

Building Life Cycle Report

Moneyduff Housing, Oranmore, Co. Galway

On behalf of Arlum Ltd



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Introduction

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

Sections 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 and Management of Apartment Developments'.

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.

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

Overview

Within the proposed development at Moneyduff, Oranmore, fifty six multi user dwellings are to be provided out of a total of two hundred and twelve dwellings. All of the multi-user dwellings are duplex type apartments with own door access, and range in floor area from 81 m² to 117 m². All apartments have two bedrooms, with the upper dwellings in house type G benefitting from an additional study. The dwellings are suitable for a range of occupants, from a single owner-occupier, through to couples, small families, and retired individuals and couples. In recent times the predominant typology of dwelling unit provided in the Oranmore area has been larger semi-detached and detached dwellings. The proposed apartment dwellings in this scheme will assist in meeting the current shortfall in housing provision in the area for 1 to 2 person households. All of the multi user dwellings are dual aspect type.

Because of the duplex type configuration of the multi user dwellings there is a possibility for most of the dwellings to be amalgamated with the dwelling either above or below to form a larger family home over three stories.

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

Section 1

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 area 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 owners management company for the ongoing management of the built development. This contract will be for a minimum of three years (to be renewed every three years) and in the form prescribed by the PSRA.

The property management company will also have the following responsibilities for the apartments within the development once constructed:

- Formation of an owners management company. The company will be a company limited by guarantee having no share capital. All future purchasers will be obliged to become members of the owners management company.

- 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 owners management company in keeping with the MUD act, including completion of the developer - owner management company 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.

- Owners management company reporting.

- Accounting services.

- Corporate services.

- Insurance management.

- After hours services.

- Staff administration.

1.2 Service charge annual budget

The property management company has a number of key responsibilities including compiling the service charge budget for the development for agreement with the owners management company. The service charge budget covers such items as cleaning, landscaping, refuse management, utility bills, insurance, maintenance, and security in accordance with the Multi User Development Act 2011.

The service charge budget also includes an allowance for a sinking fund and this allowance is determined following the review of the building investment fund report prepared by / for the owners management company. The building investment fund report, once adopted by the owners management company, determines an adequate estimated annual cost provision requirement based on the needs of the development over a 30 year cycle period. The building investment fund 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 User Development Act 2011.

In line with the requirements of the Multi User Development Act 2011 the members of the owners management company will determine and agree each year at an AGM of the members the contribution to be made to the sinking fund, having regard to the building investment fund report produced.

A sample format of a typical building investment fund report is set out in Appendix A.

Note - the details associated with each element heading (ie. specification and estimation of the costs to maintain, repair or replace) can only be determined after detailed design and the procurement / construction of the development, and is therefore not included in this document.

Section 2

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

2.1 Energy use and carbon emissions

The following are an illustration of the energy saving measures that are planned for the dwellings to assist in reducing costs for the occupants.

Measure	Description	Benefit
BER Certificates	<p>A BER certificate will be provided for each dwelling in the proposed development which will provide detail of the energy performance of the dwellings. It is proposed to target a minimum A2 rating for the apartments (in accordance with NZEB), equating to the following emissions:</p> <p>A2 - 25 to 50 kWh / m² /year with CO₂ emissions c. 10kg CO₂ / m² / year.</p>	Reduction in energy consumption and running costs.
Fabric Energy Efficiency	<p>The U-values of the building fabric will be in line with the requirements set out in the regulatory requirements of TGD Part L.</p> <p>Thermal bridging at junctions between construction elements and at other locations will be minimised in accordance with TGD Part L.</p>	Lower U-values and improved air tightness will be incorporated to minimise heat losses through the building fabric, and lower the energy consumption.
Energy efficient labelled white goods	<p>The white good package planned for provision in the apartments will be of a very high standard and have a high energy efficiency rating:</p> <p>Oven - A+ Fridge / freezer - A+ Dishwasher - AAA Washer / dryer - B</p>	The provision of high rated appliances in turn reduces the amount of energy consumption.

External lighting	The proposed lighting scheme within the development consists of pole mounted fittings as indicated on drawings. Each light fitting shall be controlled with an individual photoelectric control unit. The operation of the lighting shall be on a dawn to dusk profile.	The site lighting has been designed to provide a safe environment for pedestrians, cyclist 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. Individual photoelectric control units allows for the optimum operation of lighting, reducing energy consumption and costs.
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The following low energy measures and technologies will be considered during the design development:

Condensing boilers	Condensing boilers have a higher operational efficiency, typically over 90 %, than standard boilers.	The use of condensing boilers will increase energy efficiency and lower operational costs.
Natural ventilation	Natural ventilation is being considered wherever possible.	Low noise impact for occupants and adjacent dwellings. Reduced energy consumption. Reduction in maintenance of mechanical units.
Mechanical ventilation and heat recovery	Mechanical heat recovery ventilation will be considered to provide ventilation with reduced energy consumption.	Reduced energy consumption and lower operational costs.
Photovoltaic solar panels	Photovoltaic panels considered on south facing roofs.	Reduced energy consumption and lower operational costs.
Electric car charging points	Consideration is being given to the provision of ducting from landlord distribution board to designated electric car charging parking spaces. This will allow for the installation of electric car charging points to cater for demand.	Providing the option of electric car charging points will allow occupants to avail of electric car ownership and use.

2.2 Materials

The practical implementation of material principles has informed the design of the building façades, internal layouts and detailing of the proposed apartment buildings.

2.2.1 Buildings

The proposed apartment buildings are designed in accordance with the Building Regulations. Specific measures include:

Measure Description	Benefit
Daylighting to circulation areas	Reduced energy consumption through reduced requirement for artificial lighting.
Natural ventilation to circulation areas	Reduced energy consumption through reduced requirement for mechanical ventilation, Reduced capital costs, maintenance costs and future replacement costs.
External paved and landscaped areas	Lower maintenance materials selected.
Communal circulation areas	Own door access for all duplex dwellings omit any communal areas and bring all parts of the proposed development into direct ownership, encouraging occupants to carry out maintenance and redecoration in line with the remainder of their property.

2.2.2 Material Specification

Consideration is given to the requirements of the Building Regulations and to BS 7543 : 2015 *Guide to Durability of Buildings and Building Elements*, which provide guidance on the durability, design life and predicted service life of buildings and their component parts.

Measure Description	Benefit
Use of natural stonework facing and consideration to the use of pigmented render system to the envelope.	Reduced on-going maintenance requirement.
Use of factory finished uPVC / alu-clad windows and doors and glass balconies.	Reduced on-going maintenance requirement.
Use of traditional roof coverings (slate / tile) with proven detailing to roof elements.	Reduced on-going maintenance requirement.

2.3 Landscape

Measure Description	Benefit
Use of robust, high-quality paving and decking materials, with high slip resistance.	Reduced on-going maintenance requirement.
Use of durable and robust equipment (eg. play equipment, fencing, etc.) to be used throughout.	Reduced on-going maintenance requirement.

2.4 Waste Management

Measure Description	Benefit
The application is accompanied by a Construction Waste Management Plan.	The report demonstrates how the project has been designed to comply with best practice.
The application is accompanied by an Operational Waste Management Plan.	The report demonstrates how the project has been designed to comply with best practice.
Domestic waste management strategy (including adequate bin storage provision): Residual waste, recyclable waste and compostable waste distinction.	Reduced waste and reduction in potential waste management charges.
Competitive tender for waste management system.	

2.5 Health and Well-Being of Occupants

Measure Description	Benefit
The design, layout and separation distances of the duplex blocks have been designed to optimise the ingress of natural daylight / sunlight.	Reduced reliance on artificial lighting and reduction in associated costs.
The layout of the development is designed to incorporate passive surveillance. All duplex units are designed with secure, passively surveyed, own door access.	Reduction in potential security / management costs.
All units will comply with the requirements of Part M / Part K of the Building Regulations.	Reduction in the level of adaptation potentially necessitated by the future circumstances of occupants.
Generous provision of public / communal shared amenity space.	Facilitates community interaction, socialisation and play.

2.6 Residential Management

Measure Description

On purchase a homeowner pack will be provided for the occupants which will include:

A Homeowner manual which will provide important information for the purchaser on details of their new property / dwelling. It typically includes details of the property such as the MPRN and GPRN, information in relation to connections with utilities and communication providers, contact details for all relevant suppliers, and user instructions for appliances, devices and system in the dwelling.

A Residents' pack prepared by the owners management company which will typically provide information on contact details for the managing agent, emergency contact information, information on transport links in the area, and a clear set of regulations and rules associated with the development.

Benefit

Information provided to residents will allow them to be as informed as possible so that any issues can be addressed in an efficient and convenient manner.

2.7 Transport

Measure Description

Oranmore train station is located approximately 1.5 km north west of the town centre of Oranmore, a 33 minute walk / 9 minute cycle from the proposed residential development. The station provides train services to Galway, Dublin and Cork and intervening stations.

Bus departures from Oranmore are from two stops - one a 10 minute walk / 3 minute cycle, and another a 23 minute walk / 7 minute cycle from the proposed residential development. Bus services from the nearer stop are an hourly service to GMIT, Galway, NUIG and Westside and intervening stops, and services from the further stop include - Galway, NUIG, GMIT, Dublin, Dublin Airport, Cork (via Limerick), Ennis (via Co Clare), and intervening stops.

The provision and maintenance of pedestrian and cycle infrastructure on site, their connectivity with adjoining routes and off-site networks.

The provision of high quality secure bicycle parking facilities for both short term and long term bicycle parking requirements.

Benefit

The availability of access to public transport services contributes to the reduction of reliance on private motor vehicle use.

The bus services from Oranmore provide access to additional destinations not serviced by the train services, and provide a viable and sustainable alternative to journeys undertaken by private motor vehicle.

Ensuring the long-term attractiveness of walking and cycling to a range of local education, retail, community, recreational, and amenity facilities and services.

Accommodates occupants to avail of the cycling infrastructure and reduce the reliance on the private motor vehicle.

Appendix A

Items Typically Included in a Building Investment Fund Budget Programme

The table below illustrates an example of what could be included in the calculation of a sinking fund. It is based on a single block of terraced duplex units.

Ref.	Element	Life Expectancy	Yearly estimate of costs
1.0	Roofs		
1.01	Overhaul waterproofing details to paved balcony areas	12	
2.0	Elevations		
2.01	Decorate render to duplex dwellings	10	
2.02	Minor repairs and preparation for decoration of rendered areas	10	
2.03	Replace external doors and windows	25	
2.04	Replace rainwater goods	25	
2.05	Periodic replacement and overhauling of external fixings and fittings	5	
3.0	Mechanical and Electrical Services		
3.01	Replace external light fittings	18	
3.02	Replace smoke detector heads	18	

Ref.	Element	Life Expectancy	Yearly estimate of costs
3.03	Replace fire alarm panel	18	
3.04	External mains and sub-mains electrical distribution	20	
3.05	Emergency lighting	20	
3.06	Overhaul and / or replace waste pipes, stacks and vents	20	
4.0 Exterior			
4.01	External boundary treatments, including recoat railings	60	
4.02	Replace concrete paved areas	18	
4.03	15 year cut back and thinning of trees. Overhaul landscaping generally.	15	
4.04	External handrails and balustrading	18	
4.05	Replace external signage	18	