

Mooretown Phase 2

Building Life-Cycle and Sustainability Report

Proposed Residential Development
at Rathbeale Road, Swords, Co. Dublin

Part 10 Planning Application - May 2026



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1.0 INTRODUCTION

1.1 Overview of Planning Policy

Deady Gahan Architects have been appointed to produce this Building Life-Cycle and Sustainability Report to accompany the Part 10 Planning Application to An Coimisiún Pleanála for the proposed development at Rathbeale Road, Swords, Co. Dublin. This Building Life-Cycle and Sustainability Report also meets requirement for a Sustainability Assessment Report.

The aim of this document is to assess the long-term running and maintenance costs of the development and demonstrate the provisions put in place to reduce this cost as per the Sustainable Urban Housing: *'Design Standards for New Apartments Guidelines for Planning Authorities'* (2025) - *'Planning Design Standards for Apartments - Guidelines for Planning Authorities'* (hereafter referred to as the Apartment Guidelines). The Apartment Guidelines introduced a requirement to include details on the management and maintenance of apartment schemes. This is set out in Section 6.2.

Section 6.2 of the Apartment Guidelines 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.”

This report specifically refers to the 1no. proposed 4/5 storey apartment block along with 6no. 1 bed ground floor apartments, 4no. 2 bed ground floor apartments and 10no. 2 bed duplex units. While many of the strategies adopted will also apply to the 2 and 3 storey houses in the scheme, this report does not address the particulars of their design.

Considered scheme design and choice of building materials, together with the effective management of the buildings will contribute towards a desirable, vibrant community into the future. The document

reviews the outline building specification for the proposed development and includes detail of measures proposed to manage and reduce costs for the benefit of future residents.

The report considers the use of durable materials and finishes for external elevations to reduce the need for regular maintenance and/or replacement, outside of general maintenance and housekeeping works. The choice of high quality and long-lasting materials will minimise maintenance costs for residents 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.

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

Section 02:

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 03:

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

1.2 Proposed Development

The proposed development consists of 360 no. residential units; a mix of houses, own-door duplexes, and apartments arranged in urban blocks ranging from 2- to 5-storeys, at a net density of 41 dwellings per hectare. A 2-storey crèche of c. 670 sq.m is proposed at the centre of the site. Supporting infrastructure proposed includes 580 no. car parking spaces (resident and visitor), 1,009 no. cycle parking spaces, public open space, communal amenity space, pedestrian and cycle links, hard and soft landscaping, connections to all utilities, and all associated and enabling site works.

The apartments and the own-door access apartment/duplex units act as important feature units, and will be the main focus of this report.

SCHEDULE OF ACCOMMODATION							
Unit Type	Description	No. of Bedroom	No. of Bed Space	Unit Area (sq.m.)	Height (storeys)	No. of Units	%
A/AC/AC(m)	semi-detached / mid/end/corner townhouse	2 bed	4	86.9	2	17	4.7%
A1/A1(m)	mid townhouse / end townhouse	2 bed	4	86.3	2	20	5.6%
H8/H8(m)/H8C/H8C(m)	mid townhouse / end townhouse / corner townhouse	3 bed	5	98.2	2	30	8.3%
C/CC1/CC2	detached / mid/end/corner townhouse	3 bed	5	100.6	2	12	3.3%
H7/H7C1/H7C2	mid townhouse / end townhouse / corner townhouse	3 bed	5	109.8	3	33	9.2%
E1	end townhouse	4 bed	6	135.3	3	1	0.3%
G/G(m)/GC/GC(m)	semi-detached / mid townhouse	4 bed	7	130.2	3	13	3.6%
H/H(m)	apartment (UD)	1 bed	2	52.7	3	6	1.7%
J/J(m)	duplex	2 bed	4	89.4	3	6	1.7%
M/M(m)	apartment	2 bed	4	79.8	2	4	1.1%
N/N(m)	apartment	2 bed	4	79.8	2	4	1.1%
F1G/F1G(m)	corner townhouse	3 bed	5	102.6	2	20	5.6%
D1G/D1G(m)/D2G(m)	end townhouse	3 bed	4	91.7	2	28	7.8%
E1G/E1G(m)	mid townhouse	2 bed	3	73.3	2	131	36.4%
2B	1 bed apartment (UD)	1 bed	2	50.0	4 to 5	12	3.3%
3B	2 bed apartment (UD)	2 bed	3	69.6	4 to 5	10	2.8%
4C	2 bed apartment (UD)	2 bed	4	81.0	4 to 5	5	1.4%
5B	3 bed apartment (UD)	3 bed	5	99.0	4 to 5	8	2.2%
Total No. of Units						360	100.0%

SITE SCHEDULE		
Site Area (Red Line Boundary)	14.75 HA (5.42HA + 9.33HA)	
Net Developable Area	8.77 HA	
Total No. of Units	360	
Net Density	41.0 units/HA	
Open Space	1.32 HA (15%)	
Houses	305	84.7%
Duplex-Apartments (Own-door)	20	5.6%
Apartments (Blocks)	35	9.7%
4 bed	14	3.9%
3 bed	131	36.4%
2 bed	197	54.7%
1 bed	18	5.0%
<i>Note: The proposed 2 storey creche has a net area of 670 m²</i>		

1.2 Proposed Site Plan



2.0 SECTION 02 - An assessment of long-term running and maintenance costs as they would apply on a per residential unit basis at the time of application

Units in this proposed project are designed and will be constructed using quality materials and the skills of highly competent tradespeople. The design has been informed from initial stages through discussion with the relevant Local Authority Departments, and published guidance including the *'Planning Design Standards for Apartments - Guidelines for Planning Authorities'* (2025) to inform these costs.

Careful consideration of long-term running and maintenance costs for the end user have been accounted for from the outset of this project, and this conscious thought process is essential in providing an end-product which will require minimal maintenance into the future.

Certainty around long-term running and maintenance costs for the development will be further strengthened via robust legal and financial arrangements supported by Fingal County Council's effective and appropriately resourced maintenance and operational regimes.



Apartment Block (4/5 Storeys)

3.0 SECTION 03 - Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents

Units proposed in this development will achieve a minimum A2 Building Energy Rating and will meet the standard required to be nearly Zero Energy Buildings (NZEB) as directed under the European Energy Performance of Buildings Directive Recast 2010 (EPBD). A Climate Action and Energy Statement / Energy and Sustainability Report has been prepared by ENX Engineers which outlines the strategy by which the proposed development will meet the relevant standards and targets.

The tables below provide a summary of measures proposed to assist with the effective management and reduction of costs associated with the completed development for the end user/occupant.

3.1 Building Design

MEASURE	DESCRIPTION	BENEFIT
Building Aspect/ Daylight	The results of the SDA assessment, under BRE guidelines, have presented full compliance, and shows care and consideration for daylight access has been taken into account with regard to internal layouts. The sunlight exposure (SE) assessment demonstrates that the majority of the units will have adequate sunlight levels under BRE guidelines. The Sun on ground (SOG) assessment to the proposed amenity areas has resulted in 100% compliance across the spaces assessed. <i>*Please Refer to Model Works Daylight and Sunlight Assessment Report for more detail.</i>	Reduces reliance on artificial lighting, thereby reducing costs
Daylighting to Stair & Lift cores	Both the stair and lift cores benefit from adequate natural daylighting. This has been achieved through the inclusion of windows at each landing, as well as lift cores that open out onto well-lit areas with access to natural light.	Avoids the requirement for continuous artificial lighting.
Accessibility	All units will comply with the requirements of Building Regs and Technical Guidance Documents Parts K and M while approx. 11% of the dwellings meet the standards of Age Friendly Homes.	Reduces the level of future adaptation and associated costs for residents.

MEASURE	DESCRIPTION	BENEFIT
Ventilation	All areas to be served with natural ventilation unless mechanical ventilation is specifically required in the Technical Guidance to Building Regulation F (Ventilation).	Reduce energy usage costs of ventilation systems and associated maintenance/upgrade costs.
Security	The scheme is designed to incorporate principals of passive surveillance to deter antisocial behaviour. Allowance made for inclusion of CCTV monitoring details and secure bicycle stands for apartment blocks.	Helps to reduce potential security/management cost
Windows & Doors	Aluclad windows and doors to apartment buildings and uPVC windows and doors to duplexes.	Aluclad and uPVC windows require no painting, avoiding associated maintenance costs.
Private Open Space	Provision of balconies and openable windows provides access to the outdoors and allows individuals to clean windows themselves.	Facilitates interaction with outdoors. Reduces the cost and reliance on 3rd party contractors for cleaning & maintenance.

3.2 Building Construction Materials

MEASURE	DESCRIPTION	BENEFIT
Design & Material Selection	Materials selected and chosen with due consideration to their durability, design life and maintenance requirements. Consideration given to Buildings Regulations and other relevant guidance e.g. BS 7543:2015 'Guide to Durability of Buildings and Building Elements, Products and Components'	Longevity, durability. Minimises ongoing maintenance and replacements requirement.
Building Envelope - render	Use of pigmented render systems to building envelope or mineral silicate paint on secondary facades of duplexes.	Requires little or no maintenance aside from regular house - keeping, enhanced life-span over standard external paints (over 20 years in normal conditions)
Security Building Envelope - brickwork	Brickwork used on ground floor and on upper floors of apartment building, as well as on main facades of 3-storey duplexes.	Requires little or no maintenance.
Windows & Doors	Aluclad windows and doors to apartment building and uPVC windows to duplexes.	Aluclad and uPVC windows require no painting, avoiding associated maintenance costs.
Roofs	Single ply roofing membranes to flat and low pitch roofs on apartments and duplexes.	Requires little or no maintenance, minimum 30yr lifespan in normal conditions

3.3 Energy & Carbon Emissions

The proposed development will comply with Part L (NZEB). As part of the development's efforts to further reduce energy consumption, the project is targeting a minimum A2 BER (Building Energy Rating) throughout. Extensive work has been carried out to develop a balanced design approach to achieve these onerous targets with several sustainable features being incorporated into the design from the early stages. The Climate Action and Energy Statement / Energy and Sustainability Report has been prepared by ENX Engineers which outlines the target fabric u-values and systems required to meet this target.

3.4 NZEB

Technical Guidance Document Part L – Conservation of Fuel and Energy – Dwellings sets out the requirements for the minimum fabric and air permeability requirements, maximum primary energy use and carbon dioxide (CO₂) emissions as well as the minimum amount of energy derived from renewable sources.

In line with building regulations requirements an energy assessment procedure will be performed for each building to ensure compliance is achieved. A dwelling energy assessment procedure will be performed for each dwelling in the development. A non-domestic energy assessment procedure will be performed for the landlord internal common areas in the development. Provisional assessments will be carried out prior to commencement of the development on site to ensure full compliance is achieved for each building type.

The exact specification, including technologies used, will be determined at detailed design stage, to achieve an A2 BER rating for each apartment. To demonstrate that an acceptable primary energy consumption rate has been achieved, the calculated Energy Performance Coefficient (EPC) of a building should be no greater than the Maximum Permitted Energy Performance Coefficient (MPEPC). To demonstrate that an acceptable CO₂ emission rate has been achieved, the calculated Carbon Performance Coefficient (CPC) should be no greater than the Maximum Permitted Carbon Performance Coefficient (MPCPC).

3.5 DETAILED DESIGN

The dwellings shall include several energy conservation measures to achieve a high energy rating for each property, including:

- High-performance thermal envelope with low U-values for the fabric
- Airtight construction
- Sustainable ventilation system
- Exhaust Air Heat Pump (HP) Technology in the apartments
- Energy efficient lighting to be provided where appropriate

The sustainable design of the proposed development ensures that each unit in the development performs efficiently and complies with NZEB criteria. The sections below outline the elements (based on passive and active measures) that aid in the reduction of energy consumption, carbon emissions and cost throughout the building lifecycle. The table also provides information to be used in the DEAP assessment for each specific unit in the development.

3.6 HIGH PERFORMANCE CONSTRUCTION FABRIC

The construction U-values for each dwelling within the development is outlined in the Building Regulations Technical Guidance Document – Part L (2021). Target U-Values for elements of construction, based on other recent housing schemes for FCC, are as follows:

Building Fabric Element	Target U-value (W/m ² K)
Flat Roof	0.12 - 0.20
External Walls	0.10 - 0.18
Ground Floor / Exposed Floor	0.10 - 0.18
Window, Doors, Rooflights	0.9 - 1.4

High-performance building fabric elements are being considered and selected to minimise unnecessary heat loss from the internal spaces.

In addition to the reduction in energy consumption and associated carbon emissions for space heating and ventilation through a high performance fabric, high efficiency heating systems are being proposed for use throughout the development, minimising heat losses through the buildings fabric as well as a lower than required air permeability rate, helps to ensure lower energy consumption rates and associated carbon emissions are achieved throughout the year thus reduces the overall cost of heating for the end user.

3.7 AIR TIGHTNESS

The building will be designed to ensure it will achieve compliance with the air tightness requirements outlined in the Part L (2021) TGD document. The current proposal for air tightness in the Part L document is set to a maximum value of 5.0 m³/hr/m² @50Pa. A reasonable target value for these buildings, based on other recently completed housing schemes, would be 3.0m³/hr/m² @ 50Pa.

3.8 THERMAL BRIDGING

The limitation of thermal bridging will be achieved in accordance with guidance under outlined in the Technical Guidance Document Part L (2021) regulations. To account for thermal bridging performance from TGD Part L, this should be achieved by adherence to the Building Regulations Part L Acceptable Construction Details and monitoring during the construction.

3.9 VENTILATION

To maintain indoor air quality and minimise the risk of condensation or mold growth, a mechanical ventilation system shall be provided for each apartment and duplex.

The following mechanical ventilation technologies shall be considered for the development

- Whole-apartment/house mechanical ventilation with heat recovery
- A centralised mechanical extract system that continuously extracts

Whole-house mechanical ventilation with heat recovery would minimise the heat demand for air while maximising the quality of the indoor environment in terms of fresh air and CO2 levels.

A centralised mechanical extract system continuously extracts moist, stale, and polluted air from the wet rooms of a dwelling such as bathrooms, utility rooms and kitchens. This air is exhausted directly to external via a centralised extract fan. Fresh supply air is provided via window trickle vents or ceiling vents into habitable rooms such as bedrooms and living rooms.

These mechanical ventilation technologies will be analysed in the detailed design phase and the preferred choice will be designed in compliance with TGD Part F.

Natural ventilation is being used in the internal landlord common areas of the proposed development in as far as possible to provide sufficient controlled ventilation. Appropriate background & purge ventilation facilities will be provided as per TGD Part L & F.

3.10 HEATING SYSTEMS

Space heating for the apartments will be provided via a decentralised system, which will deliver the majority of the heating demand. Exhaust air heat pumps within each dwelling will be used to provide supplementary heating where required. Each dwelling will be heated by means of steel panel radiators. In addition, electric radiant panel heaters may be utilised within landlord areas. To achieve compliance with the renewable energy requirements of Part L, a heat pump system with appropriate seasonal efficiency for both space heating and domestic hot water will be specified for all dwellings. For landlord areas, compliance may be supported through the inclusion of a photovoltaic (PV) system to generate on-site electricity, subject to detailed design. Modern heat pumps typically deliver between four and five units of heat energy for every unit of electricity consumed, resulting in lower overall energy use and reduced carbon emissions.

For corner duplex/apartment buildings, alternative systems such as air-to-water heat pumps in combination with PV panels, may be considered. These building types can accommodate larger external plant due to the availability of sufficient external space and are therefore better suited to such systems.

3.11 RENEWABLE TECHNOLOGIES

To comply with building regulations, 20% of the primary energy delivered to a dwelling must be achieved using renewable energy technologies. As outlined above the following Low Zero Carbon (LZC) technologies shall be considered for the development:

- Individual Air to Water heat pumps
- Individual Exhaust Air Heat Pumps
- Photo voltaic, PV system for on-site electricity use

Air Source Heat Pumps, Exhaust Air Heat Pumps and PV panels systems are classified as renewable technologies under Part L. These LZC technologies will be analysed in the detailed design phase to ensure that the required renewable energy targets can be achieved within the proposed development.

3.12 LIGHTING

Provision for natural daylight in modern buildings helps to create a better internal environment for occupants and helping to assist in the well-being of the inhabitants. The design of the building façades will allow greater levels of natural daylight to enter occupied zones.

Each building will be fitted with high performance energy efficient light fittings, such as LEDs. LED lighting consumes the least amount of power while providing the highest light output and is therefore the most efficient source of artificial light. Combined with a long lifespan this minimises whole life costs and reduces the carbon footprint of each home. LED technology results in 30-35% reduction in electrical energy usage over the CFL equivalent intelligent lighting controls in the form of presence detectors shall be used common areas to ensure that lighting is not in operation when areas are not in use.

Street Lighting and Amenity Lighting shall be as per the proposed design outlined in the Utility and Public Lighting Report prepared by ENX Engineers. Streetlights are specified to match existing Streetlights in the area so as to maximise the service levels that can be provided by FCC. A Public Lighting Report has been undertaken by ENX Engineers to demonstrate the levels achieved.

3.13 WATER CONSERVATION MEASURES

The requirements for Low flow sanitary ware (circa 6 ltrs/min) in each dwelling shall be considered in the detailed design. This is a water conservation initiative and reduces waste by restricting water flowrates to a shower within the dwelling. The shower head fittings could be provided with a reduced flow to allow for the conservation of water use as well as reducing energy used to heat hot water. Dual flush toilets will be provided which reduces overall water use.

3.14 LANDSCAPING

MEASURE	DESCRIPTION	BENEFIT
Natural Amenity	Landscaped areas to be created as part of landscaping design, with existing trees and hedgerows retained where practicable.	Facilitates community interaction, socialising and play resulting in improved well-being of residents
Landscaping	Detailed landscape design included as part of this application. Planting proposals intended to complement the local setting as well as being fit for purpose in respect of private and public realm uses. Planting with pollinator friendly native trees and shrubs planted in prepared beds.	Reduction in frequency of maintenance and associated costs.
Paving Materials	Sustainable, robust materials, with high slip resistance to be used. Design to incorporate principals of SUDs to aid on site attenuation. Permeable paving proposed to reinforce SUDs objectives.	Robust materials and elements reduce the frequency of required repair and maintenance
Maintenance & Management	Maintenance and management requirements have been considered through the design process. Complex planting arrangements have been omitted to avoid onerous maintenance and management requirements	Maintenance costs reduced

3.15 WASTE MANAGEMENT

MEASURE	DESCRIPTION	BENEFIT
Storage of Non-Recyclable Waste & Recyclable Household Waste	Domestic waste management strategy will include: - Centralised bin storage and collection area in close proximity to the apartment block - Separate grey, brown and green bin. Regular competitive tender for waste management collection.	Helps to reduce potential waste charges, while also minimising waste generation and improving sustainability and waste segregation within the area.
Composting	Organic waste bins will be available throughout.	Promote reuse of organic waste material and reduction of potential waste charges.

3.16 ESTATE MANAGEMENT

Fingal County Council owns and manages many properties throughout various areas of the county. The Council recognises that it has a duty of care to promote the peaceful occupation of all dwellings. In this regard, the Council aims to achieve its role as Landlord by ensuring tenants abide by the Tenancy Agreement which they sign, and by exercising its statutory powers to deal with any instances of Anti-Social Behaviour.

Estate Management is primarily about making local authority estates better places to live in. Where problems in estates are reported, the Council will utilise all legislative means available, and a multi-agency approach An Garda Síochána, the HSE, Tusla, local community groups, and other statutory and non statutory agencies, to combat any instances of anti-social behaviour. All reported incidents are dealt in confidence and investigated in a fair, impartial and objective manner.

Fingal County Council recognises the importance of resident and tenant participation in estate management and is committed to working in partnership with residents and tenants to promote estate management in their estates.

New tenants are invited to attend a Tenancy Induction Course prior to signing their Tenancy Agreement. All tenants receive a Tenancy Handbook, which outlines the conditions of their tenancy, what they can expect from the Council, and what the Council expects from them as tenants.

The Handbook is a very important element in the flow of information between the Council and the

Tenant and includes information on the following:

- Tenants' responsibilities
- Housing Maintenance
- Rent
- Resident participation
- Anti-Social Behaviour
- Protecting your Home
- Useful contact information eg opening hours, out of hrs
- General Information

MEASURE	DESCRIPTION	BENEFIT
Tenants' Pack	A Tenants' Pack prepared by FCC Housing Maintenance Department will be provided to each resident. This will typically provide a range of detail including information on contacts for maintenance issues, 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.
Handover Pack	A handover pack will be issued to new residents. This pack will contain important information regarding the new home, including: GPRN, MPRN, Contact details for all relevant suppliers, and user instructions for appliances and devices in the property.	Residents are as informed as possible so that any issues can be addressed in a timely and efficient manner.

4.0 Conclusion

To conclude, various aspects of the apartments and the own-door access apartment/duplex units within this development contain measures to reduce the life-cycle cost.

These high-density buildings have been located mostly along the Link Street to provide adequate density, give distinctiveness to the layout, maximise building efficiency and reduce maintenance cost per person.

Energy reducing methods such as Air Source Heat Pumps have been considered to reduce energy consumption and reduce energy cost for the end user.

The Sustainable Urban Housing: *'Planning Design Standards for Apartments - Guidelines for Planning Authorities'* (2025) has been utilised in order to effectively manage and reduce costs for the benefit of the residents.