Emmet Road Mixed Use Development
Inchicore Dublin

Building Lifecycle Report

NOTE: This report is to be read in conjunction with Project Team documentation & associated reports including:

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CONTENTS

1.0 INTRODUCTION

2.0 PROPOSED DEVELOPMENT

3.0 PROPERTY MANAGEMENT

4.0 MEASURES TO MANAGE & REDUCE COSTS

MATERIALS

1.0 INTRODUCTION

This document sets out to address how the outline specification set out for the Emmet Road Mixed-use Residential development, the design and material principles which have informed the design of building roofs, facades and internal layouts of the proposed development will impact the long term running and maintenance costs, and measures considered to reduce costs for the benefit of residents.

2.0 PROPOSED DEVELOPMENT

The proposed development at Emmet Road, Inchicore, Dublin 8 is a mixed-use development comprising 578 residential units, a creche, residential amenity areas, a Community Hub / Library / commercial /retail units all set in a new public realm. The residential units will be constructed in 3 no. courtyard blocks (ranging in height from one to seven storeys) situated around central landscaped communal open spaces.

All of residential units will have direct access to an area of private amenity space, in the form of a balcony / terrace, and will have shared access to external amenity space (second floor roof terrace), ground level communal landscaped courtyards and new public realm facilities.

The development will include provision of 54 no. vehicular parking spaces in the village car park at Block C servicing commercial and community units, 50 no. resident parking spaces at surface level and 1,285 no. bicycle parking spaces.

The development will also comprise all ancillary works including public realm/footpath improvements, watermain improvements on Emmet Road, landscaping, boundary treatments, provision of internal footpaths, bin storage, foul and surface water drainage, green roofs, ESB substation and all site services, site infrastructure and associated site development works necessary to facilitate the development including demolition of existing buildings.

3.0 PROPERTY MANAGEMENT

A Property Manager will be responsible for the day-to-day operations and management of the development as outlined in the Operational Management Plan. This plan is designed to detail how the development will be managed, the various amenities that residents will be able to make use of, the experience for residents and how a successful community will be facilitated through high quality design and professional operations.

The proposed Property Management approach is outlined in the plan, includes management of residential amenities & services, building operational strategies, management of residential and commercial car and bike parking areas, security, waste management, preventative maintenance, service charges etc

Please refer to Hooke & MacDonald "Operational Management Plan"

4.0 MEASURES TO MANAGE & REDUCE COSTS FOR THE BENEFIT OF RESIDENTS

Measure		Benefit to residents
Fabric Energy Efficiency	Improved building fabric performance beyond minimum requirements set out by the current regulatory requirements of the TGD Part L, titled "Conservation of Fuel and Energy- Dwellings" and "Conservation of Fuel and Energy Buildings other than Dwellings" in a 'fabric first' approach	Improved fabric performance will assist in: reduced space heating demands / reduced energy consumption
	Improved building fabric performance with lower U-values	lower U-values will assist in: minimising heat losses resulting in reduced energy consumption / minimising carbon emissions / reducing energy bills
	Improved air tightness will assist in minimising heat losses through the building fabric, reducing energy consumption, and minimising carbon emissions	improved air tightness will assist in: minimising heat losses resulting in reduced energy consumption/ minimising carbon emissions/ reducing energy bills
	Reduced thermal bridging at fabric junctions in line with TGD pt L	reduced thermal bridging will assist in: minimising heat losses resulting in / reduced energy consumption / reduced energy bills
Building Energy Ratings	BER certificates for each dwelling in the proposed development will provide detail of the energy performance of the dwellings (calculated relative to energy use for space & hot water heating, ventilation, lighting and occupancy) A2/A3 rating for the apartments is targeted which will equate to the following emissions: A2 – 25-50 kwh/m2/yr with CO2 emissions circa 10kgCO2/m2 /year A3 – 51-75 kwh/m2/yr with CO2 emissions circa 12kgCO2/m2 /year	Higher BER ratings equate to: reduced energy consumption / reduced running costs
Energy Strategy & carbon emissions	(Please refer to IN2 documentation)	
	Centralised site energy centre offers efficiencies in energy provision and distribution	Reduced operational and maintenance costs, reduced energy costs

	Air Source Heat Pumps (ASHP) included as part of centralised strategy – using electrical energy highly efficiently - thermal energy from outside air is absorbed & transferred to space heating & domestic hot water generation systems. (contributes to renewable energy requirement / no fossil fuel requirement)	Lower fuel costs and resultant reduced energy bills Reduced carbon emissions
	Mechanical ventilation heat recovery (MVHR) provides tempered fresh air to occupied spaces.	Provides ventilation with reduced energy consumption / reduced energy costs
	Modular utility incorporating Heat Interface Units and Heat Recovery units	Reduced maintenance costs / reduced energy costs
Lighting	Low internal and external energy lighting	reduced energy consumption / reduced energy costs
	Lighting will include automatic controls where feasible and safe to do so	reduced energy consumption
Natural Ventilation	Natural ventilation is optimised where possible to minimise energy usage and noise levels openable windows are provided to common areas where possible	Completely passive therefore no energy required. Reduced environmental impact as minimal equipment disposal over life cycle Avoids costly mechanical ventilation systems, associated maintenance & replacement requirements

MATERIALS

Building materials are proposed for use on building fabric, facades and in the public realm, to achieve a durable standard of quality and a long lifecycle with minimal maintenance beyond a regular inspection & maintenance regime. The choice of high quality and long-lasting materials such as brickwork, precast concrete panels and anodised aluminium windows and cladding, stone hardscaping in the public realm, will contribute to lower maintenance costs for future residents and occupiers, not requiring regular fabric replacement.

Materials have been selected with a view to longevity, durability, and low maintenance. Consideration has been given to Current Building Regulations and includes reference to BS 7543:2015 'Guide to durability of Buildings and Building elements, Products and Components'.

As the building design develops through detailed design & procurement etc a schedule can be generated detailing maintenance and replacement costs over the lifespan of the materials and development constituent parts, enabling a

robust schedule of building component repair and replacement costs so that running, and maintenance cost of the development are kept within an agreed annual operational budget

Material	DESCRIPTION	Benefit
Brickwork	Clay Brickwork	60 year lifespan, Requires minimal maintenance and does not require regular replacement
Precast Concrete	Precast concrete panels to external envelope Precast concrete sills & lintels to windows Precast concrete copings	60 year lifespan, Requires minimal maintenance and does not require regular replacement
Render	Breathable render system	40 year lifespan, Requires minimal maintenance
Terracotta Tiles	Terracotta Tiles – clay based fired and glazed terracotta tiles,	60 year lifespan, Requires minimal maintenance and does not require regular replacement
Galvanised Steel	Steel framed prefabricated balconies with Galvanised Steel balustrade	Requires minimal maintenance and does not require regular replacement
Hardwood Timber	Selected hardwood from FSC forests	60 year lifespan, Requires minimal maintenance and does not require regular replacement
Anodised Aluminium	External Framing of windows & curtain walling	60 year lifespan, Requires minimal maintenance and does not require regular replacement
Glazing	Double glazed solid & opening vents, spandrel panels	Requires minimal maintenance
Hardwood Timber	Selected hardwood from FSC forests	60 year lifespan, Requires minimal maintenance and does not require regular replacement
Roofs		
Roof finishes	Proprietary sedum/green roofs, contributing to surface water drainage (as described in the water services report documentation provided by the Consulting Civil and Structural Engineer)	Low Maintenance, Helps reduce the surface water run-off . Assists in purifying surface water run-off. Increases biodiversity
Roof Maintenance	Fall Arrest systems	Does not require regular replacement with regular inspection & maintenance

Hard Scaping / Surfaces	Concrete/stone paving to external communal roof terraces and deck access. Concrete/stone paving to private terraces/balconies	Requires minimal maintenance and does not require regular replacement
Landscape		
Paving Materials	Selected robust high slip resistance paving materials Durable and robust equipment (e.g. play, exercise, fencing etc.) to be used throughout.	Ongoing maintenance significantly reduced through use of robust materials installed with proven details.
Planting details	Use of proven trees, shrub, hedging, herbaceous and lawn installation planting & staking details (See Landscape Architects report for further details).	Correctly installed planting will develop into well established and robust soft landscape reducing future maintenance.

WASTE MANAGEMENT

Please refer to Hooke & MacDonald "Operational Management Plan"

Please refer to Operational Waste Management Plan by Byrne Environmental Consulting Ltd

HEALTH & WELL BEING

The masterplan organisation and building layouts have been designed to promote a people centred environment, with a balanced provision of both communal spaces encouraging socialising, and private amenity spaces for individual homes. Access to nature in generous landscaped open spaces is being prioritised, resulting in improved well being. The design approach has been to:

- create high quality landscaped communal spaces both in the public realm and communal residential areas

- create a public realm that is universally accessible to all ages and abilities (compliant with the requirements for Part M / K of the Technical Guidance Documents)

- create a safe public and communal realm by organising building form so as to maximise passive surveillance of the public realm, and providing clear security lines between public and private areas, with CCTV provision as necessary

- optimise natural daylighting both to external amenity spaces and to individual home units

- optimise views from inhabited spaces both within the development in this particular architectural heritage context, and from the development of distance views to the north and south

- optimise natural ventilation and air quality in internal spaces whilst creating shelter from wind in external amenity spaces

TRANSPORT & ACCESSIBILITY

The project site is positioned in an optimum location between two public transport corridors (LUAS red line, and a new BusConnects line along Emmet Road). The permeable masterplan organisation and building layouts have been designed to promote sustainable modes of transport and the use of public transport, prioritising pedestrian and cycle routes in the public realm, with generous high quality & secure bike, and motorcycle parking. Village car parking, EV charging points, and car sharing are part of the proposed Mobility Management Plan

Please refer to OCSC Moblity Management Plan and Traffic Impact Assessment for further details

The new public realm is designed to be universally accessible to all ages and abilities (compliant as a minimum with the requirements for Part M / K of the Technical Guidance Documents).