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Proposed Residential Development at

Coolcarron, Fermoy, Co.Cork

LIFE CYCLE REPORT

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Overview of Planning Policy

This Life Cycle Report was undertaken in order to assess the long term running and maintenance costs of the simplex and duplex apartment buildings, as required by the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities.

This report will specifically examine the following two sub-sections of section 6.13 of the guidelines:

Section 2.0 - 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 3.0 - Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.

1.2 Outline of Proposed Development

Cumnor Construction Ltd. intends to apply for planning permission on lands located at Coolcarron, Fermoy, Co.Cork, on a site measuring c. 11.22 ha.

The development will consist of the construction of:

- 336 no. residential units comprising of 242 dwelling houses and 94 simplex and duplex apartments as follows:
  - 39 no. 1 bed duplex units,
  - 55 no. 2 bed simplex & duplex units,
  - 10 no. 2 bed dwelling houses,
  - 182 no. 3 bed dwelling houses,
  - 46 no. 4 bed dwelling houses,
  - 4 no. 5 bed dwelling houses.

- 502 no. car parking spaces and bicycle storage for each duplex/simplex building, as well as communal bin storage for duplex/simplex buildings
- Open space of c. 1.48 hectares including playground areas, all ancillary landscaping works with public lighting as well as the provision of pedestrian connections to lands to the east
- 1 no. vehicular access from R639, provision for future vehicular link to the east, pedestrian access from main entrance as well as to the east
- A biodiversity corridor along the east of the site
- A creche along with associated play area and car parking
- SUDs measures, as well as all ancillary site development works

2.0 AN ASSESSMENT OF LONG TERM RUNNING AND MAINTENANCE COSTS AS THEY WOULD APPLY ON A PER RESIDENTIAL UNIT BASIS AT THE TIME OF APPLICATION

2.1 Establishment of an Owners Management Company

A property management company will be engaged early in 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.

As per section 6.14 of Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities – The Multi-Unit Developments Act sets out the legal requirement for the "Establishment of an Owners Management Company (OMC)". Common areas of the development are to be transferred to the OMC. This includes maintenance of the structure of the building and the provision of services to the owners and occupiers of the individual units in the development.

The OMC will engage a Property Management Company (PMC), as a matter of priority, to carry out the ongoing management of the completed development. The contract between the OMC and the PMC will be for a maximum period of c. 3 years and in the form prescribed by the PSRA. The Property Management Company will have the responsibility for dealing with all property management functions including the maintenance and running costs of the above mention common areas and that same adhere to the agreed Annual Operational Budget.

The appointed Property Management Company's also has other responsibilities including the following:

- The preparation of an annual service charge budget relating to the common areas of the development
- Fair and equitable apportionment of the annual operational charges in line with the MUD Act
- Transfer of documentation in line with Schedule 3 of the MUD Act
- Estate Management and the procurement/management of third party contractors for the upkeep of common areas
- 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 the common areas
- Staff administration
- Insurance management
- Accounting services

2.2 Residents Service Charge Budget

The long term running and maintenance costs on a per residential unit basis are reflected in the annual service charge payable by each residential unit (i.e. each simplex and duplex building in the development). The calculation of the service charge budget is one of the key responsibilities of the Property Management Company, which in turn, must be agreed with the Owners Management Company by means of a general meeting of the members concerned.

Section 18 (3) of the The Multi-Unit Developments Act, 2011 (MUD Act) breaks the service charge budget down into the following categories:

a) Insurance
b) General maintenance
c) Repairs
d) Waste management

e) Cleaning
f) Gardening and landscaping
g) Concierge and security services
h) Legal services and accounts preparation
i) Other expenditure arising in connection with the maintenance, repair and management of the common areas anticipated to arise

The MUD act also stipulates the establishment of a building investment fund (sinking fund) as part of the service charge budget. This sinking fund covers reasonable expenditure incurred on the refurbishment, improvement and maintenance of a non-recurring nature or advice from a suitably qualified person in relation to same. A Building Investment Fund Report should be prepared and regularly updated by the OMC to help determine the annual contribution to the sinking fund. Section 19 (5) of the MUD Act apportions a nominal figure of €200 per unit for the sinking fund or "*such other amount as may be agreed by a meeting of the members as the contribution in respect of the year concerned."*

The next section of this report examines the "measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents". These measures, considered at early design stage by the design team, have a major bearing on the day to day service charges incurred in the finished development, as well as on potential non-recurring costs covered by the sinking fund.

3.0 MEASURES SPECIFICALLY CONSIDERED BY THE PROPOSER TO EFFECTIVELY MANAGE AND REDUCE COSTS FOR THE BENEFIT OF RESIDENTS

3.1 Scheme Design

3.1.1 Building Form:

The simplex and duplex buildings come under the umbrella of the Owners Management Company and have been designed in accordance with all aspects of current building regulations, with particular attention paid to reducing potential costs for the effective functioning of the completed development. Some of these specific design measures include:

MEASURE DESCRIPTION	BENEFIT
INTERNAL CIRCULATION	
Internal circulation areas have been minimised	Whilst maximising the use of space, avoids unnecessary expense in cleaning and renewal of finishes
Dual aspect design	Dual aspect glazing increases natural light and adds the benefit of passive solar gain to reduce heating costs

3.1.2 Selection of Materials, Finishes and Treatments

Whilst building form has a more direct bearing on the day to day running costs for residents, the careful selection of materials, finishes and treatments has a direct impact on the sinking fund cost apportioned to the residents. Both aesthetics and durability played a central role in the design process, with the durability considered in relation to the expense of maintenance, upkeep or potential replacement of the selected materials.

BS 7543:2015, 'Guide to Durability of Buildings and Building elements, Products and Components' has been referenced in conjunction with the current building regulations. This standard provides guidance on the durability, design life and predicted service life of buildings and their parts and further helps predict and reduce associated costs for individual residents.

The performance and durability of common areas of the proposed apartment and duplex buildings are designed in accordance with Figure 4 of BS7543; 2015, Phases of the Life Cycle (Please see Appendix B).

Some of the specific design measures taken include the following:

MEASURE DESCRIPTION	BENEFIT
EXTERNAL BUILDING ENEVELOPE	
Use of Brickwork for the majority of facades to simplex and duplex buildings Minimal amount of painted render to envelope	Brick requires no on-going maintenance Minimal repainting required
Use of alu-clad or uPVC windows	Requires no maintenance to upkeep the visual appearance

LANDSCAPING	
Aesthetically pleasing and hard-wearing hard landscaping	Minimum ongoing maintenance associated with this choice of materials
Play areas to use durable, robust materials	Robust materials and elements reduce the frequency of required repair and maintenance

3.1.3 Waste Management

Waste management has been considered as follows:

MEASURE DESCRIPTION	BENEFIT
The application is accompanied by a Construction Waste Management Plan	This report demonstrates how the proposed development has been designed to comply with current best practice
The application is accompanied by an Operational Waste Management Plan	This report demonstrates how the proposed development has been designed to comply with current best practice
Centralized bin storage area to be provided for each apartment and duplex building with a domestic waste management strategy in place	Communal bin storage is more efficient and reduces potential waste charges

3.1.4 Human Health and Wellbeing

Measures focused on the health & wellbeing of future residents:

MEASURE DESCRIPTION	BENEFIT
The design and layout of the simplex and duplex apartments have been designed to optimize the ingress of natural daylight to the proposed dwellings	This will aid in reducing the need for artificial light
Compliance with Parts M and K of the current Building Regulations.	Reduces the potential need/cost for changes in design to accommodate resident's future changing circumstances.
Public open/amenity space	Encourages improved wellbeing through social interaction, exercise and play

3.2 Energy and Carbon Emissions

Due consideration has been taken of the energy and carbon emissions associated with the individual units of the proposed development and will reduce the overall impact of the development on the environment,

while reducing individual unit running costs for residents. Measures taken, in particular in relation to the construction stage include the following:

MEASURE DESCRIPTION	BENEFIT
Fabric Energy Efficiency	
Reduced U values of all external envelope elements of the proposed buildings to meet Part L "Conservation of Fuel and Energy" of the current building regulations. Robust detailing at junctions between all external envelope elements will be imperative to reduce thermal bridging. Robust detailing in all areas of construction will also ensure a high level of air tightness	Reduced U values, minimisation of thermal bridging and minimisation of air leakage ensures reduced energy consumption and associated costs
BER Certification	
It would be prudent to carry out preliminary DEAP (Dwelling Energy Assessment Procedure) calculations, prior to construction, to ensure the required energy rating, renewable energy contribution etc. will be achieved.	Early DEAP calculations will flag any potential changes to fabric insulation, heating system, ventilation system etc. that would need to be made to both reduce costs and ensure compliance.
White Goods	
"A" rated white goods, where possible, to be provided with any white goods package planned for the apartments	Reduction in electricity consumption and associated costs for residents.
External Lighting	
Latest design standards and technologies to be utilised, including low level lighting with minimal upward light spill and low voltage LED lights, all approved by the local authority The operation of the lighting shall be on a dusk-dawn profile to reduce unnecessary artificial light usage	As well reducing lighting costs apportioned to the service charge budget, the external lighting plan will ensure safety for pedestrians, motorists and cyclists alike whilst deterring any potential anti-social behaviour.

3.2.1 Low Energy Technologies

To achieve the best possible BER rating, as discussed above, the following low energy technologies will be considered:

DESCRIPTION	BENEFIT
Space and Water Heating	
Air to Water Heat Pumps: An air to water heat pump essentially extracts heat from the outside air, upgrades it to a higher temperature and the resultant heat is then used for space and water heating in the building	Although a certain amount of electricity is used to power an air to water heat pump, the high efficiencies of such system (typically in excess of 400% for space heating) means they are classed as a renewable heating source and running costs can typically be up to one third of a conventional heating system.
Energy Producing Technologies	
Photovoltaic (PV) or solar panels are being considered to utilise renewable solar energy to produce electricity. Careful consideration needs to be given to the orientation and any possible impact of shading on the panels.	This renewable electrical energy could be used to offset any electricity costs associated with the heat pump.

3.3 Transport and Accessibility

The proposed development is highly accessible via a variety of transport modes. The following table illustrates how such accessibility allows residents to manage and reduce costs associated with travel to and from home:

DESCRIPTION	BENEFIT
Access to Public Transport (Light Rail/Bus)	
The site is located within 700m of a bus stop with hourly access to Cork City	Close proximity to the local bus stop provides access for the residents of the area to the national bus and rail networks, a short distance away in Cork city.
Pedestrian Permeability	
The site is located within 1km of Fermoy Town and the proposed design includes a variety of pedestrian only routes through the site	Ensures the long-term benefits of walking and cycling through the development and encourage a vibrant active locale
Cycling	
Bicycle parking is provided for simplex and duplex buildings as outlined in apartment design guidelines and promotes sustainable transport mode	Accommodates the uptake of cycling and reducing the reliance on private cars

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 a typical apartment type H in the development which consists of 27 apartments over 4 floors.

BUILDING INVESTMENT FUND (SINKING FUND) ESTIMATION *Specification to be finalized at detailed design stage*		
REF	**ELEMENT**	**LIFE EXPECTANCY**
1.00	**ROOFS**	
1.01	Replacement roof covering incl. insulation to main roofs	18
1.02	Replacement parapet details	18
1.03	Replace roof access hatches	25
2.00	**ELEVATIONS**	
2.01	Minor repairs and preparation for decorations of rendered areas (if applicable)	18
2.02	Replace exit/ entrance doors	25
2.03	Replace Rainwater goods	25
2.04	Recoat powder coated Finishes to balconies	20
2.05	Periodic replacement and overhauling of external fixings	5
2.06	Replace Balcony floor finishes	25
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 entrance mats	10
3.06	Replace stair nosings	12
3.07	Replace ceramic floors tiles	20
5.00	**M&E SERVICES**	
5.01	General - Internal relamping	7
5.02	Replace Internal light fittings	18
5.03	Replace External light fittings (lights at entrance lobbies)	18

5.04	Replace smoke detector heads	18
5.05	Replace manual break glass units	18
5.06	Replace Fire alarm panel	18
5.07	Replace lift car and controls	25
5.08	Replace AOV's	25
5.08	Replace security access control installation	15
5.09	Sump pumps replacement	15
5.10	External Mains Water connection	20
5.12	Electrical Mains and Sub Mains distribution	20
5.13	Emergency Lighting	20
6.00	**EXTERIOR**	
6.01	Repaint car parking	12
6.02	Re tarmac	60
6.03	External boundary treatments - Recoat powder coated Finishes to railings	60
6.04	Replace cobble block areas	18
6.05	10 year cutback & thinning of trees Overhaul landscaping generally	10
6.06	Replace CCTV provision	12
6.07	External Handrails and balustrades	18

Appendix B: PHASES OF THE LIFE CYCLE OF BS7543; 2015

Table 1 - Categories of Design Life for Buildings (from BS 7543:1992)

Category	Description	Building Life	Examples
1	Temporary	Up to 10 yrs	Site huts; temporary exhibition buildings
2	Short life	Min. 10 yrs	Temporary classrooms; warehouses
3	Medium Life	Min. 30 yrs	Industrial buildings; housing refurbishment
4	Normal life	Min. 60 yrs	Health, housing and educational buildings
5	Long life	Min. 120 yrs	Civic and high quality buildings