



LIFE CYCLE REPORT

RESIDENTIAL DEVELOPMENT IN THE TOWNLANDS OF TRUSKY EAST, TRUSKY WEST, FREEPORT AND AHAGLUGGER,
BEARNA, CO. GALWAY

STAGE 3 SHD PLANNING SUBMISSION TO AN BORD PLEANÁLA ON BEHALF OF BURKEWAY HOMES LTD
SEPTEMBER 2020

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1.0. | Introduction

The report demonstrates the measures which have been considered to effectively manage and reduce costs for the benefit of residents and the environment. We have included a template for an Asset Register to aid assessment of the long term running and maintenance costs.

Section 6 of the Sustainable Urban Housing; Design Standards for New Apartments - Guidelines for Planning Authorities (2018) includes the below sections which relate to the “Operations & Management of Apartment Developments” and require a Building Life Cycle Report to be submitted.

Section 6.11

“Certainty regarding the long term management and maintenance structures that are put in place for an apartment scheme is a critical aspect of this form of residential development. It is essential that robust legal and financial arrangements are provided to ensure that an apartment development is properly managed, with effective and appropriately resourced maintenance and operational regimes.”

Section 6.12

“In this regard, consideration of the long-term running costs and the eventual manner of compliance of the proposal with the Multi- Unit Developments Act, 2011 are matters which should be considered as part of any assessment of a proposed apartment development.”

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

“Include a building lifecycle report, which in turn includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application.....to 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 how we have addressed the requirements of Section 6.13 of Apartment Guidelines 2018.

Property Management of the Common Areas of the development

A property management company (PMC) will be engaged at an early stage of the development to ensure that all property management functions are dealt with for the development. The PMC will establish manage the maintenance regime, establish, manage and adjust the budget for the service charges and ensure 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.

The contract will be for a maximum period of 3 years and in the format prescribed by the Property services Regulatory Authority (PSRA).

The Property Management Company also has the following responsibilities for the apartment development once constructed:

- Formation of an Owners Management Company. This will be a company limited by guarantee having no share capital. All future purchasers will be obliged to become members of this OMC
- Fair and equitable apportionment of the Annual operational charges in line with the Multi-Unit Development Act 2011
- 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
- Preparation of annual service charge budget for the development common areas
- Estate Management
- Third Party Contractors Procurement and management
- Reporting to OMC
- Accounting Services
- Corporate Services
- Insurance Management
- After Hours Services
- Staff Administration

Common Areas are areas including:

- The external walls, foundations and roofs and internal load-bearing walls
- The entrance halls, landings, lifts, lift shafts, staircases and passages
- The access roads, footpaths, kerbs, paved, planted and landscaped areas, and boundary walls
- Architectural and water features
- All ducts and conduits, other than those within and serving only one unit in the development
- Cisterns, tanks, sewers, drains, pipes, wires, central heating boilers, other than such items within and serving only one unit in the development
- Other areas that are from time to time provided for common use

An assessment of long term maintenance and running expenses.



1.2. | Service Charge Budget

The PMC has a number of key responsibilities most importantly is the establishment of the Service Charge Budget. The budget will cover all items in connection to the maintenance, management, repair, upkeep, cleaning of common areas and equipment in accordance with the he Multi Unit Developments Act 2011 (“MUD” Act).

A service charge budget should also include an allowance for a Sinking Fund and a Reserve Fund.

Sinking fund

- A fund formed by periodically setting aside money for the replacement of a wasting asset (for example, major items of plant and equipment, such as heating and air-conditioning plant, lifts, etc.). It is usually intended that a sinking fund will be set up and collected over the whole life of the wasting asset.

Reserve fund

- A fund formed to meet the anticipated future costs of maintenance and upkeep in order to avoid fluctuations, or an anticipated large, one-off increase in the amount of service charge payable each year (for example, regularly recurring items such as external cleaning and redecorations).

The allowance for the sinking fund and reserve fund within the service charge budget is determined by establishing the Asset Register. The Asset Register 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 and the costs required to achieve it. The Asset Register will form part of the initial report for the OMC.

A sample format of the typical Asset Report is set out in Appendix 1.

Please Note: the sample Asset Report is based on an estimation of the types of assets that will ultimately be incorporated in to the developed scheme. The final specification and estimate of the costs to maintain, repair or replace, will only be determined after detailed design and the procurement and construction of the development as concluded.

OMC ANNUAL REPORT

The OMC must prepare an annual report and hold an annual meeting to discuss the report. The report must include details of income and expenditure,

annual service charges, the sinking fund account, planned expenditure on maintenance and repair, insurance cover and contracts entered into by the company. The members must be given 21 days’ notice of the meeting and be provided with the report 10 days before the meeting. The annual general meeting must take place reasonably close to the multi-unit development unless 75% of the members of the company agree otherwise. The Asset Register is subject to annual review and updates.

SERVICE CHARGES

The company must establish a scheme for annual service charges to pay for the maintenance, insurance and repair of common areas within its control and for the provision of common services (for example, security) to unit owners. The initial charge may be set without holding a meeting of the members but, in general, these charges must be approved by a general meeting of the members. If over 75% of the members do not approve the proposed charge, the existing charge must remain in place.

The service charge may not be used to pay for matters that are the responsibility of a developer or builder unless this is agreed in writing by 75% of the members of the company. This approval may only be given if 65% of the units are sold and can only come into effect 3 years after the transfer of ownership of the common areas to the owners’ management company.

Unit owners are obliged to pay the service charge (including developers in the case of unsold units). The service charge must be calculated on a transparent and fair basis and expenditure must be properly recorded.

ESTABLISHMENT OF THE SINKING FUND

Within 3 years of the transfer of ownership to it, the owners’ management company must establish a sinking fund for spending on refurbishment, improvement or maintenance of a non-recurring nature of the multi-unit development. Unit owners are obliged to make contributions to it (including developers in the case of unsold units). The Act provides that the amount is to be €200 annually or such other amount as the members agree.

Contributions to the sinking fund must be held in a separate account.

LIFE CYCLE

Measures considered by the developer and design team to manage, mitigate and reduce the ongoing costs of the development costs for the benefit of residents and environment.

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 Calculations	<p>A Building Energy Rating (BER) certificate will be provided for each dwelling in the proposed development which will provide detail of the energy performance of the dwellings. A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target an A2 rating for the houses and apartments this will equate to the following emissions.</p> <ul style="list-style-type: none"> A2 – 25-50 kwh/m2/yr with CO2 emissions circa 10kg CO2/m2 per year A3 – 51-75 kwh/m2/yr with CO2 emissions circa 12kg CO2/m2 per year 	Higher BER ratings reduce energy consumption and running costs.
Fabric Energy Efficiency	<p>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, “Conservation of Fuel and Energy Buildings other than Dwellings”. Thermal bridging at junctions between construction elements will be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L. Details will be in accordance with the ACD’s or will be modeled for thermal bridging analysis.</p>	Lower U-values and improved air tightness will help minimise heat losses through the building fabric, lower the energy consumption and minimise carbon emissions to the environment.
Energy Labelled White Goods	<p>The white goods package planned for the houses and 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:</p> <ul style="list-style-type: none"> Oven - A plus Fridge Freezer - A plus Dishwasher - AAA Washer/Dryer - B 	The provision of high rated appliances reduces the amount of electricity required by occupants.
External Lighting	<p>The proposed lighting scheme within the development consists of 8m and 6m pole mounted fittings as indicated on the drawings. The luminaire specified is an LED pole mounted luminaire with NEMA socket and photocell, this fitting was selected for the following reasons:</p> <ul style="list-style-type: none"> Low level lighting Minimal upward light spill Low voltage LED lamps <p>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.</p>	The site lighting has been designed to provide 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. Having PECU allows for the optimum operation of lighting which minimizes costs.



2.1. | Energy and Carbon Emissions

The following are the **Low energy strategies** 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 and implemented to achieve A2/A3 BER Rating.

MEASURE	DESCRIPTION	BENEFIT
Natural Ventilation	Natural ventilation is being evaluated as a ventilation strategy to minimise energy usage and noise levels.	<ul style="list-style-type: none"> • Low noise impact for occupants and adjacent units. • Completely passive. • 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.	Mechanical Heat Recovery Ventilation provides ventilation with low energy usage. The MVHR reduces overall energy and ensures a continuous fresh clean air supply.
Air to Water Heat Pumps	Air to Water Heat Pumps will be considered to provide space heating & domestic hot water with low energy usage.	Air to Water Heat Pumps offer the benefit of reducing fossil fuel consumption and carbon emissions to the environment.

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:

2.2.2 MATERIAL SPECIFICATION

Consideration as been given to the requirements of the Building Regulations particularly 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. 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

MEASURE DESCRIPTION	BENEFIT
Daylighting to circulation areas	Avoids the requirement for continuous artificial lighting
Natural/Passive ventilation system to circulation areas	Avoids mechanical ventilation systems and associated maintenance and future replacement
Secure ground level cycle and refuse storage areas	Avoids access lifts /ramps and any handling/moving equipment.
External paved and natural landscaped areas	All of the materials in these areas are selected to require low/ minimal maintenance

MEASURE DESCRIPTION	BENEFIT
Use of factory finished and alu clad / PVC windows and doors, and powder coated steel balconies	Requires no on-going maintenance.
Use of grey/brown Lacken stone sourced in the West of Ireland (Ballina, Co. Mayo), to entrance elevation	Requires no on-going maintenance.
Use of sand cement render with high quality paint finish to external envelope.	Harsh coastal environment necessitates some maintenance. Good quality paint finish is least onerous maintenance regime. Also allows for easy repair.
Use of metal panel system to external envelope.	Requires no on-going maintenance.
Natural/Passive ventilation system to circulation areas	Avoids costly mechanical ventilation systems and associated maintenance and future replacement

2.3. | Health and 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 all entrances to apartment buildings overlooked. All public open spaces are also passively overlooked.	Help to reduce potential security/management costs.

2.4. | Management

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

MEASURE	DESCRIPTION	BENEFIT
Home User Guide	<p>Once a purchaser completes their sale, a homeowner file 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 Meter Point Reference Number (MPRN) and Gas Point Reference Number (GPRN), Information in relation to connect with utilities and communication providers, Contact details for all relevant suppliers and User Instructions for appliances and devices in the property. • A Residents Pack prepared by the OMC which will typically provide information on contact details for the Managing agent, emergency contact information, transport links in the area and a clear set of rules and regulations. 	Residents are as informed as possible so that any issues can be addressed in a timely and efficient manner.

2.5. | Waste Management

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

MEASURE	DESCRIPTION	BENEFIT
Construction Waste Management Plan	A construction management and plan will be completed prior to commencement on site. The management plan will cover waste management, licensing etc.	The report will ensure that the construction phase will be managed to comply with best practice.
Operational Waste Management Plan	Operational waste has been reviewed by OCSC consulting engineers. All bin storage is on grade, with communal bin stores for the Multi-Unit buildings.	The report will ensure that the operational waste can be managed in an efficient and cost effective manner.
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.

2.6. | Landscape

MEASURE DESCRIPTION	BENEFIT
Use of robust, high quality paving and decking materials, with robust and proven details	Requires no on-going maintenance.
Use of durable and robust equipment (e.g. play, exercise, fencing etc.) to be used throughout.	Requires no on-going maintenance.

MEASURE	DESCRIPTION	BENEFIT
Access to Public Transport (Bus Services)	A total of three local Bus services operate in close proximity to the subject development site. Bus Eireann route numbers No. 424, City Direct route 414 and No. 524 Lally Coach Bus connect Bearna to Galway City Centre.	The proximity, frequency and range of destinations served by these local bus services enhance the accessibility levels of the proposed residential development in addition to providing a viable and practical sustainable alternative to journeys undertaken by the private motor car.
Permeable Connections	Provision and subsequent maintenance of dedicated pedestrian and cycle infrastructure onsite, and their connectivity with adjoining third party lands and the off-site networks.	Ensure the long-term attractiveness of walking and cycling to a range of local education, retail and community facilities and services.
Bicycle Storage	The provision of high quality secure bicycle parking facilities, for both short term and long-term parking requirements.	Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle.
Motorcycle Parking	The implementation of secure, attractive, best practice motorcycle parking facilities for residents.	Reduces the reliance on the private motor vehicle in parallel with reducing oil dependency.

APPENDIX 1 | Sample Asset Register

REF	ELEMENT	LIFE EXPECTANCY	YEARLY ESTIMATE OF COSTS YEAR 1 TO YEAR 30
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/ entrance doors	25	
2.04	Replace Rainwater goods	25	
2.05	Recoat powder coated Finishes to balconies	20	
2.06	Periodic replacement and overhauling of external fixings	5	
2.07	Replace Balcony floor finishes	25	
2.08	Paint external rendered elevations	3	
3.00	Stair cores & 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 nosings	12	
3.08	Replace ceramic floors tiles	20	
3.09	Fixed Furniture & Equipment - Provisional Sum	18	

REF	ELEMENT	LIFE EXPECTANCY	YEARLY ESTIMATE OF COSTS YEAR 1 TO YEAR 30
4.00	M&E Services		
4.01	General - Internal relamping	7	
4.02	Replace Internal light fittings	18	
4.03	Replace External light fittings (lights at entrance lobbies)	18	
4.04	Replace smoke detector heads	18	
4.05	Replace manual break glass units	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	Sump pumps replacement	15	
4.11	External Mains Water connection	20	
4.12	Electrical Mains and Sub Mains distribution	20	
4.13	Emergency Lighting	20	
5.00	Exterior		
5.01	Entrance Gate - motor renewal	12	
5.02	Entrance Gate & pedestrian gate - redecoration	60	
5.03	External boundary treatments - Recoat powder coated Finishes to railings	60	
5.04	Replace cobbleblock areas	18	
5.05	15-year cutback & thinning of trees. Overhaul landscaping generally	15	
5.06	Replace CCTV provision	12	
5.07	External Handrails and balustrade	18	



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