

OUTLINE MANAGEMENT & BUILDING LIFE CYCLE REPORT

**For Proposed Residential Development at
Frankfort Castle, Old Frankfort, Dublin 14**

Prepared By:

Tom Phillips + Associates

O'Mahony Pike Architects

CS Consulting Engineers

DFLA Landscape Architects

AWN Consulting

ARUP Engineers

On behalf of:

Pembroke Partnership Limited

April 2021

1.0 INTRODUCTION

This Outline Management Plan and Lifecycle Report describes the processes and practices to be implemented, for the effective management of the proposed residential development at Frankfort Castle, Old Frankfort, Dublin 14. Additionally, the lifecycle of the building has been assessed to benefit the residents as outlined in the Apartment Guidelines 2018 – Section 6.13 relating to long term running and maintenance costs of the development.

Section 6.13 of the Apartment Guidelines 2018 requires that apartment applications shall:

“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.”

2.0 PROJECT DETAILS

The proposed development will consist of 115 no. residential units comprising 45 no. one-bed units and 70 no. two-bed units. The proposed units will be accommodated in the partially retained Frankfort Castle building and in 3no. blocks with a maximum height of 5 storeys.

Additional works proposed include the provision of a childcare facility (80sqm), car and cycle parking at surface and basement levels, hard and soft landscaping, surface water drainage infrastructure and attenuation tank, and all associated site development and infrastructure works.

3.0 DEVELOPMENT MANAGEMENT

A Property Management Company will be appointed to ensure that all running and maintenance costs associated with and pertaining to the common areas within the site and buildings are properly managed, with effective and appropriately resourced maintenance and operations regimes.

As each building contributes to the running costs of the development, a services budget will be established and each unit in the development will contribute accordingly as per sales and leasing arrangements established upon completion of the development.

The Property Management Company also has the following responsibilities for the apartment development once constructed:

- Timely formation of an Owners Management Company (OMC) – which will be a company limited by guarantee having no share capital. All future purchasers will be obliged to become members of this OMC
- Preparation of annual service charge budget for the development common areas
- Fair and equitable apportionment of the Annual operational charges in line with the 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

4.0 SERVICES BUDGET

As mentioned above, the management team will have numerous key responsibilities but most notable would be the completion of the Service Charge Budget. This will be compiled in accordance to the MUD and will typically cover the following items:

- Insurance;
- General Maintenance;
- Repairs;
- Waste Management;
- Cleaning;
- Landscaping;
- Legal Services;
- Accounts Preparation;
- Property Management Fees;
- Other Expenditures.

As per the outlined requirements in the MUD Act, the service budget will also include the allowance of a Sinking Fund. This fund will allow for major maintenance and upgrade costs that may come in the future. This contribution will be agreed annually and reported in the Building Investment Fund (BIF) report which is prepared by the management team.

The BIF report will identify those works which are necessary to maintain, repair, and enhance the premises over the 30year 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.

5.0 BUILDING MATERIALS

The practical implementation of the Design and Material principles has informed design of building facades, internal layouts and detailing of the proposed apartment buildings.

Buildings

Apartment Buildings are designed in accordance with the Building Regulations, in particular Part D 'Materials and Workmanship', which includes all elements of the construction. The Design Principles and Specification are applied to both the apartment units and the common parts of the building and specific measures taken include:

Measure Description	Benefit
Daylighting to circulation areas	Avoids the requirement for continuous artificial lighting
Natural/Passive ventilation system to circulation areas	Avoids costly mechanical ventilation systems and associated maintenance and future replacement
Natural ventilation to carpark (and other common areas)	Avoids costly mechanical ventilation systems and associated maintenance and future replacement
Secure ground level cycle and refuse storage areas	Avoids access lifts /ramps and any handling/moving equipment.
External paved and landscaped areas	All of these require low/minimal maintenance

Table A. Measures to Improve Efficiencies

Material Specification

Measure Description	Benefit
<p>Consideration is given to the requirements of the Building Regulations and includes reference to BS 7543:2015, 'Guide to Durability of Buildings and Building elements, Products and Components', which provides guidance on the durability, design life and predicted service life of buildings and their parts.</p> <p>All common parts of the proposed Apartment buildings and, the durability and performance of these are designed and specified in accordance with Figure 4; Phases of the Life Cycle of BS7543; 2015. (Please see Appendix A for this figure). The common parts are designed to incorporate the guidance, best practice principles and</p>	<p>Ensures that the long-term durability and maintenance of Materials is an integral part of the Design and Specification of the proposed development.</p>



<p>mitigations of Annexes of BS 7543: 2015 including:</p> <p>Annex A Climatic Agents affecting Durability Annex B Guidance on materials and durability Annex C Examples of UK material or component failures Annex D Design Life Data sheets</p>		
<p>Use of brickwork and pigmented render systems to envelope</p>		<p>Requires no on-going maintenance.</p>
<p>Use of factory finished and alu clad windows and doors, and powder coated steel balconies</p>		<p>Requires no on-going maintenance.</p>

Table B. Material Specifications and Associated Benefits

6.0 LANDSCAPING

The proposed landscaping design has been informed by the existing site context and the requirement to ensure the maximum retention of trees on site. Additional trees and planting will be carefully chosen so that they complement the existing site context and develop into soft landscaping requiring less maintenance whilst being aesthetically pleasing.

As noted within the enclosed Landscape Design Rationale Report, prepared by DFLA, the selection of paving and other landscape materials has been determined by proposed function, longevity and durability.

7.0 ENERGY AND CARBON EMISSIONS

Various strategies will be incorporated within the development to ensure low energy use and low carbon emissions which will reduce maintenance and unit costs for the residents. As stated in the enclosed 'Energy Statement', prepared by ARUP, the aim is to *'outperform the sustainability and energy targets and overheating risk assessment set by the Irish Building Regulations, Part L – Conservation of Fuel and Energy 2019'*.

In addition, the energy of the aims of the development will follow the core principles outlined below:

Reduce energy consumption by passive or active means;

- The building fabric materials have been specified not only for their low maintenance and robust quality but also for their high-performance U value. Careful design detailing will be applied to the envelope details to reduce heat loss at vulnerable junctions and maximise air tightness.
- The blocks have been orientated to take advantage of daylight with no apartment fully facing north. This strategy was employed to improve the quality of the living space and to maximise solar gain.

Reuse energy where possible by recovering waste energy;

Utilise **renewable** technologies to offset energy from fossil fuel technology;

- The development will make use of a combined heat and power system to support energy efficiency and reduce costs for the residents.

Rethink and refine the energy strategy and approach.

- Management will evaluate energy saving strategies in line with the future objectives that may be developed.

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

1. Measure – BER Certificates
<p>Description A Building Energy Rating (BER) certificate will be provided for each unit in the proposed development which will provide detail of the energy performance of the dwellings. A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target an A2/A3 rating for the apartments this will equate to the following emissions.</p> <p>A2 – 25-50 kwh/m2/yr with CO2 emissions circa 10kgCO2/m2 year A3 – 51-75 kwh/m2/yr with CO2 emissions circa 12kgCO2/m2 /year</p>

<p>Benefit Higher BER ratings reduce energy consumption and running costs.</p>
<p>2. Fabric Energy Efficiency</p>
<p>Description The U-values being investigated will be in line with the requirements set out by the current regulatory requirements of the Technical Guidance Documents Part L, titled “Conservation of Fuel and Energy Buildings other than Dwellings”.</p> <p>Thermal bridging at junctions between construction elements and at other locations will be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L. See below Table 1 of Part L, Building Regulations.</p>
<p>Benefits Lower U-values and improved air tightness is being considered. Considered to help minimise heat losses through the building fabric, lower of energy consumption and thus minimise carbon emissions to the environment.</p>
<p>3. Energy Labelled White Goods</p>
<p>Description The white good package planned for provision in the apartments will be of a very high standard and have a high energy efficiency rating. It is expected that the below appliance ratings will be provided:</p> <ul style="list-style-type: none"> • Oven - A plus • Fridge Freezer - A plus • Dishwasher - AAA • Washer/Dryer - B
<p>Benefit The provision of high rated appliances in turn reduces the amount of electricity required for occupants.</p>

Table C. Energy & Cost Saving Measures Proposed

The following are Low energy technologies that are being considered for the development and during the design stage of the development the specific combination from the list below will be decided on and then implemented to achieve the A2/A3 BER Rating.

Measure	Description	Benefit
Condensing Boilers	Condensing boilers are being investigated as they have a higher operating efficiency, typically over 90%, than standard boilers and have the benefit of lower fuel consumption resulting from the higher operating efficiencies.	Condensing boiler have lower fuel consumption resulting from the higher operating efficiencies.
Natural Ventilation	Natural ventilation is being evaluated as a ventilation strategy to minimise energy usage and noise levels.	The main advantages of natural ventilation are: <ul style="list-style-type: none"> • Low noise impact for occupants and adjacent units. • Completely passive requiring no energy

Measure	Description	Benefit
		<ul style="list-style-type: none"> Minimal maintenance required. Reduced environmental impact as minimal equipment disposal over life cycle. Full fresh air resulting in healthier indoor environment.
Mechanical Ventilation Heat Recovery	Mechanical heat recovery ventilation will be considered to provide ventilation with low energy usage.	Mechanical Heat Recovery Ventilation provides ventilation with low energy usage. The MVHR reduces overall energy and ensures a continuous fresh clean air supply.
Domestic Heat Pumps	A domestic 'Air-to-Air Heat pump' system is being considered for installation in each apartment. An air-to-air heat pump system makes use of the heat that is available in the outside air to provide tempered air internally. The particular system being considered for this development has the further added benefit of providing 'Air-to-Water' functionality, meaning the heat extracted from refuse exhaust air is used to provide domestic hot water in addition, improving overall energy efficiency and sustainability.	No additional fuel (natural gas, oil, etc) required. Low noise impact for occupants and adjacent units. Minimal maintenance required. Filtration and clean air production. Integrated domestic hot water production. Leading domestic technology for alignment with SEAI energy sustainability guidelines.
ECAR Charging Points	Ducting shall be provided from a local landlord distribution board to designated E-car charging car park spaces. This will enable the management company the option to install a number of E-car charging points within the basement carpark to cater for E-car demand of the residence. This system operates on a single charge point access card. A full re-charge can take from one to eight hours using a standard charge point.	Providing the option of E-car charging points will allow occupants to avail of the ever-improving efficient electric car technologies.

Table D. Low Energy Technologies

8.0 HEALTH AND WELLBEING

The health and wellbeing of the residents is one of the utmost importance. With this considered, there have been several design strategies employed to ensure this is achieved.

Natural/Daylight:

The design, separation distances and layout of the apartment blocks have been designed to optimize the ingress of natural daylight/ sunlight to the proposed dwellings to provide good levels of natural light. This will promote better health and well-being as it promotes the use of natural light and reduces the reliance on artificial light while also reducing costs for the occupant.

Amenities:

The site features various amenities that may be utilised by the residents. There is ample public and communal open space provided at easily accessible locations for all residents. Informal play areas are provided and a significant number of mature trees are retained ensuring that the open spaces are attractive spaces in which to linger. Residential amenity areas are also proposed within a portion of the retained Frankfort Castle building (Block D). These features promote community interaction, enhancing wellbeing, socialising and development of relationships between neighbours.

Accessibility:

The development will be fully compliant with the Part M Building Regulations as outlined in the Architectural Statement. This will be further illustrated in the DAC. Ensuring that the development will be fully compliant will negate the need for adaption in the future and result in a universally acceptable, inviting residential space to live.

Security:

Access will be given to residents by means of the access fobs or key codes to the individual blocks. In addition, all public spaces are well overlooked and benefit from passive surveillance. This will give the residents a heightened sense of security and reduce potential costs associated with antisocial behaviour. Lighting of the site will also provide an added sense of security with the management team ensuring that all lights are maintained, and bulbs are changed when required.

9.0 WASTE MANAGEMENT

As outlined in the enclosed Construction & Environment Management Plan and the Construction and Demolition Waste Management Plan, prepared by CS Consulting, all waste produced on site as a result of demolition or construction will be disposed of in the correct manner while ensuring recycling is of the utmost importance and landfill waste is minimised.

An Operational Waste Management Plan has also been prepared by AWN outlining how future residents will reduce the waste to landfill and increase recycling levels. The management team will aid in the success of this and provide regular maintenance of the bin stores as outlined in the OWMP.

10.0 TRANSPORT AND ACCESSIBILITY

The development site is conveniently located for those who will reside at this development as it is extremely close to a multitude of public transport facilities. It is situated within 11 minutes' walk of stops on the Luas Green Line, which are served by frequent trams into and through Dublin city centre. In addition, the site benefits from proximity to Dundrum village and Dundrum Town Centre (both within approx. 15 minutes' walk or less than 10 minutes' bicycle journey), which is a key employment hub and includes a range of key amenities such as supermarkets, medical clinics, pharmacies, banks, and a post office, as well as a significant number of further retail, leisure, and dining facilities.

11.0 CONCLUSION

In conclusion, a management team will be appointed to ensure that the development is maintained. Best practise design strategies will be employed, and the building will be constructed with durable, high quality, robust materials that will enhance the proposed development aesthetically and reduce maintenance costs for the residents over time.

Therefore, the opinion is taken that the above reflects positively on the lifecycle of the building and complies with the Apartment Guidelines – Operation and Management of Apartment Developments Sections 6.11-6.14.

Appendix A:

Phases of the Life Cycle of BS7543; 2015

Figure 4 Phases of the life cycle

