

Mixed-use development, Greenfields, Swords Business Park, Swords, Co. Dublin.

BUILDING LIFE CYCLE REPORT

For Jackie Greene Construction Limited

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Revision 1

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INTRODUCTION

This Building Lifecycle Report was prepared on behalf of Bovale Developments, to accompany an LRD Stage 3 Planning Application for the development of 289 no. residential units, retail/ commercial unit and a creche facility on a greenfield site with a net site area of circa 2.22 Ha at Greenfields, Swords Business Park, Swords, Co. Dublin

The Sustainable Urban Housing; Design Standards for New Apartments – Guidelines for Planning Authorities were first published in July 2023 and updated in July 2025 (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 6.10 to 6.14 - “*Operation & Management of Apartment Developments*”, specifically Section 6.12.

Section 6.2 of the Apartment Guidelines 2025 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, as well as demonstrating what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents

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 proposed development consists of a mixed-use development that constitutes a 'Large-Scale Residential Development' (LRD) at a site of 2.22 Ha at Greenfields, Swords Business Park, Swords, Co. Dublin. The site is principally bound: to the north by an access road and ancillary car park to serve the commercial units in Swords Business Park; to the east by the M1 Motorway; to the south by Mantua Road; and to the west by an access road across which is the 'Total Produce PLC' warehouse. The application site also extends to include parts of: the access road to the west and north for footpath, landscape and foul drainage connection works; Mantua Road to the west for foul drainage connection works; and the green strip to the south for a pedestrian and cyclist connection at Mantua Road.

Permission is sought for a mixed-use development with a gross floor area of 30,358 sq m and principally comprised in 5 No. blocks (A–E), with heights ranging from 1 No. to 9 No. storeys. The proposed block heights are as follows: Block A is 6 No. to 7 No. storeys; Block B is 6 No. to 7 No. storeys; Block C is 6 No. to 7 No. storeys; Block D is 6 No. to 9 No. storeys; and Block E is 1 No. to 9 No. storeys. The development consists of:

289 No. residential apartments (60 No. 1-bed, 200 No. 2-bed and 29 No. 3-bed); retail/commercial unit (701sq m); and crèche (418 sq m) with outdoor play area (42 sq m).

Permission is also sought for: new multi-modal site entrance to the west; minor relocation of existing northern site entrance to the east; internal road, cycle and footpath network; 132 No. car parking spaces; 13 no. motorcycle parking spaces; cycle parking; hard and soft landscaping, including public open space, communal amenity space (at-grade and as roof gardens atop Block D and Block E) and incidental open space;

private amenity space as balconies and terraces facing all directions; public lighting; bin stores; plant rooms;

2 No. sub-stations; green roofs; rooftop plant, PV panels, telecommunications infrastructure, lift overruns and automatic opening vents; and all associated works above and below ground

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 Apartment Units and Common Areas

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.

The property management company will enter into 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.

The Property Management Company also has the following responsibilities for the duplex 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.

1.1. Service Charge Budget

The property management company has a number of 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.

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 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 details 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.	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, titled “Conservation of Fuel and Energy Buildings other than Dwellings”. Thermal bridging at junctions between construction elements and at other locations will be minimised in accordance with 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. <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 (Um)</th><th>Column 3 Average Elemental U-value – Individual element or section of element</th></tr> </thead> <tbody> <tr> <td>Roots</td><td></td><td></td></tr> <tr> <td>Pitched roof - Insulation at ceiling - Insulation on slope</td><td>0.16 0.16</td><td>0.3</td></tr> <tr> <td>Flat roof</td><td>0.20</td><td></td></tr> <tr> <td>Walls</td><td>0.21</td><td>0.6</td></tr> <tr> <td>Ground floors³</td><td>0.21</td><td>0.6</td></tr> <tr> <td>Other exposed floors</td><td>0.21</td><td>0.6</td></tr> <tr> <td>External doors, windows and rooflights</td><td>1.6⁴</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 1.6 W/m²K when their combined area is 25% of floor area. However area and U-values may be varied as set out in Table 2.	Column 1 Fabric Elements	Column 2 Area-weighted Average Elemental U-Value (Um)	Column 3 Average Elemental U-value – Individual element or section of element	Roots			Pitched roof - Insulation at ceiling - Insulation on slope	0.16 0.16	0.3	Flat roof	0.20		Walls	0.21	0.6	Ground floors ³	0.21	0.6	Other exposed floors	0.21	0.6	External doors, windows and rooflights	1.6 ⁴	3.0	Lower U-values and improved air tightness are being considered to help minimise heat losses through the building fabric, lower energy consumption and thus minimise carbon emissions to the environment.
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Energy Labelled White Goods	The white good 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 appliance ratings will be provided as below: - 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 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 existing flora and fauna in the area.	Low energy lamps and automatic controls improve energy efficiency. Adequate lighting levels ensure safe environments.																								

The following are **Low energy technologies** that are being considered for the development and during the design stage of the development, to meet the requirements of Part L of the Building Regulations and the Near Zero Energy Building standard. 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	If gas fired heating is adopted, condensing boilers will be provided 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.
Mechanical Ventilation Heat Recovery	Centralised mechanical ventilation will be provided to all dwellings to ensure that the air quality within the dwellings will be adequate. The inclusion of Heat Recovery Ventilation into the centralised ventilation system will be considered and assessed, to minimise the energy usage within the dwelling.	Mechanical Heat Recovery Ventilation provides ventilation with low energy usage. The MVHR reduces overall energy and ensures continuous fresh clean air supply.
PV Solar Panels	PV Solar Panels will be considered to meet the renewable energy contribution required by Part L of the Building Regulations. These panels convert sunlight into electricity which can be used within the dwelling. The panels are typically placed on the South facing side of the building to maximise the solar exposure.	PV Solar Panels offer the benefit of reducing fossil fuel consumption and carbon emissions to the environment. They also reduce the overall requirement to purchase electricity from the grid.
Air Source Heat Pump	As part of the overall energy strategy, the use of Air Source Heat Pumps will be assessed to determine their technical and commercial feasibility. These systems extract heat energy from the outside air and, using a refrigerant cycle, raise the temperature of the heat energy using a refrigerant vapour compression cycle.	Air source heat pumps use electrical energy from the grid to drive the refrigeration cycle but do so extremely efficiently. Modern heat pumps will typically provide 4 to 5 times more heat energy to the dwelling than the electrical energy they consume.
E-car Charging Points	Within the external parking areas, ducting shall be provided from a local landlord distribution board to parking spaces. This will enable the company to install several E-car charging points to cater for E-car demand of the residents. This system operates on a single charge point access card. A full recharge 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 themselves 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 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
Own Door Access units	Reduces the extent and cost of heating and lighting shared communal spaces.
Waste storage	Communal bin stores – conveniently located at ground level within walking distance of the stair/ lift cores
Improved Daylighting	Reduces the requirement for artificial lighting
Passive ventilation in conjunction with background mechanical ventilation	Avoids the reliance on mechanical ventilation systems for purge ventilation
External paved and landscaped areas	All of these require low/minimal maintenance
Plant equipment is easily accessible at ground level and via a staircase at roof level for ease for access.	Allows for easier maintenance and replacements as necessary

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 UK 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 and rendered panels to envelope.	Requires minimal on-going maintenance.
Use of factory finished 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	Sustainable Urban Drainage Systems are included in the proposals; These measures include a combination of green/ blue roofs, permeable paving, and stone storage area.	Reduces the burden on public infrastructure.
Hard Landscaping Materials	Sustainable, robust materials, with high slip resistance to be used for paving. Durable and robust equipment (e.g., play, exercise, boundary treatments etc.) to be used throughout.	Robust materials and elements reduce the frequency of required repair and maintenance.
Soft Landscaping	A selection including native 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
Construction and Operational Waste Management Plan	The application is accompanied by a Construction and Operational Waste Management Plan	The report demonstrates how the scheme has been designed to comply with best practice.
Storage of Non-Recyclable Waste and Recyclable Household Waste	Communal bin stores provided at ground level in each of the blocks to apartments. - Grey, Brown, and Green Bin distinction.	Easily accessible by all residents with external access for waste collection
Composting	Organic waste bins to be provided	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 building has been favorably orientated. The design, separation distances and layout of the building have been designed to optimize the ingress of natural daylight/sunlight to the proposed apartments to provide good levels of natural light. Please refer to the daylight/ sunlight report prepared by 3D Design Bureau that accompanies this application.	Reduces reliance on artificial lighting thereby reducing costs.
Accessibility	All units will comply with the requirements of Part M fostering easy access and circulation through the proposed scheme. 20% of units are designed as UD units	Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances.
Security	The scheme is designed to incorporate passive surveillance with all public spaces overlooked by residential units.	Help to reduce potential security/management costs.
Natural Amenity	Communal open space is provided in the central courtyard area securely accessed from both residential cores.	Facilitates community interaction, socialising, and play – resulting in improved wellbeing

2.6. Management

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

Measure	Description	Benefit
Home User Guide	Occupiers shall be provided with • Homeuser 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 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	Nearest Bus Stops on mantua Road, ID 5044 heading west/ ID 7189 heading west No. 43 Talbot Street The R132 has bus stops for the following bus numbers within walking distance of the site- 41, 41B, 41D, Swords Manor-Lower Abbey Street 197 Ashbourne- Swords Airside 101 Bus Eireann Dublin to Drogheda No. 500, Swords express to Eden Quay Future metro link stop “Seatown” Station 400m directly west of the application site, connecting the site to the city centre & airport.	The availability, proximity, and ease of access to high quality public transport services contributes to reducing the reliance on the private motor vehicle for all journey types
Bicycle Storage	There are 603 long-term resident bicycle spaces provided in dedicated storerooms at ground level serving apartment blocks A, B, C, D, and E. There are 5 long stay secure spaces serving the childcare facility in Block A. There are 10 long stay secure spaces serving the commercial area in Block D. 179 visitor spaces are provided externally in the form of clusters of Sheffield type stands around the scheme.	Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle.
E-car Facilities	28 No. parking spaces are proposed to be provided with EV charger points, which is 20% of the parking provision (overall 132 no. spaces).	To accommodate the growing demand for E-car which assist in decarbonising 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	
Building Element	Minimum Service life (years) at Service Commencement Date*
Structure/ sub structure	60
Floor Structure	60
Roof Structure	60
Roof covering – up to 5-degree pitch	40
Roof covering – over 5-degree pitch	40
Windows	40
External wall/ cladding inc. openings	40

External doors	40
Internal partitions inc. openings	40
Internal finishes	15
Ceilings	40
Internal doors	30
Internal fixtures and fittings	15
Sanitary fittings	20
Kitchen sanitary fittings	20
Built-in furniture	20
Mechanical plant	As CIBSE Guide, Vol. B
Electrical plant	As CIBSE Guide, Vol. B
Engineering services distribution systems	As CIBSE Guide, Vol. B
CCTV installations	20
Fire installations	20
Security installations	20
Communications installations	20
Lifts	15
Underground drainage	60
External finishes -decorative coatings	25
External fences	30

APPENDIX B:

Phases of the Life Cycle of BS7543; 2015

Figure 4 Phases of the life cycle

