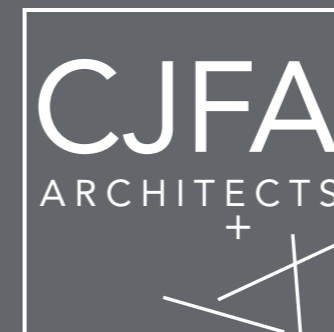
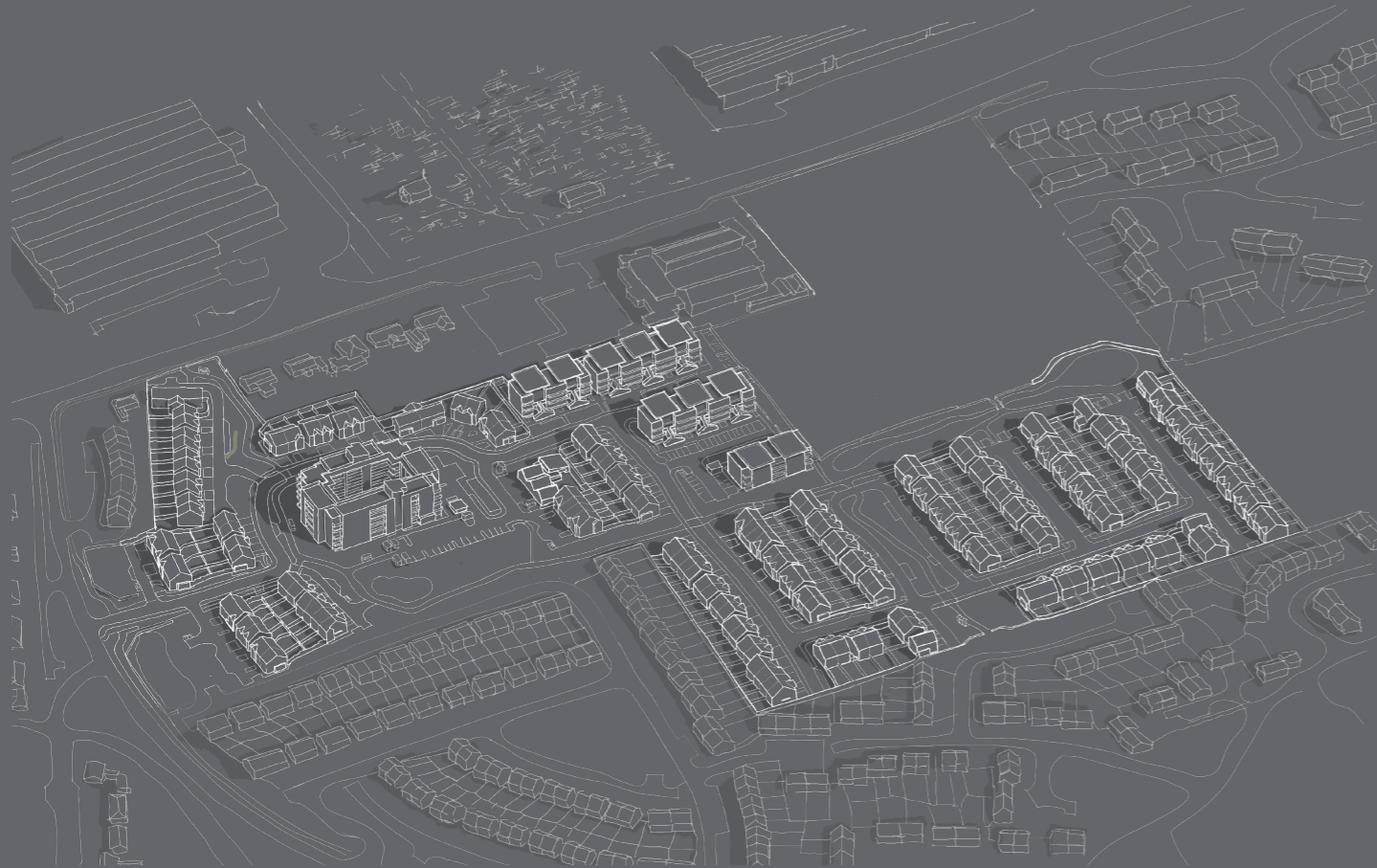


DESIGN STATEMENT

LRD - STAGE 3

LARGE RESIDENTIAL DEVELOPMENT
AT LANDS IN BALLYNANEASHAGH / BALLYBEG
CORK ROAD, WATERFORD.

PROJECT NO.: 2019011
PREPARED BY: Patricio Harte
APPROVED BY: Gareth Falconer
DATE: 11TH June 2024
VERSION/REVISION: ISSUED FOR PLANNING



C.J. Falconer
+ Associates

ARCHITECTS

T: +353 (0)51 878888

E: MAIL@CJFA.IE

W: WWW.CJFA.IE

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8.1.1 INTRODUCTION

In compliance with the *Sustainable Urban Housing: Design for New Apartments_Guidelines for Planning Authorities (2023)* the following section includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis, for all of the proposed multi-unit / apartment complexes within the development and aims to demonstrate what measures have been specifically considered by the applicant and designers to effectively manage and reduce maintenance costs for the benefit of residents.

8.1.2 PROPERTY MANAGEMENT OF APARTMENT UNITS AND COMMON AREAS

For each one of the apartment complexes/zones that are proposed within 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 and that the running and maintenance costs of the common areas are kept within the agreed annual operations budget. It is proposed that all of the areas which are not sold into private ownership and those that are not taken in charge by the Local Council, will be transferred to the respective management company.

Each Apartment Zone Property Management Company will have the following responsibilities for the apartment developments, once constructed:

- Timely formation of an Owners Management Company (OMC), if appropriate.
- Preparation of annual service charge budget for the respective Apartment Zone common areas
- Fair and equitable apportionment of the Annual operation charges in line with the Multi Units Development Act 2011 (MUD Act)
- Engagement of independent legal representation on behalf of the OMC (where appropriate) in keeping with the MUD Act- including completion of Developer OMC Agreement and transfer of common areas.
- Transfer 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.

8.1.3 MAINTENANCE COSTS / LIFE CYCLE COSTS

Each Property Management Company shall be responsible for building maintenance and upkeep of their respective Apartment Zone / Complex. The following section outlines design measures that have been adopted to reduce long term running costs. It also includes a sample of Building Investment Fund report that identifies those works which are necessary to maintain, repair and enhance the respective premises over a 30-year life cycle period.

It is important to note that Apartment Zones “X” and “Y” will consist of Apartment Blocks (2,3 & 4) with no internal common spaces. All apartment units within these zones will have “own-door” access from the public realm.

8.2.1 COST REDUCTION MEASURES

The following measures were specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents. Long-term running and maintenance costs for the end-user have been central concerns during the design process of the proposed development.

BUILDING DESIGN		
MEASURE	DESCRIPTION	BENEFIT
"Own-door" Access	All the apartment units contained within the Apartment Blocks 2 ,3 & 4 (located in Apartment Zones "X" and "Y" within the proposed developemnt), have been designed to have their own access from public footpaths.	Avoids the cost of heating and lighting shared communal spaces. Each occupier responsible for their own energy use
Building Aspect / Daylight	The design, separation distances and layout of the proposed apartment blocks aims to maximise provision of natural daylight.	Avoids the requirement for continuous artificial lighting.
Accesibility	All apartments unit have been designed to be compliant with the requirements of Building Regulations (Part K and Part M). Additionally, the aparment units of the "Age-Friendly" Apartment Block -1 have been designed under the "Unversial Access" design guidelines in order to satisfy the specific requirements of elderly residents that may suffer from disabilities or impaired moibility conditions.	Reduces the level of future adaptation and associated costs for residents.
Ventilation	All apartment units have been designed in accordance with the requirements of Building Regulations (Part F) in relation to the adequate levels of ventilation.	Reduce energy usage costs of ventilation systems and associated maintenance/upgrade costs.

ENERGY AND CARBON EMISSIONS		
MEASURE	DESCRIPTION	BENEFIT
BER Certificates	A Building Energy Rating (BER) will be provided for each dwelling in the proposed development which will provide details of the energy performance of the building(s). A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy.	BER ratings reduce energy consumption and running costs
NZEB	To demonstrate that an acceptable primary energy consumption has been achieved, the calculated Energy Performance Coefficient (EPC) of each building should be no greater than the Maximum Permitted Energy Performance Coeffieicnt (MPEPC). To demonstrate that an acceptable C02 emission reate has been achieved, the calcaulted Carbon Performance Coefficient (CPC) should be no greater than the Maximum Permitted Carbon Performance Coefficient (MPCDC).	These measures will ensure the mitigation and reduction of CO2 emissions from each building
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 of energy consumption and thus minimise carbon emissions to the environment.

Drawings within this document are for illustration purposes only and not to scale. Please refer to and read in conjunction with the attached drawings prepared by CJFA for further detail.

Energy Labelled White Goods	The white good package (where provided) 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: • 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.
Internal Common Areas & External Lighting	In the case of the proposed "Age-Friendly" Apartment Block - 1, the building will comprise common areas that will be administered and maintained by the appointed management company. In this case, low energy luminaires and automatic controls such as motion sensors are to be provided for electric lighting to maximize efficiency in use. LED lamps will be preferred as far as is practical. For all external common areas, applicable to all apartment zones, lighting will be provided to ensure a safe environment for pedestrians, cyclists and moving vehicles, to deter antisocial behavior and to limit the environmental impact of artificial lighting on existing flora and fauna in the area.	Low energy lamps and automatic controls improve energy efficiency. Adequate lighting levels ensure safe environments.
Mechanical Ventilation Heat Recovery	Where appropriate, the inclusion of Heat Recovery Ventilation into the centralised ventilation system will be considered and assessed in order to minimise the energy usage within the dwelling.	Mechanical Heat Recovery Ventilation provides ventilation with
PV Solar Panels	PV Solar Panels will be considered in order to meet the renewable energy contribution required by Part L of the Building Regulations. These panels convert sunlight into electricity which can be used within the apartment blocks. The panels are typically placed on the South facing side of the building to maximise the solar exposure.	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.
Air Source Heat Pump	As part of the overall energy strategy for houses and apartment units, the use of Air Source Heat Pumps will be assessed to determine their technical and commercial feasibility. These systems extract heat energy from the outside air and, using a refrigerant cycle, raise the temperature of the heat energy using a refrigerant vapour compression cycle.	Air source heat pumps use electrical energy from the grid to drive the refrigerant cycle but do so extremely efficiently. Modern heat pumps will typically provide 4 to 5 times more heat energy to the dwelling than the electrical energy they consume
EV Charging Points	Designated car-parking spaces with charging points/facilities have been provided for all shared parking areas in all of the three proposed Apartment Zones. Additionally, ducting shall be provided throughout the overall parking areas to provide EV charging facilities in future as required.	Providing EV Charging facilities and infrastructure, will allow occupants to avail of the ever-improving efficient electric car technologies.

MATERIALS		
MEASURE	DESCRIPTION	BENEFIT
Design and Material Selection	Materials have been selected and chosen with due consideration to their durability, design life and maintenance requirements. Consideration given to Buildings Regulations and other relevant guidance e.g., BS 7543:2015 'Guide to Durability of Buildings and Building Elements, Products and Components'	Ensures that the long-term durability and maintenance of Materials is an integral part of the Design and Specification of the proposed development.
Building Envelope	Use of brick, coloured render systems and aluminum cladding (where appropriate) will be used for all of the proposed buildings' envelopes. Furthermore, the proposed apartment blocks will be provided with flat roof systems made of concrete and protected with single ply membranes as per the respective manufacturer's and engineering specifications.	Requires minimal on-going maintenance
External Windows, Doors & Balconies	uPVC or Aluclad to selected colour will be used for all proposed Apartment Blocks. Proposed balconies will consist of powder coated steel and other metal profiles as appropriate. Proposed balustrades will be made of factory finished, tempered glass.	Requires minimal on-going maintenance. Increased longevity and durability. Reduce energy usage costs of ventilation systems and associated maintenance/ upgrade costs.
Roofline + Rainwater goods	Wall cappings will consist of pressed metal profiles, powdercoated to selected colour and adequately installed as per manufacturer's specifications. All fascias, soffits, and other rainwater goods will consist of uPVC systems, or aluminum (where appropriate) finished to selected colour.	Requires minimal on-going maintenance

LANDSCAPE		
MEASURE	DESCRIPTION	BENEFIT
Natural Amenity / Landscape Design / Soft Landscaping	Detailed landscape design included as part of this package. Planting proposals intended to complement the local setting and be fit for private and public realm uses. Pollinator friendly native trees and planting shall be incorporated.	Facilitates community interaction, socialising and play resulting in improved well-being of residents
Permeability	All on-street parking spaces are provided with permeable paving. Natural Suds features incorporated into the landscaping	SUDs drainage system and landscape maintenance preferable. Attenuation reduces the burden on vulnerable rainwater goods, resulting in fewer elements that could require replacement or repair.
Hard Landscaping 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, where appropriate.	Robust materials and elements reduce the frequency of required repair and maintenance.

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WASTE		
MEASURE	DESCRIPTION	BENEFIT
Operational Waste Management Plan	Operational Waste Management Plan, prepared by CJFA in conjunction with the applicant has been included in this document.	This section demonstrates how the scheme complies with best practice and how waste will be minimized and managed upon its completion and occupation.

HEALTH & WELLBEING		
MEASURE	DESCRIPTION	BENEFIT
Natural Daylight	The proposed Apartment Block buildings have been favorably orientated, as stated in previous sections of this document. In addition to this, a daylight assessment was carried out to confirm the provision of good levels of daylight for the apartment units within the "Age-Friendly" Apartment Block 1, given its proposed "courtyard" arrangement.	Reduces reliance on artificial lighting thereby reducing costs.
Accessibility	The proposed apartment complexes fully comply with the requirements of Part M. Furthermore, the proposed apartment units for the "Age-Friendly" Apartment Block 1, have been designed based on "Universal Access" design recommendations and requirements which are aimed to assist elderly users that may have specific needs.	Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances.
Security	All of the proposed Apartment Zones have been designed to incorporate passive surveillance. These zones will also be provided with additional security strategies like CCTV monitoring equipment, locking mechanisms and access keys/fobs for their respective residents	Help to reduce potential security/management costs.

TRANSPORT		
MEASURE	DESCRIPTION	BENEFIT
Access to public transport	The proposed apartment complexes are located in close proximity to the Cork Road, which is an important public transport corridor within Waterford City. Each apartment unit is located within less than 1km from the closest bus stop. Adequate footpaths and pedestrian routes have been designed in accordance with Building Regulations and the recommendations stipulated by DMURS. As such, a clearly identifiable, secure, and accessible pedestrian route has been provided to connect all proposed apartment blocks with each one of the site entrances.	The availability, proximity, and ease of access to public transport services contributes to reducing the reliance on the private motor vehicle for all journey types
Permeable Connections	Provision and subsequent maintenance of dedicated pedestrian infrastructure on-site, and their connectivity with existing adjoining pedestrian and cycle infrastructure which is linked with amenities in surrounding area	Ensure the long-term attractiveness of walking and cycling to a range of local education, retail and community facilities and bus services.
Bicycle Storage	The provision of secure bicycle parking facilities at grade service the entire site.	Accommodates the uptake of cycling and

Mobility Scooters Charging Stations	The proposed "Age-Friendly" Apartment Block 1, has been provided with a designated room where the residents can safely connect and charge their electric mobility assistance equipments, if required.	Promotes user independency and reduces the need of assisted care for elderly residents.
E-car Facilities	Designated car-parking spaces with charging points/facilities have been provided for all shared parking areas in all of the three proposed Apartment Zones. Additionally, ducting will be provided from a local landlord distribution board to all parking spaces. This will allow the management company the option to install additional EV charging points to cater for potential expanding EV demands.	To accommodate the growing demand for E-car which assist in decarbonizing society and reducing oil dependency.

8.3.1 MANAGEMENT

The developer or the appointed Management Company of the proposed apartment buildings (where appropriate) shall ensure that all occupiers and future residents are provided with a *Homeuser manual / Tenant's pack* that will contain essential information regarding the new home, including: GPRN, MPRN, Contact details for all relevant suppliers, user instructions for appliances (where applicable). These informational packages should also include information regarding contacts for maintenance issues, emergency contact details, transport link in the area and a clear set of rules and regulations for all users and residents.

8.4.1 BUILDING INVESTMENT FUND (BIF) CALCULATIONS

Building Investment Fund (Sinking Fund) Calculations	
Building Element	Minimum Service life (years) at Service Commencement Date*
Structure/ sub structure	60
Floor Structure	60
Roof Structure	60
Roof covering – up to 5 degree pitch	40
Roof covering – over 5 degree pitch	40
Windows	40
External wall/ cladding inc. openings	40
External doors	40
Internal partitions inc. openings	40
Internal finishes	15
Ceilings	40
Internal doors	30
Internal fixtures and fittings	15
Sanitary fittings	20
Kitchen sanitary fittings	20
Built-in furniture	20
Mechanical plant	As CIBSE Guide, Vol. B
Electrical plant	As CIBSE Guide, Vol. B
Engineering services distribution systems	As CIBSE Guide, Vol. B
CCTV installations	20
Fire installations	20
Security installations	20
Communications installations	20
Lifts	15
Underground drainage	60
External finishes -decorative coatings	25
External fences	30

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C.J. Falconer
+ Associates

ARCHITECTS

T: +353 (0)51 878888

E: MAIL@CJFA.IE

W: WWW.CJFA.IE