

Building Life Cycle Report

Ibis Red Cow Dublin

Lands at Monastery Road, Naas Rd, Redcow, Dublin, D22 WY43

September 2022

Introduction

6.11 to 6.14 of the newly published Sustainable Urban Housing; Design Standards for New Apartments – Guidelines for Planning Authorities relates to the “Operation & Management of Apartment Developments”

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

“shall include a building lifecycle report, which in turn includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application”

“demonstrate what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.”

This Building Life Cycle Report document sets out to address the requirements of Section 6.13 of Apartment Guidelines 2018.

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for lands at Ibis Red Cow, Dublin.

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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.

The property management company will enter into a contract directly with the OMC for the ongoing management of the built development. Note 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 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 a number of key responsibilities with first and foremost being 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, 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 by 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 30year life cycle period, as required by the Multi Unit Development Act 2011.

In line with the requirements of the MUD Act, the members of the OMC will determine and agree each year at a General Meeting of the members, the contribution to be made to the Sinking Fund, having regard to the BIF report produced.

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 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. The apartments will achieve compliance with Building Regulations Part L 2019 (NZEB) and a minimum BER of A3.	Compliance with Part L 2019 will ensure low running costs for heating, hot water generation and electric lighting.
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 Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L.	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	The white good package planned for provision in the apartments will be of a very high standard and have a high energy efficiency rating. It is expected that the below appliance ratings will be provided: <ul style="list-style-type: none"> • 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.
External Lighting	The proposed lighting scheme within the development consists of 8m and 6m pole mounted fittings as indicated on the drawings. The luminaire selected is the Thorn CiviTeq fitting, this fitting was selected for the following reasons; <ul style="list-style-type: none"> • Low level lighting • Minimal upward light spill • Low voltage LED lamps • Pre-approved by Dun Laoghaire Rathdown County Council 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 flora and fauna 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 on and then implemented to achieve the A2/A3 BER Rating.

Measure	Description	Benefit
Domestic Hot Water Air to Water Heat Pump	Each individual apartment will be provided with a dedicated Domestic Hot Water Air to Water Heat Pump. These units have a Coefficient of Performance (COP) of 3.21.	Hot water heat pumps have high efficiencies and contribute significantly to the element of renewables required.
Heat Recovery Ventilation (Mechanical)	Air is mechanically supplied to habitable rooms and extract from bathroom / kitchen areas. This area is then ducted to and from outside via a high efficiency heat exchange unit.	External air is constantly provided to the apartment at a controlled rate and is filtered minimal heat loss as a result of the heat exchange unit.
Electric Heating	High efficiency electric panel radiators will be provided and will include an electrical towel rail heater in the bathroom.	In achieving Part L 2019 Compliance, space heating loads are substantially reduced, this reduced load will be met by electric panel radiators installed complete with thermostats and time-clocks to optimise performance.
Internal Lighting	Internal Lighting will be by low energy LED lighting throughout with presence detection in circulation areas and locally controlled in apartments.	LED Lighting is very energy efficient also bulbs have a much extended life span resulting in less frequent replacement.
ECAR Charging Points	Ducting shall be provided from a local landlord distribution board to designated E-car charging car park spaces. This will enable the management company the option to install a number of E-car charging points within the carpark to cater for E-car demand. 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 design of building facades, internal layouts and detailing of the proposed apartment buildings.

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
Carparking is contained at basement level within the building form, creating fully activated facades at all levels.	Avoids blank facades.
Open primary entrances and circulation areas and use of open building skin for ventilation where appropriate	Avoids costly mechanical ventilation systems and associated maintenance and future replacement.
Low maintenance green roofs to attenuate water	Use of surfaces to capture and recycle rainwater
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. All common parts of the proposed Apartment buildings and, the durability and performance of these are designed and specified in accordance with Figure 4; Phases of the Life Cycle of BS7543; 2015. (Please see Appendix B for this figure). 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 to envelope	Requires no on-going maintenance.
Use of factory finished and alu clad windows and doors, and powder coated steel balconies	Requires no on-going maintenance.

2.3 Landscape

	Measure Description	Benefit
Green Roofs	Use of green roofs and traditional roof coverings with robust and proven detailing to roof elements.	Attenuation reduces the burden on vulnerable rainwater goods, resulting in fewer elements that could require replacement or repair.
Paving and Decking Materials	Use of robust, high quality paving and decking materials, with robust and proven details	Require no on-going 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.

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 prepared by OSMF.	The report demonstrates how the scheme has been designed to comply with best practice.
Storage of Non-Recyclable Waste and Recyclable Household Waste	Domestic waste management strategy: 1) Grey, Brown and Green bin distinction 2) Competitive tender for waste management collection	Helps reduce potential waste charges.
Composting	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 design, separation distances and layout of the apartment blocks have been designed to optimize the ingress of natural daylight/ sunlight to the proposed dwellings to provide good levels of natural light.	Reduces reliance on artificial lighting thereby reducing costs.
Accessibility	All units will comply with the requirements of Part M/ K.	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 • Car registration recognition at entrance gate • Secure bicycle stands – covered by CCTV • Routine access fob audits 	Help to reduce potential security/ management costs.

2.6 Management

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

Measure	Description	Measure
<p>Home User Guide</p>	<p>Once a purchaser completes their sale, a homeowner box will be provided which will include:</p> <ul style="list-style-type: none"> • 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. 	<p>Residents are as informed as possible so that any issues can be addressed in a timely and efficient manner.</p>

2.7 Transport

Measure	Description	Benefit
Access to Public Transport (LUAS / Light Rail)	The site is located ca. 500 metres from Red Cow Luas Depot which can be easily accessed by foot or bicycle.	Short distance to public transport.
Access to Public Transport (Bus Services)	A total of three bus services, namely Dublin Bus routes 13, 68, 69, 300, L54, 600, 726, 868, operate in close proximity to the subject development site.	The available bus routes provide access to major employment and education destinations in North Dublin, Dublin City Centre and South Dublin. The frequencies of these bus routes also mean that bus travel as a mode of transport is a viable option at all times of day for residents and visitors to the proposed development, thus decreasing reliance on the private car.
Permeable Connections	Provision and subsequent maintenance of dedicated pedestrian and cycle infrastructure within the proposed development and their connectivity with wider public pedestrian and cyclist infrastructure.	Thanks to spatial permeability the internal pedestrian and cycling network is well-connected to the surrounding area, presenting walking and cycling as viable and safe means of transport for both residents and visitors.
Bicycle Storage	Provision of high-quality secure bicycle parking facilities to serve residents, visitors, creche staff and creche users. These facilities will accommodate a range of bicycle types, including cargo bikes and shared bikes.	Accommodates the uptake and increase the attractiveness of cycling as a viable and flexible alternative to private car use for a range of trip types.
Motorcycle Parking	The implementation of secure, attractive, best practice motorcycle parking facilities for residents.	Reduces the reliance on the private motor vehicle.

Appendix A

ITEMS INCLUDED IN A TYPICAL BIF

The BIF table below illustrates what would be incorporated for the calculation of a Sinking Fund. It is based on Block 001 in the development which consists of 47 apartments over 4 floors.

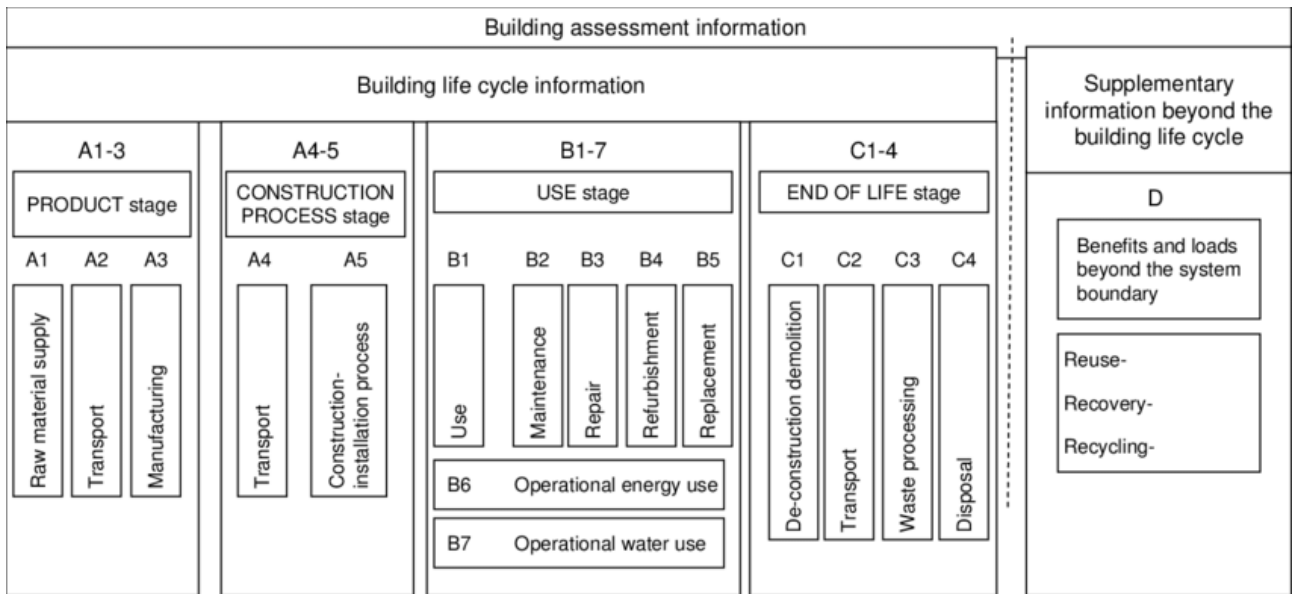
Building Investment Fund (Sinking Fund)		
Ref	Element	Life Expectancy
1.00	Roofs	
1.01	Replacement felt roof covering incl. insulation to main roofs	18
1.02	Replacement parapet details	18
1.03	Replace roof access hatches	25
1.04	Specialist Roof Systems - Fall arrest	25
2.00	Elevations	
2.01	Decorate rendered panels to apartments	18
2.02	Minor repairs and preparation for decorations of rendered areas.	18
2.03	Replace exit / entry doors	25
2.04	Replace rainwater goods	25
2.05	Recoat powder coating finish to balconies	20
2.06	Periodic replacement and overhauling of external fixings	5
2.07	Replace balcony floor finishes	25
3.00	Stair core & lobbies	
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 nosing	12
3.08	Replace ceramic floor tiles	20
3.09	Fixed furniture and equipment - provisional sum	18
4.00	Basement Car Park	
4.01	Remove / replace ceiling insulation	25

4.02	Repaint parkings spaces & numbering	7
5.00	M&E Services	
5.01	Central boilers	15 - 20
5.02	CHP engine	15
5.03	Circulating pumps	15
5.04	Pressurisation unit	15 - 20
5.05	HIU apartment heat exchangers	10
5.06	General - Internal relamping	7
5.07	Replace internal light fittings	20
5.08	Replace external light fittings (at entrance lobbies)	15
5.09	Switches	10
5.10	Sensors and detectors	10
5.11	Time clocks / controllers	10
5.12	Emergency lighting - luminaries	25
5.13	Emergency lighting - lighting batteries	5 - 7
5.14	ICT system	10
5.15	Public address system	10
5.16	Disable toilet call system	10
5.17	Intruder alarm	10 - 15
5.18	Replace smoke detector heads	10
5.19	Replace manual break glass units	15
5.20	Replace fire alarm panel	15
5.21	Replace lift car and controls	25
5.22	Replace AOV's	20
5.23	Replace security access control installation	10 - 15
5.24	External mains water connection	20
5.25	Electrical mains and sub mains distribution	20 - 35
5.26	LV distribution swtichgear - Main switch panel	30
5.27	LV distribution swtichgear - Distribution boards	20 - 30
5.28	Primary containment system	30 - 35
5.29	Submains cabling	30 - 35
5.30	Sockets, outlets, wiring accessories	15

5.31	Cabling and conduits (lighting, power and general services)	20 - 30
5.32	Drainage services (PVC)	40
5.33	Gas services - pipework	40
5.34	Gas services - valves	25
5.35	Water services - cold water storage tank	25
5.36	Water services - ACVs	15 - 20
5.37	Water services - CWS booster pumps	15
5.38	Water services - HWS booster pumps	15
5.39	Water services - pipework (cu)	40
5.40	Air condition system	10
5.41	Heat emitters - radiators	20
5.42	Heat emitters - underfloor heating	30
5.43	Ventilation (fans)	15 - 20
5.44	BMS	10
5.45	Lifts	20
6.00	Exterior	
6.01	External boundary treatments- redcoat powder coated finish to railings	60
6.02	Replace cobbleblock areas	18
6.03	15 year cut-back and thinning of trees. Overhaul landscape generally	20
6.04	Replace CCTV provision	10 - 15
6.05	External handrails and balustrade	18

Appendix B

Phases of the Life Cycle of BS7543; 2015



Key

1. Highest severity of consequence of failure
2. Anticipated severity of consequence of failure
3. Lowest severity of consequence of failure
4. Minimum service life
5. Most likely service life
6. Maximum service life

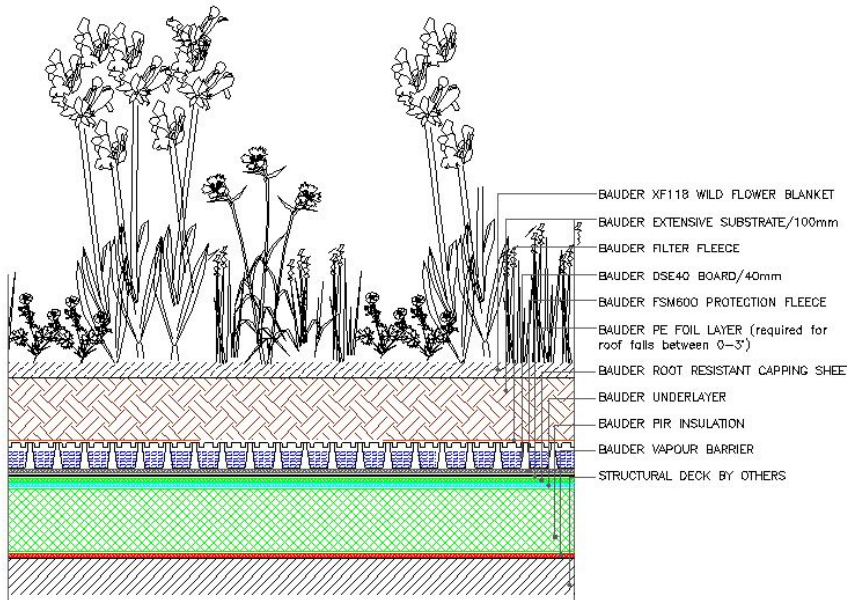
Appendix C

Landscape

Measure	Description	Benefit
Site Layout & Landscape design	High quality landscaping with landscape, bicycles and pedestrians prioritised over car use. An increase in soft landscaping. Please refer to Landscape Report for further detail.	Natural attenuation, reduced surface water runoff from site and increased biodiversity
Hard Landscape Materials	Sustainable, robust, high quality materials, with high slip resistance to be used for paving	Required ongoing maintenance significantly reduced through use of robust materials installed with proven details.
Soft Landscape Materials	The use of native and strategically located non-native plants will provide optimum biodiversity and aesthetic values. This varied profile is designed to provide a diversity of landscape.	Low-cost, availability, ease of establishment and reduced requirements for maintenance.
Children's Play Elements	Durable and robust equipment to be used.	Robust materials and elements reduce the frequency of required repair and maintenance.
Sustainable Drainage	Use of a 40mm deep combined drainage board/reservoir system across green roofs. Refer to landscape drawings for details on swale attenuation and permeable paving to access road and shared surface.	Reduces the volume of irrigation required
Planting Details	Proven trees staking details. Shrub, hedging, herbaceous and lawn installation	Correctly installed planting will develop into well established and robust soft landscape reducing future maintenance.
Green Roofs	Use of green roofs and traditional roof coverings with proven detailing to roof elements. Bauder XF118 Wildflower detail to accommodate grasses/ wildflowers.	Attenuation reduces the burden on vulnerable rainwater goods, resulting in fewer elements that could require replacement or repair.

Bauder Bituminous Membrane Green Roof System - Standard Detail
 Extensive substrate based green roof system - Bauder XF118 wild flower blanket

XF118 / BIO - 1A		
Issue	Date	Checked
1	MARCH 2013	



TYPICAL SECTION DETAIL / BUILD-UP / DSE40 BOARD 0 - 5° SLOPE

NOT TO SCALE

- Notes:**
- This detail is of a conceptual nature and should only be used as such and not included as part of a specification document. Please contact our Technical Department to ensure the details you require are appropriate and accurate.
- BIODIVERSITY LANDSCAPING ELEMENTS BY OTHERS**
- DESIGN CONSIDERATIONS**
- Any additional biodiversity landscaping is normally constructed in accordance with an ecologist report and recommendations. Bauder does not take any responsibility for the design, performance or maintenance of any planting schemes.
 - Weight loading for any surface landscaping items, such as rocks, logs, undulating areas of growing medium and fully established planting /vegetation, making up the Biodiverse landscaping, must be provided directly from the supplier or landscape designer and should be the subject to a structural engineer's approval.

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