

BUILDING LIFE CYCLE REPORT

for

St. Laurence's Park Housing and Library
At St. Laurence's Park
Stillorgan
Co. Dublin

PLANNING
July 2020

TABLE OF CONTENTS

Introduction

Part 01

Assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application

Part 02

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

Part 03

Building Investment Fund Life Cycle

Introduction

The Building Life Cycle Report sets out to address the requirements of 6.13 of Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities; Department of Housing, Planning and Local Government 2018

Operation and Management of Apartment Developments

6.13....building life cycle 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, as well as demonstrating what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.

PART 01

The long term running, maintenance and management costs have been taken into account at the outline design and specification stage of this development.

Management of Tree Belt

Dún Laoghaire Rathdown County Council Parks Department will be responsible for the maintenance of the 'tree belt' along the eastern perimeter of the development. This is delineated by the edge of the shared surface route.

PART 02

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

Table 2.1 below outlines the proposed measures to enable reduced running costs for the occupants.

Measure	Description	Benefit
Fabric Energy Efficiency	A 'fabric first' approach will be utilised on the project aiming for a high degree of air tightness and lower U-value performance than the current requirements in TGD Part L 2019. Thermal bridging will at construction junctions will be minimised in line with TGD Part L.	Energy Efficient Design with reduced space heating demand by minimising heat losses ensuring lower energy consumption.
Building Energy Rating (BER) Certificate	A BER Certificate will be provided for each dwelling. An analysis of a sample of 6 no. apartments has been carried out with an estimated BER rating of A2.	Higher BER ratings reduce running costs and energy usage
Mechanical Ventilation Heat Recovery (MVHR)	MVHR is proposed for each dwelling.	MVHR provides ventilation with low energy usage.
Heating Centre	Each unit will be served by a dedicated Exhaust Air Heat Pump	
PV Solar Panels	PV panels are to be utilised. The panels will be facing southwards to maximise heat gains.	Renewable energy resource which reduces the requirement to purchase electricity from the grid.
Internal Lighting	Automatic lighting controls will be deployed through-out the common areas where it is safe to do so.	This will reduce energy consumption and running costs.
External Lighting	A combination of low voltage LED pole fittings and recessed low level down-lighters will be utilised, as per the External Lighting Layout.	Low voltage fittings will reduce energy consumption and running costs within the development.
White Goods	White goods will not be provided, but minimum ratings will be set within the Home User Guide to ensure that high ratings are achieved.	Highly rated white goods will reduce the running costs for the residents.
Electrically Operated Vehicle Charging Points	Electric Vehicle Charging Points will be provided from the Landlord's distribution board. Options for a number of types of chargers are being reviewed. An increase on the minimum number set in the DLR Development Plan 8.2.4.12 is aimed for.	This will encourage the use of electric vehicles in line with Council and National Policy.

Materials

Materials have been selected to ensure the long-term durability and maintenance taking into account TGD Part D Materials and Workmanship 2013 and with reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components.

2.2 Material Specification

Location	Material	Benefit
External walls	Use of brickwork and stone/precast concrete to external envelope.	Requires a low level of maintenance.
External walls	Factory finished aluminium clad windows and doors. Factory finished wintergarden glazing. Glass replacement from the interior. Powder coated steel balconies.	Requires a low level of maintenance.
Roof	Proprietary green roof system.	Improved U-value with additional build-up. Attenuation reduces
Structure	In-situ concrete structure (GGBS)	Long design life requiring no maintenance
Internal party walls	215mm blockwork or 200mm in-situ concrete (GGBS)	Durable and requires a low level of maintenance.
Landscape		
Paving	Use of high quality and robust paving materials.	Requires a low level of maintenance.
Benches	Use of high quality concrete/pre-cast elements.	Requires a low level of maintenance.
Structure	In-situ concrete structure (GGBS)	
Internal party walls	215mm blockwork or 200mm in-situ concrete (GGBS)	

2.3 Waste Management

Measure	Description	Benefit
Operational Waste Management Plan	Plan to be provided by DLR Waste Management Department	Report to demonstrate how the scheme has been designed to comply with best practice.
Storage of Waste and Recyclable Household Waste	Waste Management Strategy: Grey, Brown and Green bin numbers agreed with DLR Waste Management Department	Aids in reducing potential waste charges

2.4 Health & Well being

Measure	Description	Benefit
Natural light and views	Site layout, separation distances and apartment layouts are designed to optimise natural light and views. Day-lighting and views provided to communal corridors	Reduces reliance on artificial lighting.
Accessibility	Apartments to be designed to comply with Part M and Part K.	Reduces the requirement for future adaptation.
Security	The project is designed to encourage passive surveillance.	Aids in reducing potential security/management costs.

2.5 Management

Measure	Description	Benefit
Home User Guide	Homeowner Manual to be provided to the occupant.	Occupants/Tenants are informed.

2.6 Transport

Measure	Description	Benefit
Public Transport	QBC on N11 Stillorgan Road with high frequency 46A and 145 Bus Routes. A number of other Dublin Bus routes in close proximity to the site – 7b, 7d, 46e, 47, 75, 84x, 116 and 118. Bus Éireann no. 133 and Aircoach no. 700.	Services provide access to a number of destinations. Proximity, frequency and ease of access in relation to the proposed development provides a viable and practical alternative to private car use.
Cycle storage	Robust and high quality cycle storage for long and short term use.	Accommodates cycle use and reduces the reliance on private car ownership.
Cycle Network	C1 cycle tracks on Stillorgan Park Road C2 cycle tracks on N11 Stillorgan Road	Allied with cycle storage, creates an alternative to private car ownership.
Site permeability	Site layout encourages pedestrian and cycle permeability.	Promotes cycling and walking.

PART 03

Building Investment Fund (Sinking Fund) Life Cycle

Ref	Element	Life Expectancy
1.0	ROOF	
1.1	Replacement of vegetation layer, substrate, drainage and separation layer	20
1.2	Replacement parapet details	18
1.3	Replace roof access hatches / AOV	20
1.4	Specialist Roof Systems - Fall arrest	20
2.0	ELEVATIONS	
2.1	Replace exit/ entrance doors	15
2.2	Replace windows	40-60
2.3	Recoat powder coated Finishes to balconies	10
2.4	Periodic replacement and overhauling of external fixings	5
2.5	Replace Balcony floor finishes	25
2.6	Recoat powder coated Finishes to gates	10
2.7	Replace rainwater goods	25
3.0	STAIR CORES AND LOBBIES	
3.1	Decorate Ceilings	5
3.2	Decorate Walls	5
3.3	Decorate Joinery	5
3.4	Replace fire doors	25
3.5	Replace carpets (stairwells & lobbies)	10
3.6	Replace entrance mats	5
3.7	Replace nosing	12
3.8	Replace ceramic floors tiles	20
3.9	Letter boxes	10
4.0	GROUND FLOOR CAR PARK	
4.1	Remove/Replace ceiling insulation	25
4.2	Repaint parking spaces & Numbering	7
5.0	M&E SERVICES	
5.1	General - Internal relamping	7
5.2	Replace Internal light fittings	18
5.3	Replace External light fittings (lights at entrance lobbies)	18
5.4	Replace smoke detector heads	18
5.5	Replace manual break glass units	18
5.6	Replace Fire alarm panel	18
5.7	Replace lift car and controls	25
5.8	Replace AOV's	25
5.9	Replace security access control installation	15
5.10	Sump pumps replacement	15
5.11	External Mains Water connection	20
5.12	Electrical Mains and Sub Mains distribution	20
5.13	Emergency Lighting	20
5.14	Overhaul and/or replace waste pipes & vents System designed for 60 year life.	20
5.15	Exhaust Air Heat Pump	15-20
5.16	MVHR Fan	15
5.17	MVHR Heat Exchanger	40
6.0	EXTERIOR/SITE	
6.1	Car Park Entrance Gate - motor renewal	12
6.2	Entrance Gate, pedestrian gate and bin store - redecoration	6
6.3	External boundary treatments - Recoat powder coated Finishes to railings	6
6.4	15 year cutback and thinning of trees	15

6.5	External handrails and balustrades	18
6.6	Replace external signage	18

Note: Specification to be finalized at Detail Design Stage