External , Staircores	Various				· .	13.5%		20		13.5%		
Fire Alarm	Landlord Fire Alarm	Various					13.5%		20	· .	13.5%		
Apartment Boards Apartment HIII	Apartment Boards Heat Interface Unit	Apartment					13.5%		30 20	٠ .	13.5%		
	Ventilaiton Heat	Appriment					72 6%		8		42 50/		
	Recovery Unit	Apartment				,	13.3%		70		13.5%		
one rigning	External Lighting	SILE											
			_			_							

CONCLUSION & CONTACT DETAILS





8.0 CONCLUSION & CONTACT DETAILS

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, and communal open space will contribute to lower maintenance costs for future residents and occupiers.

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