

BUILDING LIFECYCLE REPORT

In respect of:
Proposed Residential Development at
Ballinderry Road, Mullingar, Co. Westmeath.

On behalf of:
Consdorf Investments ICAV

Prepared by:
BPL Management Limited

March 2022

BPL MANAGEMENT LIMITED

Forest Park
Mullingar
Co Westmeath

INTRODUCTION

This Building Life Cycle report has been prepared in support of a strategic housing development proposed by Consdorf Investments ICAV for a new residential development on lands measuring approximately 4.015 ha and with a gross residential site area of 4.015 hectares located along Ballinderry Road, Mullingar, Co. Westmeath. The following report has been prepared in compliance with Section 6.13 of the 2018 Guidelines on *Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities)* as set out below:

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

Section 1 - Outlines the process to preparing the long-term running and maintenance costs as they would apply on a per residential unit basis at the time of the application.

Section 2 - Outlines the measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of the residents.

DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development consists of the construction of 130 no. dwellings comprising 94 houses and 36 no apartment /duplex dwellings. The apartment/duplex units are accommodated in 5 no. buildings across the site. The breakdown of apartments / duplex units is as follows

Type	Format	2 Bedrooms	3 Bedroom	Total
D	Ground Floor Apartment	3		3
D1	Ground Floor Apartment	2		2
E	First Floor Apartment	3		3
E1	First Floor Apartment	2		2
F	Ground Floor Apartment		1	1
F1	Ground Floor Apartment		8	8
G	Upper Floor Duplex	1		1
G1	Upper Floor Duplex	8		8
H	Ground Floor Apartment	4		
J	Upper Floor Duplex		4	
Total		23	13	36

This Report relates to the Apartment / Duplex element of the development only. The apartment/duplex units account for 36 no. or 27 per cent of the overall dwelling provision. Development to be accessed from Ballinderry Road (existing) running along the eastern boundary with additional new pedestrian access along the northern boundary which connects the proposed residential development with the adjoining residential estate of Chestnut Drive.

Provision of car parking (surface) and cycle parking, open spaces and all associated site development works, landscaping, boundary treatments and other servicing works.

SECTION 01

As required by the Multi-Unit Developments Act 2011, an owner's management company must be set up, and the common areas of the development transferred to it, before the developer sells any unit. An assessment of long-term running and maintenance costs is undertaken as they would apply on a per residential unit basis at the time of application.

PROPERTY MANAGEMENT OF THE COMMON AREAS OF THE DEVELOPMENT

A licensed 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 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 3 years and in the form prescribed by the PSRA.

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 & Corporate Services.
- Insurance Management.
- After Hours Services & Staff Administration

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, life safety systems, security, property management fee, etc., 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 Table A overleaf.

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 the sinking fund requirements are listed to show what elements must be covered by this service charge.

TABLE A- LIFE EXPECTANCY/ SINKING FUND CALCULATIONS

BUILDING INVESTMENT FUND (Sinking Fund Calculations)			
Ref	Element	Life Expectancy	Amount
1.00	Roofs		
1.01	Repair of flat roof covering to first floor balconies.	20	
1.02	Replacement of specialist fall arrest system	25	
2.00	Elevations		
2.01	Replace exist/ entrance doors	25	
2.02	Replace rainwater goods	25	
3.00	Stair core and lobbies		
3.01	Decorate ceilings and walls	2	
3.02	Decorate joinery (stairwells & lobbies)	2	
3.03	Replace Fire doors (stairwells & lobbies)	25	
3.04	Replace floor finish (stairwells & lobbies)	10	
3.05	Replace entrance mats (stairwells & lobbies)	10	
3.06	Replace nosings (stairwells)	10	
4.00	M&E services		
4.01	General - Internal re-lamping (stairwells & lobbies)	7	
4.02	Replace Internal light fittings (stairwells & lobbies)	18	
4.03	Replace external light fittings (at entrance lobbies)	18	
4.04	Replace smoke detector heads	18	
4.05	Replace manual break glass units/ disabled refuge call points	18	
4.06	Replace fire alarm panel	18	
4.07	Replace lift car and controls	25	
4.08	Replace AOV's	25	
4.09	Replace security access control installation	15	
4.10	Emergency lighting	20	
4.11	Overhaul of waste pipes, stacks & vents	20	
5.00	Landscaping		
5.01	Replace external signage	18	
5.02	15-year cutback & thinning of tress and general overhaul of the landscaping	15	
5.03	Replace CCTV provision	10	
5.04	External handrails and balustrade	18	
5.05	Repaint parking spaces and numbering	5	

SECTION 02

ENERGY AND CARBON EMISSIONS

The following are an illustration of the energy measured 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, lighting, and occupancy. It is proposed to target an NZEB rating for all units. All dwellings within the proposed development are targeting to achieve a BER rating of A2/ A3 throughout.	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 Technical Guidance Document Part L, " <i>Conservation of Fuel and Energy Buildings other than dwellings</i> ". Thermal bridging at junctions	Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric, lower energy consumption and thus minimise carbon emissions to the environment.
Energy Labelled White Goods	Should the applicants provide a white goods package for the residential units, they will be A rated appliances to achieve a high energy efficiency rating.	The provision of high rated appliances in turn reduces the amount of electricity required for occupants.
External lighting	The proposed lighting scheme within the development utilise 4.5m & 6m column height fittings as indicated on the lighting drawings. The luminaire schedule as per lighting drawings was selected for the following reasons: <ul style="list-style-type: none"> • Economical LED alternative • High efficiency and energy savings • Good application coverage • Dedicated light recipes that help with maintaining an optimal ecosystem for bats or 2) preserving a dark night sky and reduce light pollution. Each light fitting shall be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile.	The site lighting has been designed to provide a safe environment for pedestrians, cyclists and moving vehicles, to deter anti-social behaviour and to limit the environmental impact of artificial lighting on existing fauna and flora in the area. Having PECU allows for the optimum operation of lighting which minimises costs.

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 upon and then implemented to achieve an A2/ A3 BER rating-

Measure	Description	Benefit
Condensing boilers and Air to Water Heat Pumps	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. Air to Water heat pumps may be considered as an alternative.	Higher BER ratings reduce energy consumption and running costs
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- Low noise impact for occupants and adjacent units Completely passive therefore no energy required. 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 within the apartments and duplex units.	Mechanical Heat Recovery Ventilation provides ventilation with low energy usage. The MVHR reduces overall energy and ensures a continuous fresh air supply.
PV Solar Panels	PV solar panels are being considered which converts the electricity produced by the PV system (which is DC) into AC electricity. The panels are typically placed on the south facing side of the building for maximum heat gain and in some instances, can also be used to assist the heating system.	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.
Combined Heat and Power	Combined heat and power (CHP) is a technology being evaluated. This technology generates electricity and captures the waste heat from the generation unit that can be used within the development.	CHP can achieve energy efficiencies by reusing waste heat from the unit to generate heat required for space heating and domestic hot water services in the apartment development.

<p>ECAR charging points</p>	<p>Charing shall be provided from a local landlord distribution board to designated E-car charging car parking spaces. This will enable the management company the option to install a number of E-car charging points within the surface car parking spaces 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.</p>	<p>Providing the option of E-car charging points will allow occupants to avail of the ever-improving efficient electric car technologies.</p>
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ROBUST MATERIALS:

The materials within the development have been chosen to find a balance between the outgoing costs for purchasers and ongoing maintenance.

External Walls: The following variety of materials has been chosen.

- Roof Covering: Slate/concrete
- Wall Finishes: Selected Colour facing bricks and nap plaster.
- Windows: Selected Colour UPVC/Aluminum
- Doors: Selected Colour /UPVC/Aluminum
- Balconies: Glass or galvanised metal
- Galvanised Metal Frame: Galvanised metal frame to selected colour and finish.

Materials

The practical implementation of the Design and Material principles has informed design of the 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
Natural / Passive ventilation system to circulation areas (where possible)	Avoid costly mechanical ventilation systems and associated maintenance and future replacement
External Paved and Landscaped areas	All of these require low/ minimal maintenance
Roof construction includes significant areas of traditional pitched roofs including traditional tiled coverings	Minimises ongoing maintenance

Material Specification

Measure Description	Benefit
<p>Consideration is given to the requirements of the building regulations and includes reference to BS 7543:2015, “<i>Guide to Durability of Buildings and Building Elements, Products and Components</i>”, which provides guidance on the durability, design life and predicted service life of buildings and their parts.</p> <p>All common areas of the scheme, and their durability and performance are designed and specified in accordance with Figure 4: Phases of Life Cycle BS 7543:2015. The common parts are designed to incorporate the guidance, best practice, principles, and mitigations of Annexes of BS 7543:2015 including-</p> <p>Annex A- Climatic Agents affecting durability.</p> <p>Annex B- Guidance on materials and durability.</p> <p>Annex C- Design Life data sheets.</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>
Use of brickwork; pigmented render systems to envelope	Requires no ongoing maintenance
aluminum /uPVC (or similar) windows and doors, and glass or galvanised steel balconies	Requires no ongoing maintenance

Landscaping

Element	Measure Description	Benefit
Paving	Use of robust, high quality paving, with robust proven details	Requires no ongoing maintenance
Materials	Sustainable, robust materials, with high slip resistance to be used for paving. Durable and robust equipment (e.g. play, exercise, fencing etc.) to be used throughout.	Robust materials and elements reduce the frequency of required repair and maintenance
Site Layout and Design	Generous and high-quality mature landscaping, with ecological corridors prioritising pedestrians and landscape over the car- increase in soft landscaping.	Natural attenuation and landscape maintenance preferable.

Waste Management

Measure	Description	Benefit
Construction and Operational Waste Management Plan	A Construction and Operational Waste Management Plan will be prepared and submitted to the Planning Authority for written approval, prior to the commencement of development	Will ensure compliance with best practice waste management standards.
Storage of Non-Recyclable Waste and Recyclable Household Waste	Domestic waste management strategy: Grey, brown, and green bin distinction. Competitive tender for waste management collection	Will help reduce potential waste charges
Composting	Organic waste bins to be provided throughout	Will help reduce potential waste charges

Human Health and Wellbeing

Measure	Description	Benefit
Natural/ day light	The design, separation distances and layout of the apartment blocks have been designed to optimise the ingress of natural daylight/ sunlight to the proposed dwellings to provide good levels of natural light. All dwellings benefit from either dual or triple aspect. Daylight has been assessed in compliance with the BRE Guide by calculation of Average Daylight Factor and all meet requisite standards. Dwellings also comply with daylight provision standards under EN 17037:2018.	A high standards of residential amenity is provided to all dwellings. Reduces reliance on artificial lighting, thereby reducing costs
Accessibility	All units will comply with the requirements of Building Regulations, Technical Guidance Documents Parts K and 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- <ul style="list-style-type: none"> • CCTV monitoring details • Overlooked communal open spaces 	Helps to reduce potential security/ management cost
Natural Amenity	Detailed landscape plan for the site has been prepared that includes a range of fully landscaped open space areas as well a detailed planting plan for	Promotes biodiversity and opportunities for play, socialising and interaction in a pleasant

	individual gardens and site boundaries. Part of northern site boundary is to be retained and supplemented. Principal access road through the site comprises landscaped street with cycle tracks and footpaths either side.	landscaped and 'green' environment, thereby providing a quality environment and improved well-being.
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Management

Consideration has been given to ensuring that 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 the property. Typically, it includes details of the property such as MPRN and GPRN information in relation to connection with utilities and communication providers. Contact details for all relevant suppliers and user instructions for appliances and devices in the property. 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.

Transport

Measure	Description	Benefit
Access to Public Transport (Bus & Train Services)	Direct and continuous footpath connectivity from the site to the town centre is available and to Mullingar Train Station. Mullingar train station is located c. 2. km from the development site providing excellent and easy links to Dublin, Galway, and Cork. Access direct to Ballinderry Road which leads directly onto the N52 which has a direct link onto the M4.	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 and enhance the accessibility levels of the proposed residential development
Permeable Connections	The development facilitates interconnections by pedestrian and cycling routes both within the scheme and to adjoining existing residential developments. C. 400 linear metres of new high quality cycle track is proposed. 2 no. new pedestrian /cyclist links are proposed to existing residential developments to the north. Proposed development facilitates future sustainable connections to adjoining residentially zoned development lands to the west.	Ensures the long-term attractiveness of walking and cycling to a range of local education, retail and community facilities and services.
Bicycle Storage	Secure high quality secure bicycle parking both for short- and longer-term parking requirements.	Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle.
ECAR facilities	Ducting provided from a local landlord distribution board to designated e-car charging car spaces.	To accommodate the growing demand for e-cars which assist in decarbonising society and reducing oil dependency.

