

Planning Application
For
Proposed Residential Development
The Former Cork Warehouse Company Site

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Executive Summary

This Building Lifecycle Report addresses requirements as outlined in the 'Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)' as they relate to this proposed residential project.

Considered scheme design and choice of building materials, together with the effective management by the appointed Property Management Company and each homeowner playing their part, will help contribute towards a desirable, vibrant community into the future.

The document reviews the outline building specification for the proposed development and assesses the associated long-term running and maintenance cost per unit.

The report considers the use of durable materials and finishes for external elevations (e.g. brickwork and metal railings) so as to reduce the need for regular maintenance and/or replacement, outside of general housekeeping works. The choice of such high quality and long-lasting materials, will minimise maintenance costs for residents and occupiers into the future. A similar approach is proposed in the choice of building material for internal finishes, for electrical and plumbing installations, and for landscaping of public and private open space areas.

As the building design develops and material choices are confirmed, this document is to be updated to help inform the appointed property management company of expected running and maintenance costs for the development, and to aid more accurate scheduling of works and service charge budgets.

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1. Introduction

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.

The Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities (2018) (hereafter referred to as the SUH Guidelines) introduced a requirement to include details on the management and maintenance of apartment schemes.

This is set out in Section 6.11 to 6.14 - "Operation & Management of Apartment Developments", specifically Section 6.13. Section 6.13 of the SIH Guidelines 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"

"Demonstrate what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents."

This Building Life Cycle Report document sets out to address the requirements of Section 6.13 of the Apartment Guidelines. The report is broken into two sections as follows:

Section 04:

An assessment of long-term running and maintenance costs as they would apply on a per residential unit basis at the time of application

Section 05:

Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.

2. Description of the proposed Development

The site is located in the heart of Corks docklands, on the Former Cork Warehouse site at Centre Park Road and Marquee Road.

The proposed development will consist of the demolition of all existing structures and the construction of a strategic housing development of 190 no. apartments in a building ranging in height from single to 12 storeys.

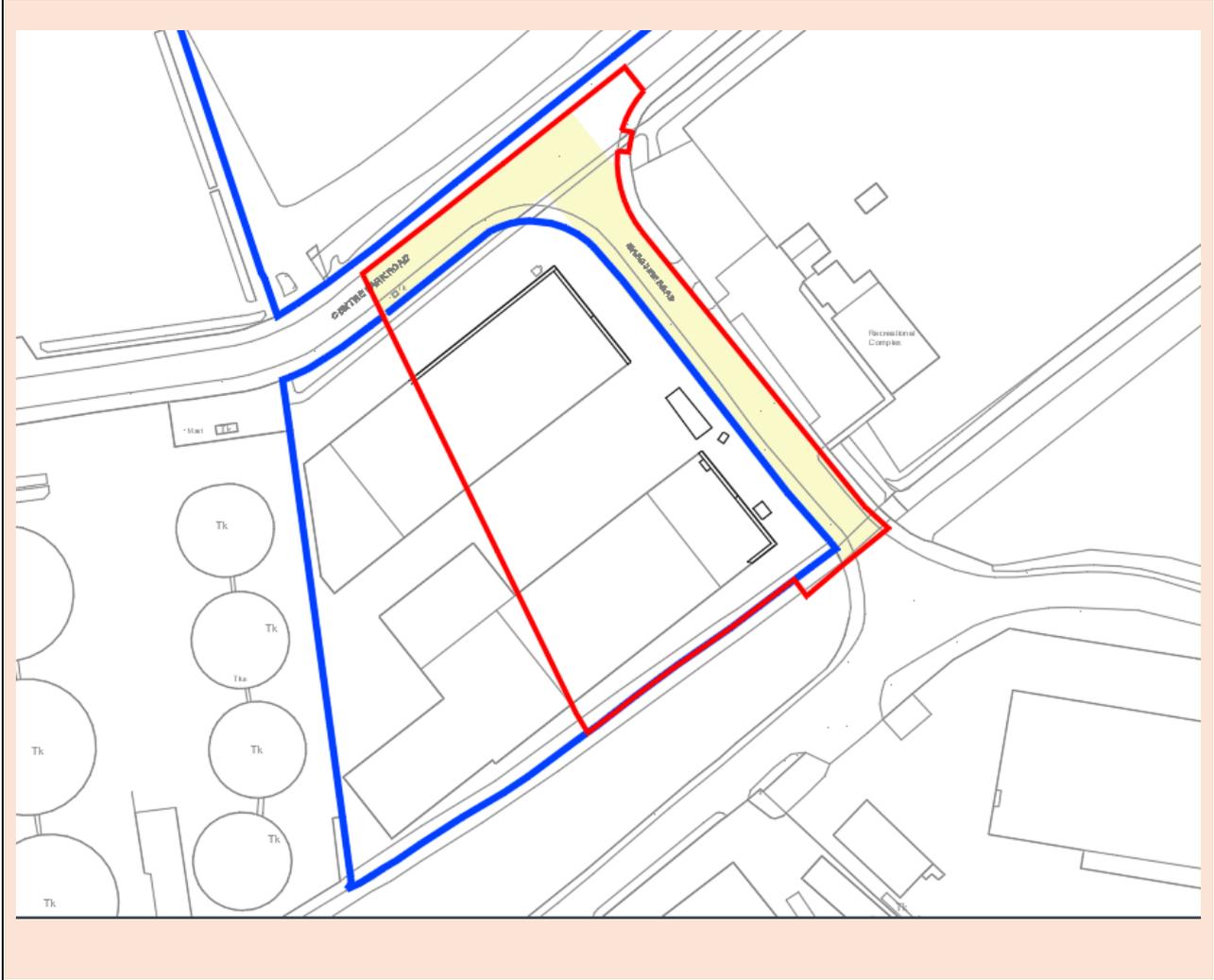
The proposed development makes provision for 3 no. café/restaurant units, 2 no. retail units, a creche and supporting tenant amenity facilities at ground floor level and includes 64 no. 1 bedroom apartments, 106 no. 2 bedroom apartments and 20 no. 3 bedroom apartment on the upper levels.

The proposed development also provides for outdoor amenity areas, landscaping, public realm works on Marquee Road and Centre Park Road, car parking, bicycle stores and shelters, bin stores, ESB substation, plant rooms and all ancillary site development works.

Vehicular access to the proposed development will be provided via Marquee Road.

Former Cork Warehouse site	
Developable Area	0.78 h.a 1.92 acres 7,785 s.q.m
Total Application area	1.06 h.a 2.60 acres 10,559 s.q.m

3. Location Map



4. Long-term running and maintenance costs as they would apply on a per residential unit basis at the time of application

The proposed project will be designed and constructed using quality materials and the skills of highly competent trade's people. The Applicant and Design Team have many years of experience to rely upon and the design has been informed from early stages through discussion with the Local Authority and An Bord Pleanála, and published guidance including the Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities).

A property management company will be engaged at an early stage of the development to ensure that all property management functions are dealt with for the development and that the running and maintenance costs of the common areas of the development are kept within the agreed Annual operational budget.

a) Property Management Company and Owners Management Company

A Property Management Company will be engaged at an early stage of the development to ensure that all property management functions are dealt with for the development and that the maintenance and running costs of the development's common areas are kept within the agreed annual service charge budget. The property management company will enter a contract directly with the Owners Management Company (OMC) for the ongoing management of the built development. This contract will be in place for a period of time and form prescribed by the PSRA's best practice.

The PMC – Property Management Company has the following duties once the development has been constructed.

- Preparation of annual service charge budget for the development common areas.
- Fair and equitable apportionment of the Annual operational charges in line with the Multi Units Development Act 2011 (MUD Act).
- Engagement of independent legal representation on behalf of the OMC in keeping with the MUD Act - including completion of Developer OMC Agreement and transfer of common areas.
- Transfer of documentation in line with Schedule 3 of the MUD Act.
- Estate Management.
- Third Party Contractors Procurement and management.
- OMC Reporting.
- Accounting Services.
- Corporate Services.
- Insurance Management.
- After Hours Services. • Staff Administration.

b) Service Charge Budget

In accordance with the Multi Unit Developments Act 2011 ("MUD" Act), the service charge budget typically covers items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security, property management fee, etc, to the development common areas. This service charge budget also includes an allowance for a Sinking

Fund and this allowance is determined following the review of the Building Investment Fund (BIF) report prepared for the OMC.

The BIF report will identify those works which are necessary to maintain, repair, and enhance the premises over the 30-year life cycle period, as required by the Multi Unit Development Act 2011. In line with the requirements of the MUD Act, the members of the OMC will determine and agree each year at a General Meeting of the members, the contribution to be made to the Sinking Fund, having regard to the BIF report produced.

A sample format of the typical BIF report is set out in Appendix B.

5. Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents

a) Energy and Carbon emissions

The following are an illustration of the energy measures that are planned for the units to assist in reducing costs for the occupants.

Measure	Description	Benefit
BER Certificates	The design team intend to achieve building envelope and HVAC performance that is a significant improvement on the statutory requirements contained in the Irish Building Regulations. The design team will achieve TGD Part L 2019 Nearly Zero Energy Buildings (NZEB) for the proposed development. A preliminary DEAP analysis has been undertaken on the residential units within the development to inform the design strategy, demonstrate compliance with the domestic Building Regulations Part L and to ensure that the targeted Building Energy Ratings (BERs) of A2 (or better) will be achieved.	A BER rating is a rating given based on the overall energy efficiency of the building.
Fabric Energy Efficiency	In accordance with TGD Part L 2019 (current edition for Dwellings) the following checks are made: a) A compliance check will be carried out to ensure that the average U-value complies with the maximum permitted by the TGD standard. b) Maximum elemental U-value Check will be carried out using SEAI approved software (DEAP) c) The Energy Performance Coefficient (EPC) for the proposed dwellings will be calculated to ensure it is less than 0.3 d) The Carbon Performance Coefficient (CPC) for the proposed dwellings will be calculated ensure it is less than 0.35 e) Minimum level of renewable energy technology to be provided check will be carried out f) TM 59 Overheating analysis carried out on apartments g) Airtightness to be under 3m ³ /m ² /hr at 50Pa where Mechanical Ventilation is installed. See Tables of Part L, Building Regulations (Appendix A).	Reduction in the consumption of fuel and the associated carbon emissions and operating costs

Energy Labelled white goods	High standard white goods with high energy efficiency ratings will be supplied to all units. It is expected to install appliances of the following ratings: Oven – A+ Fridge Freezer – A+ Dishwasher – AAA Washer / Dryer – B	High energy rated appliances reduce the amount of electricity required for occupants
External Lighting	The external lighting for the development has been designed and specified with high-end, high efficiency LED light fittings throughout with required colour temperatures in accordance with the Bat Ecologist requirements. Automatic daylight lighting control (automatic dimming) complete with combined PIR detection will be specified where appropriate.	High efficiency luminaires and control systems minimise energy consumption and associated carbon emissions

b) Building Design

Measure	Description	Benefit
Building Aspect / Daylight	Design of the layout of the development has been optimised to achieve a good quality of natural daylight to the units	Demonstration of how the scheme has been designed to comply with best practice
Accessibility	All units, egress routes and stair cores to comply with the requirements of Technical Guidance Documents Part M/K	
Ventilation	Each dwelling shall include an exhaust air heat pump system which operates by mechanically extracting warm moist air from each wet room and kitchen area within the dwelling. This is a constant extract system with make-up air provided via an adjustable wall mounted supply vents designed to provide a continuous comfortable airflow into each habitable space.	
Security	Passive surveillance is incorporated into the design	Access to all residents to reduce risk of littering within the scheme and reduces potential waste charges.
Amenity Space	The scheme provides a range of communal amenity spaces, facilities for the residents and commercial use at Ground Floor Level.	Facilitates socialising, community interaction and provide active frontage which

	<p>These facilities can be categorized as:</p> <ul style="list-style-type: none"> • Resident Support Facilities - comprising of facilities related to the operation of the development for residents such as concierge and management facilities, maintenance /repair services, waste management facilities, etc. • Resident Services and Amenities - comprising of facilities for communal recreational and other activities by residents including, shared amenity room/ gym/ co-working area. • Commercial Unit - for Class 1- Shop or Class 2- Office / Professional Services or Class 8- Medical Centre or Class 11 –Restaurant / Café, including ancillary takeaway use. 	enable access for all users and in compliance with Part M.
Public Open Space/ outdoor amenity spaces	The public open spaces within the proposed development are located at ground level and outdoor amenity spaces for residents are located at the podium.	Facilitates interaction with outdoors.

c) Building Construction Materials

Measure	Description	Benefit
Design & Material Selection	<p>Brickwork</p> <p>The use of brick as the predominant material is a response to the surrounding urban context. It is warmer and gives human scale to the facade. It was also selected for its robustness, domesticity, and ease of maintenance.</p>	Longevity, durability. Minimises ongoing maintenance and replacements requirement.
External Windows & Doors	Use of factory finished and alu-clad windows and doors. All windows shall be double glazed windows with a combined thermal transmittance not greater than 1.2W/m ² K. All windows shall comply with BS EN ISO 10077-1: 2006 - 'Thermal performance of windows, doors and shutters.	Requires no on-going maintenance.
Balconies & Railings	Glass balustrades and metal railing are used. Also, 1.8m side glazing panels area proposed in selected locations	They work subtly in the elevations and helps to scale down the building. In certain locations, there work also as wind break.

d) Building Installations

Measure	Description	Benefit
Electric Car Charging Points	It is the design intent to specify a few electric car charging points within the carpark, with electrical infrastructure provided to all parking spaces for the future upgrade to electric charging.	Electric cars offer a real opportunity to reduce the carbon output of the transport sector, as they emit zero exhaust pipe emissions. Providing electric car charging points will encourage the buildings users towards this sustainable mode of transport.
Energy performance strategy commercial units	The Commercial Units will be completed to the Shell and Core stage. This means that the Heating Ventilation and Air Conditioning (HVAC) plant will be provided by the future tenants during the Fit-Out stage. The Likely strategy will include heating and cooling being provided by VRF units, natural ventilation utilised where possible and artificial lighting provided by means of an energy efficient LED lighting design. Electrical and water connections will be provided to all retail units to enable the future Fit-Outs to be completed	
Exhaust Air Heat Pumps	An all-in-one unit – Heat recovery ventilation, Heating and Hot water. Suitable for apartments that will be at a high level of air-tightness and low heat loss. An Exhaust Air Heat Pump (EAHP) extracts heat from the exhaust air and transfers the heat to domestic hot water and/or hydronic heating system (underfloor heating, radiators)	Provide low emission heating system but are also future proofed for future grid improvements.
Low Energy LED Lighting	The design has allowed for Lighting provided by LED luminaires. Automatic daylight lighting control (automatic dimming) complete with combined PIR detection will be specified where appropriate.	Significant electrical energy savings, as well as increasing the occupant's exposure to natural daylight – thereby promoting a healthier environment.

e) **Waste Management**

Measure	Description	Benefit
Construction and Operational Waste Management Plan	This application is accompanied by a Construction & Demolition Waste Management Plan prepared ARUP.	The Plan demonstrates how the scheme will comply with EU, national, and local waste legislation along with best practice.
Storage of Non-Recyclable Waste and Recyclable Household Waste	This application is accompanied by an Operational Waste Management Plan prepared by ARUP	The Plan demonstrates how the scheme has been designed to comply with EU, national, and local waste legislation, waste bye-laws, along with best practice.
Storage of Non-Recyclable Waste and Recyclable Commercial Waste	The waste storage room will be appropriately ventilated and sufficient drainage will be provided to enable a thorough wash down of all bins and the waste storage room itself.	Easily accessible by all Residents, commercial unit staff, facilities management personnel and the waste contractor(s), minimises potential littering of the scheme, reduce potential waste charges and does not limit waste contractor selection.
	The waste storage room will have adequate provision to move waste to a designated waste marshalling area. Waste collection will take place from the designated marshalling area.	
	Domestic waste management strategy will consist of: dry mixed recyclable, glass, mixed non-recyclable waste and organic waste segregation. Commercial unit waste management strategy will consist of: dry mixed recyclable, glass, mixed non-recyclable waste and organic waste segregation.	Helps reduce potential waste charges and does not limit waste contractor selection.
	Security restricted shared WSAs	Reduce potential for fly tipping by residents and non-residents.
	Well signed shared WSAs and waste receptacles.	Help reduce potential cross contamination of waste and reduce waste charges.
Composting	Organic waste receptacles to be provided in the shared residential WSA and in the commercial tenants will be required to supply them in their WSA.	Helps reduce potential waste charges and compliance with national policy and legislation regarding segregation of biodegradable waste.

f) Building Management

Measure	Description	Benefit
Operating Management Company	A property manager will be hired to lead a team of full-time, part-time, and third-party services providers to ensure the building runs smoothly and that residents are well looked after (a building management team). The property manager will be the main point of contact for prospective residents and current residents alike, having duties such as setting up new leases, assisting residents and vendors with queries, and communicating with residents on behalf of the property owner. The building management team will include members such as the concierge, cleaning staff, and landscaping staff.	Residents are as informed as possible so that any issues can be addressed in a timely and efficient matter.
Tenants Guide	A Residents Pack prepared by the OMC which will typically provide information on contact details for the Managing agent, emergency contact information, transport links in the area and a clear set of rules and regulations	Residents are as informed as possible so that any issues can be addressed in a timely and efficient matter.

g) Landscaping – Public & Private Areas

Measure	Description	Benefit
Landscaping Amenity – Areas – Design & Use	<p>The communal amenity space design responds to the needs of the residents of the space, providing diversity in space and use, for young and old, regardless of ability. There are seating areas, large and small gathering / sociable spaces, play spaces, and open unprogrammed space for residents.</p> <p>The communal amenity spaces will encourage residents to get to know each other and a sense of community by providing space to meet and socialize.</p>	<p>High amenity value for the residents, with options to exercise, relax, play and simply 'be' outdoors in contact with nature and greenery, which is proven to enhance mental health and wellbeing.</p> <p>Social opportunities to meet and get to know neighbours.</p>
Biodiversity & Planting	The landscape spaces will be planted with a variety of species suited and adapted to the Irish climate, including a proportion of native plants. Pollinator-friendly plants will also be included to enhance insect populations. By encouraging wildlife, this will improve local biodiversity and animate the amenity spaces	<p>Ecological enhancement of the local area and contributing to the wider environmental quality of the city.</p> <p>Improved air quality and sensory environment.</p>

	<p>and wider urban landscape.</p> <p>Planting will also provide a contact with nature in the urban environment for the residents, and will have strong aesthetic characteristics, including tactile and aromatic qualities.</p>	
Accessibility	The landscape spaces are fully accessible and inclusive, in accordance with 'Building for Everyone' (National Disability Authority guidance) and the relevant Building Regulation, Part M.	Inclusiveness and ease of access for all.
Materiality	<p>The materials selected are of a high quality and will enhance the feel and quality of the spaces.</p> <p>Materials are robust and will be sourced sustainably where feasible, with low-carbon products preferred.</p>	Environmental benefits from the sourcing and longevity of the specified landscape elements.
Maintenance & Management	<p>Maintenance and Management operations will follow sustainable practices, encouraging natural growth habits, and minimizing chemical inputs.</p> <p>Plant species have been selected that will not require mechanical irrigation, which can be wasteful, as they are adapted to the Irish climate.</p>	Environmental benefits.

h) Transport & Accessibility

Measure	Description	Benefit
Access to public transport	The development will deliver a new neighbourhood which will be conveniently located in proximity to Cork City Centre and to the south-eastern suburbs. The site lies on the strategic transport corridor intended to facilitate a rapid transit system as identified in the Cork Metropolitan Area Transport Strategy.	Availability, proximity to quality bus routes reduces the reliance on private motor
Pedestrian Permeability	<p>The pedestrian network in the site vicinity is extremely popular as a leisure walking and running route due to the onward connection to the southern bank of the River Lee (along the Marina).</p> <p>Marquee Road has footpaths provided on both sides of the road, of varying quality.</p>	Ensures long term attractiveness of walking, and cycling

Bicycle storage	448 no. bicycle parking spaces are provided within the scheme. This is in line with the new apartment guidelines for Build-to-rent requirements and promotes sustainable transport modes.	Accommodates the uptake of cycling and reduces the reliance on the private motor vehicle.
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Appendix A:

The design intent is to incorporate the following passive design measures for the proposed residential units where it is both technically and economically practical. These design parameters are the current targets and are subject to amendment during design development. As a minimum, all U-Values shall comply in full with TGD Part L 2019 (current edition for Dwellings).

Element	Performance Target
Roof U-Value	0.15 W/m ² °K (target value).
Wall U-Value	0.15 W/m ² °K (target value).
Floor U-Value	0.15 W/m ² °K (target value).
Window U-Value	1.20 W/m ² °K (target value including window frame).
Building Air Permeability	≤3.0 m ³ h ⁻¹ m ⁻² @50Pa (target value) All dwellings to be tested and certified
Thermal Bridging	Acceptable Construction Details to be specified and followed on site.
Lighting	LED Lighting Throughout
Ventilation	Mechanical Ventilation via the EAHP

Table 1. Energy Performance strategy – Residential Units

Element	Performance Target
Roof U-Value	0.15 W/m ² °K (target value).
Wall U-Value	0.15 W/m ² °K (target value).
Floor U-Value	0.15 W/m ² °K (target value).
Window U-Value	1.20 W/m ² °K (target value including window frame).
Window G-Value to EN410	0.40-0.55 (target range). This will help to reduce unwanted solar gain and in turn reduce unwanted overheating in summer
Light Transmittance	0.65 - 0.71 (target range) – the highest value possible shall be specified where feasible.
Building Air Permeability	≤3.0 m ³ h ⁻¹ m ⁻² @50Pa (target value) All units and communal areas to be tested and certified
Lighting	LED Throughout with PIR sensors in communal hallways to reduce electricity consumption.

Table 2. Energy Performance strategy – Communal areas

Element	Performance Target
Roof U-Value	0.15 W/m ² °K (target value).
Wall U-Value	0.15 W/m ² °K (target value).
Floor U-Value	0.15 W/m ² °K (target value).
Window U-Value	1.20 W/m ² °K (target value including window frame).
Building Air Permeability	≤3.0 m ³ h ⁻¹ m ⁻² @50Pa (target value) All commercial units to be tested and certified
Lighting	LED Lighting Throughout
Ventilation	Natural ventilation where feasible. Mechanical ventilation provided in areas where natural ventilation is not feasible.

Table 3. Energy Performance strategy – Commercial Units (shell and core)

Appendix B: Items included in a typical BIF

The BIF table below illustrates what would be incorporated for the calculation of a Sinking Fund. It is based on an Apartment Block in the development.

Building investment fund (sinking fund) estimation

Example Apartment Block

Specification to be finalized at detailed design stage

Ref	Element	Life Expectancy	Yearly estimate of costs year 1 to year 30
1.00	Roofs		
1.01	Replacement roof covering incl. insulation to main roofs	25	
1.02	Replacement parapet details	18	
1.03	Replace roof access hatches	25	
1.04	Specialist Roof Systems - Fall arrest	25	
2.00	Elevations		
2.01	Decorate plaster finishes to apartment core & bin storage	18	
2.02	Minor repairs and preparation for decorations of rendered areas (if applicable)	18	
2.03	Replace exit/ entrance doors	25	
2.04	Replace Rainwater goods	25	
2.05	Recoat powder coated Finishes to balconies	20	
2.06	Periodic replacement and overhauling of external fixings	5	
2.07	Replace Balcony floor finishes	25	
3.00	Stair cores & lobbies		
3.01	Decorate Ceilings	7	
3.02	Decorate Walls	7	

3.03	Decorate Joinery	7	
3.04	Replace fire doors	25	
3.05	Replace carpets (stairwells & lobbies)	12	
3.06	Replace entrance mats	10	
3.07	Replace nosings	12	
3.08	Replace ceramic floors tiles	20	
4.00	Car Park		
4.01	Repaint parking spaces & Numbering	7	
5.00	M&E Services		
5.01	General - Internal relamping	7	
5.02	Replace Internal light fittings	18	
5.03	Replace External light fittings (lights at entrance lobbies)	18	
5.04	Replace smoke detector heads	18	
5.05	Replace manual break glass units	18	
5.06	Replace Fire alarm panel	18	
5.07	Replace lift car and controls	25	
5.08	Replace AOV's	25	
5.08	Replace security access control installation	15	
5.09	Sump pumps replacement	15	
5.10	External Mains Water connection	20	
5.12	Electrical Mains and Sub Mains distribution	20	
5.13	Emergency Lighting	20	
5.14	Photovoltaic (PV) panels	25	
6.00	Exterior		

6.01	Entrance Gate - motor renewal	12	
6.02	Entrance Gate & pedestrian gate - redecoration	60	
6.03	External boundary treatments - Recoat powder coated Finishes to railings	60	
6.04	Replace cobbleblock areas	18	
6.05	15-year cutback & thinning of trees. Overhaul landscaping generally	20	
6.06	Replace CCTV provision	12	
6.07	External Handrails and balustrade	18	