

BUILDING LIFE CYCLE REPORT

**Residential
Development
at
Ninth Lock Rd,
Clondalkin,
County Dublin**

On behalf of Thornmeadow Developments Ltd.

25018-OMP-ZZ-XX-RP-A-9003

Prepared By:

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On behalf of: Thornmeadow Developments Ltd.

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INTRODUCTION

The Planning Design Standards for Apartments – Guidelines for Planning Authorities were published in July 2025 (hereafter referred to as the Apartment Guidelines). The Apartment Guidelines feature a requirement to include details on the management and maintenance of apartment schemes. This is set out in Section 6.0- *“Apartments and the Development Management Process”*.

Section 6.2 of the Apartment Guidelines 2025 requires that apartment applications shall:

“include a building lifecycle report which in turn includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application, as well as demonstrating what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents”

This Building Life Cycle Report document sets out to address the requirements of Section 6.2 of the Apartment Guidelines. The report is broken into two sections as follows:

Section 01:

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 02:

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

PROPOSED DEVELOPMENT

The overall development will consist of 408 no. residential units, 403 no. apartment units, 5 no. own-door duplex housing units, & a childcare facility . The 403 no. apartments are contained in 4 no. blocks ranging in height from 4 to 9 storeys .

The apartment buildings consist of 24 no. studio units, 224 no. one-bed units, and 155 no. two-bed units, which are integrated across high-performance vertical circulation cores.

The terraces of houses contain 5 no. three-bedroom / 5-person own-door duplex and housing units organized within 3 separate blocks.

A detailed breakdown of the bicycle and car parking allocation is provided within the sitewide schedule of accommodation and within the TTA prepared by PMCE and GK Consulting engineers to accompany this proposal.

Public open space is provided at the central green along the primary access road and the 46-metre wide strategic infrastructure corridor.

Communal amenity is provided in compliance with the Section 28 housing guidelines across expansive courtyard sanctuaries embedded within the perimeter blocks.

All units will have access to private amenity space, achieved via low-profile flush thresholds leading to either a private rear garden, ground-floor terrace, or projecting precast metal balcony .

The building life cycle report relates to the 403 no. apartments and 5 no. Townhouse units only.

SECTION 01

AN ASSESSMENT OF LONG-TERM RUNNING AND MAINTENANCE COSTS AS THEY WOULD APPLY ON A PER RESIDENTIAL UNIT BASIS AT THE TIME OF APPLICATION

1.1. Property Management of the Common Areas of the development

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. It is proposed that all the lands which are not sold into private ownership will be transferred to a management company.

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 for a maximum period of 15 years and in the form prescribed by the PSRA.

All lands not sold privately or taken in charge by MCC will be transferred to the property management company.

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 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.

1.2. Service Charge Budget

The property management company has several key responsibilities, primarily the compiling of the service charge budget for the development for agreement with the OMC. The service charge budget covers items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security, property management fee, etc., related to the development common areas in accordance with the Multi Unit Developments Act 2011 ("MUD" Act).

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 once adopted by the OMC, determines an adequate estimated annual cost provision requirement based on the needs of the development over a 30-year cycle period. 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 A.

Note: the detail associated with each element heading i.e. specification and estimate of the costs to maintain / repair or replace, can only be determined after detailed design and the procurement/ construction of the development and therefore has not been included in this document.

SECTION 02

MEASURES SPECIFICALLY CONSIDERED BY THE PROPOSER TO EFFECTIVELY MANAGE AND REDUCE COSTS FOR THE BENEFIT OF RESIDENTS.

2.1. Energy and Carbon Emissions

The following items 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	A Building Energy Rating (BER) certificate will be provided for each dwelling 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. 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 Note proposed Part L revisions will increase the energy efficiency standard required for residential units.	Higher BER ratings reduce energy consumption and running costs.																														
Fabric Energy Efficiency	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 2022, title 'Conservation of Fuel and Energy Dwellings'. Thermal bridging at junctions between construction elements and at other locations will be minimized in accordance Paragraphs 1.3.3.1 & 1.3.3.2 within the Technical Guidance Documents Part L. See below Table 1 of Part L, Building Regulations. <table border="1"> <caption>Table 1 Maximum elemental U-value (W/m²K)^{1, 2}</caption> <thead> <tr> <th>Column 1 Fabric Elements</th><th>Column 2 Area-weighted Average Elemental U-value (U_m)</th><th>Column 3 Average Elemental U-value – individual element or section of element</th></tr> </thead> <tbody> <tr> <td>Roofs</td><td></td><td></td></tr> <tr> <td>Pitched roof</td><td></td><td></td></tr> <tr> <td>- Insulation at ceiling</td><td>0.16</td><td>0.3</td></tr> <tr> <td>- Insulation on slope</td><td>0.16</td><td></td></tr> <tr> <td>Flat roof</td><td>0.20</td><td></td></tr> <tr> <td>Walls</td><td>0.18</td><td>0.6</td></tr> <tr> <td>Ground floors³</td><td>0.18</td><td>0.6</td></tr> <tr> <td>Other exposed floors</td><td>0.18</td><td>0.6</td></tr> <tr> <td>External doors, windows and rooflights</td><td>1.4^{4,5}</td><td>3.0</td></tr> </tbody> </table> Notes: 1. The U-value includes the effect of unheated voids or other spaces. 2. For alternative method of showing compliance see paragraph 1.3.2.3. 3. For insulation of ground floors and exposed floors incorporating underfloor heating, see paragraph 1.3.2.2. 4. Windows, doors and rooflights should have a maximum U-value of 1.4 W/m²K. 5. The NSAI Window Energy Performance Scheme (WEPS) provides a rating for windows combining heat loss and solar transmittance. The solar transmittance value g_{iso} measures the solar energy through the window.	Column 1 Fabric Elements	Column 2 Area-weighted Average Elemental U-value (U _m)	Column 3 Average Elemental U-value – individual element or section of element	Roofs			Pitched roof			- Insulation at ceiling	0.16	0.3	- Insulation on slope	0.16		Flat roof	0.20		Walls	0.18	0.6	Ground floors ³	0.18	0.6	Other exposed floors	0.18	0.6	External doors, windows and rooflights	1.4 ^{4,5}	3.0	Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric, lower of energy consumption and thus minimise carbon emissions to the environment.
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Energy Labelled White Goods	The white goods package (where provided) 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: • Oven - A plus • Fridge Freezer - A plus • Dishwasher - AAA • Washer/Dryer - B	The provision of high rated appliances in turn reduces the amount of electricity required for occupants.																														
Internal Common Areas & External Lighting	Low energy luminaires and automatic controls such as motion sensors are to be provided for electric lighting to maximize efficiency in use. LED lamps will be preferred as far as is practical. Lighting will be provided to ensure a safe environment for pedestrians, cyclists and moving vehicles, to deter anti-social behavior and to limit the environmental impact of artificial lighting on	Low energy lamps and automatic controls improve energy efficiency. Adequate lighting levels ensure safe																														

Measure	Description	Benefit
	existing flora and fauna in the area.	environments.

The following are **Low energy technologies** that are being considered for the development and during the design stage of the development in order to meet the requirements of Part L of the Building Regulations and to meet Near Zero Energy Building standard if required. The specific combination from the list below will be decided on and then implemented to achieve the A2/A3 BER Rating. All apartment units have been oversized to allow for in-unit exhaust air source heat pumps to be installed without affecting development standards.

Measure	Description	Benefit
Air Source Heat Pump – Houses	As part of the overall energy strategy for the houses and duplexes, the use of Exhaust Air Heat Pumps is proposed. These systems extract heat energy from the outside air and, using a refrigerant cycle, raise the temperature of the heat energy using a refrigerant vapor compression cycle.	Air source heat pumps use electrical energy from the grid to drive the refrigerant cycle but do so extremely efficiently. Modern heat pumps will typically provide up to 4.5 times more heat energy to the dwelling than the electrical energy they consume.
Exhaust Air HeatPump Apartments	As part of the overall energy strategy for apartments, the use of Air Source Heat Pumps is proposed. These systems extract heat energy within the dwelling from the air exhausted from wet areas and kitchen and, using a refrigerant cycle, raise the temperature of the heat energy using a refrigerant vapor compression cycle.	Exhaust Air source heat pumps use electrical energy from the grid to drive the refrigerant cycle but do so extremely efficiently. Modern heat pumps will typically provide up to 5 times more heat energy to the dwelling than the electrical energy they consume.
E-car Charging Points	Ducting and on street infrastructure shall be provided from a local landlord distribution board to parking spaces identified. This will allow management company the option to install a number of E-car charging points to cater for E-car demands of the residences. 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.

2.2. Materials

The practical implementation of the Design and Material principles has informed the design of internal layouts, detailing of the proposed apartment buildings, and building facades. The façade materials will consist of brick, render, glazing, zinc and pressed metal.

2.2.1. 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 core (apartment block) wherever possible	Reduces the requirement for artificial lighting
Natural/Passive ventilation system to circulation areas. The requirements for AOV shafts adjoining circulation areas have been minimized as much as possible.	Avoids costly mechanical ventilation systems and associated maintenance and future replacement.
External paved and landscaped areas	All of these require low/minimal maintenance

2.2.2. Material Specification

Measure Description	Benefit
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. The common parts are designed to incorporate the guidance, best practice principles and mitigations of Annexes of BS 7543: 2015 including: - Annex A Climatic Agents affecting Durability - Annex B Guidance on materials and durability - Annex C Examples of material or component failures - Annex D Design Life Data sheets	Ensures that the long-term durability and maintenance of Materials is an integral part of the Design and Specification of the proposed development.
Use of brickwork, rendered panels, and profiled metal cladding to envelope.	Requires minimal on-going maintenance.
Use of factory finished and alu or uPVC windows and doors, and powder coated steel balconies	Requires minimal on-going maintenance.

2.3. Landscape

Measure	Description	Benefit
Site Layout and Design	All parking spaces are paved with permeable paving in line with SuDS strategy. The central open space is substantial and contains largely soft landscaping with a stormwater attenuation system below. Several other open spaces with a mix of hard and soft landscaping have been proposed.	Sustainable drainage systems such as permeable paving improve the quality of, and reduce the volume of, stormwater runoff generated from the development. Stormwater attenuation systems reduces the rate of stormwater discharging from the development to the greenfield runoff rate, to prevent flooding occurring downstream.
Hard Landscaping Materials	Sustainable, robust materials, with high slip resistance to be used for paving. Durable and robust equipment with emphasis on 'natural play' (e.g. play, exercise, fencing etc.) to be used throughout.	Robust materials and elements reduce the frequency of required repair and maintenance.
Soft Landscaping	A selection including native mature trees and planting is proposed. Hard and soft landscaped areas are balanced to ensure a quality public environment.	High quality soft landscaping improves the general quality of the environment for residents.

2.4. Waste Management

The following measures illustrate the intentions for the management of Waste.

Measure	Description	Benefit
Storage of Non-Recyclable Waste and Recyclable Household Waste	Access to centralized bin storage areas is provided at grade adjacent to the apartment building / duplex blocks and in front of or near mid terraced housing.	Easily accessible by all residents and minimizes potential littering of the scheme
Storage of Non-Recyclable Waste and Recyclable Household Waste Composting	Domestic waste management strategy: • Grey, Brown and Green bin distinction. • Competitive tender for waste management collection.	Helps reduce potential waste charges.
	Organic waste bins to be provided throughout.	Helps reduce potential waste charges.

2.5. Health & Well Being

The following are illustrations of how the health and well-being of future residents are considered.

Measure	Description	Benefit
Natural / Day Light	The buildings have been favorably orientated. The design, separation distances and layout of the apartment block and duplexes have been designed to optimize the ingress of natural daylight/sunlight to the proposed dwellings to provide good levels of natural light.	Reduces reliance on artificial lighting thereby reducing costs.
Accessibility	All units will comply with the requirements of Part M.	Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances.
Security	The scheme is designed to incorporate passive surveillance with the following security strategies likely to be adopted: • CCTV monitoring details • Secure bicycle stands • Routine access fob audits	Help to reduce potential security/management costs.
Natural Amenity	Public Open Space is to be provided in the centre of the site with smaller areas of open space provided throughout. Larger areas of parkland are also located nearby.	Facilitates community interaction, socializing and play – resulting in improved wellbeing

2.6. Management

Consideration has been given to ensuring the homeowners have a clear understanding of their property

Measure	Description	Benefit
Home User Guide	Once a purchaser completes their sale, a homeowner box will be provided which will include: • Homeowner manual – this will provide important information for the purchaser on details of their new property. It typically includes details of the property such as MPRN and GPRN, Information in relation to connect with utilities and communication providers, Contact details for all relevant suppliers and User Instructions for appliances and devices in the property. • 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 manner.

2.7. Transport

Measure	Measure Description	Benefit
Access to Public Transport	The site is situated within a 1 to 5-minute walk from the site. These bus stops are served by the following routes operating along L1026 Ninth Lock Road. □ Routes 60, 68, L54 and W2 These services provide frequent and direct connections to key destinations, including Dublin City Centre, Liffey Valley Shopping Centre, and surrounding residential and commercial areas.	The availability, proximity, and ease of access to public transport services contributes to reducing the reliance on the private motor vehicle for all journey types.
Permeable Connections	Provision and subsequent maintenance of dedicated pedestrian infrastructure on-site, and their connectivity with existing adjoining pedestrian and cycle infrastructure which is linked with amenities in surrounding area.	Ensure the long-term attractiveness of walking and cycling to a range of local education, retail and community facilities and bus services.
Bicycle Storage	The provision of secure bicycle parking facilities at grade service the entire site.	Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle.
E-car Facilities	Ducting will be provided from a local landlord distribution board to designated E-car charging car park spaces. This will allow management company the option to install additional E-car charging points to cater for expanding E-car demands of the residences.	To accommodate the growing demand for E-car which assist in decarbonizing society and reducing oil dependency.

APPENDIX A:

ITEMS INCLUDED IN A TYPICAL BIF

The BIF table below illustrates what would be incorporated for the calculation of a Sinking Fund.

	BUILDING INVESTMENT FUND (SINKING FUND) CALCULATIONS		
Ref	Element	Life Expectancy	Amount
1.00	Roofs		
1.01	Replacement felt roof covering incl. insulation to main roofs/ overhaul to green roofs.	18	
1.02	Replacement parapet details	18	
1.03	Replacement/ repairs to fascias	18	
1.04	Replace roof access hatches / roof lights	25	
1.05	Specialist Roof Systems - Fall arrest	25	
1.06	Overhaul waterproofing details to terraces / balconies	12	
2.00	Elevations		
2.01	Recoat zinc / metal panels	25	
2.02	Minor repairs and preparation for decorations of rendered areas	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	Staircores & lobbies (1 No. Core in Apartment Block)		
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 Entrance lobbies	20	
3.09	Fixed Furniture & Equipment - Provisional Sum	18	
4.00	Car Parking		
4.01	Repaint parking spaces & Numbering	7	
4.02	Replace store doors, ironmongery & digi-locks	15	
4.03	Replace Bike stands	25	
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/ disabled refuge call points	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	Overhaul and/or replace Waste Pipes, Stacks & Vents	20	
6.00	Exterior		
6.01	External boundary treatments - Recoat powder coated Finishes to railings	60	
6.02	Replace external signage	18	
6.03	Replace cobblelock areas	18	
6.04	15-year overhaul of soft landscaping generally	15	
6.05	Replace CCTV provision	12	
6.06	External Handrails and balustrade	18	

APPENDIX B:
Phases of the Life Cycle of BS7543; 2015

Figure 4 Phases of the life cycle

