CLONGRIFFIN BUILDING LIFE CYCLE REPORT

CLONGRIFFIN, DUBLIN 13

August 2019

Gerard Gannon PROPERTIES

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1.0 INTRODUCTION

This Building Life Cycle Report has been prepared by Gerry Gannon Properties for the proposed residential development at Clongriffin, Dublin 13 with input from Conroy Crowe Kelly Architects, Wilson Architects, Downey Planning & Architecture, DK Partnership Consulting Engineers and Ronan McDiarmada & Associates Landscape Architects.

The purpose of this report is to provide an initial 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 to effectively manage and reduce costs for the benefit of the residents.

The Building Lifecycle Report has been developed on foot of newly revised guidelines for Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities) under Section 28 of the Planning and Development Act 2000 (as amended).

Within the new guidelines, new guidance is being provided on residential schemes. 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, as well as demonstrating what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of the residents."

2.0 DESCRIPTION OF PROPOSED DEVELOPMENT

Gerard Gannon Properties intend to apply for planning permission concurrently for three separate planning applications at lands in Clongriffin, Dublin 13, in accordance with the legislative provisions of the SHD process, such that two of which are SHD applications whilst the third application is being lodged to Dublin City Council.

The three applications cover 15 infill urban blocks in the centre of Clongriffin which include Blocks 3, 4, 5, 6, 8, 11, 13, 14, 15, 17, 25, 26, 27, 28 and 29 on a total site area of 11.4ha. The subject blocks have lapsed planning permissions under the parent planning permission for Clongriffin masterplan development (DCC Reg. Ref. 0132/02) which was granted in 2003. SHD 1 application includes Blocks 6, 8, 11, 17, 25, 26, 27, 28 & 29 with 1030 no. apartments and c.2,285m^2 commercial space. SHD 2 application includes Blocks 4, 5 and 14 with 500 no. apartments and c. 3,125m^2 commercial space. Clongriffin Planning Application includes Blocks 3, 13 & 15 with 420 no. apartments and c.17,317m^2 commercial space.

The overall development will consist of:

- Construction of 1950 no. residential units in 15 urban blocks which comprises 715 no. 1 Bed Apartments, 1073 no. 2 Bed Apartments, 113 no. 3 Bed Apartments and 49 no. Studio Apartments.
- Provision of 22,727.5 m^2 commercial/retail space which includes a community centre, men's shed, 3 no. Creches, 8 screen cinema, 1 no. Gym, 2 nr. 5-storey office buildings, 7 no. cafe/restaurants and 30 no. retail units;
- Provision of 1,358 no. additional car parking spaces and 3,525 bicycle parking spaces and 56 no. additional bicycle spaces within Station Square;
- Provision of two new urban parks, Grant Park and Railway Park
- Provision of new pedestrian and cyclist priority green link along Market Street connecting Beltree Park to Station Square
- All other ancillary site development works, site services, a sub-station, public lighting, signage, plant, bin stores, bike stores, boundary treatments and landscaping
- The Build to Rent blocks will have ancillary residential amenity facilities which include resident's amenity rooms, meeting rooms, laundry rooms, residents' gyms and concierge facility.

The proposed tenure for the development is a mix of Build to Rent, Private/Build to Sell and Part V Social Housing. Blocks 3, 5, 15 and 28 will be Private/Build to sell totalling 607 units. Blocks 4, 6, 13, 14B, 17, 25, 26 and 27 will be Build to Rent totalling 1130 units. There will be 195 Part V Social Housing Units located in Blocks 11, 14A and 29 (2 no. units proposed in Block 29).

The proposed development consists of infill blocks within the existing fabric of Clongriffin which was largely granted and built under the parent permission (DCC Reg. Ref. 0132/02). The lands are situated at the north eastern boundary of Dubin City Council jurisdiction. The overall site for the 15 blocks is bounded by the railway line with Fingal County Council lands to the east, the river Mayne and Fingal County Council lands to the north, existing housing to the north west and west and existing housing to the south of Main Street.

Much of the town infrastructure is already in place including roads, drainage, services and landscaping. The roads and drainage infrastructure around the subject blocks have been largely constructed under the Clongriffin parent planning permission, with the exception of a section of Station Street to the west of Blocks 8, 11 and 26. The main trunk drainage has been constructed along the alignment of Station Street to serve these blocks, however, the road and watermain have yet to be constructed.

The entire Clongriffin development drains by gravity to the Clongriffin Pumping Station on Marrsfield Avenue to the north of Clongriffin through a series of existing 225mm, 300mm and 450mm diameter foul sewers within the road network. The pumping station was designed and constructed to accommodate the full development of the Clongriffin lands and has been taken in charge by Dublin City Council. As part of the pre-connection enquiry with Irish Water, they confirmed that the pumping station had more than sufficient capacity to cater for the proposed development.

The subject lands are served by an existing storm water drainage system approved and constructed under the Clongriffin parent planning Reg. Ref. 0132/02. The surface water sewers constructed under the parent planning permission discharge to the attenuation pond at the northeast of the Clongriffin scheme before discharging to the Mayne River.

Under the parent planning permission, it was proposed to drain surface water runoff from the subject development directly into the existing surface water network. It is now proposed to incorporate a Storm Water Management Plan though the use of various SuDS techniques to treat and minimise surface water runoff from the subject blocks. SuDS devices employed in the design include:

- Source Control – On-site within each Block - permeable paving, green roofs and filter drains;
- Site Control – Public Roads within the development – permeable paving at on-street parking bays, bio-retention tree pits; and,
- Regional Control – Clongriffin attenuation pond located at Marrsfield Crescent to the northeast of the development.

The overall Clongriffin development is served by an existing watermain network designed and constructed under the parent planning permission Reg. Ref. 0132/02. The Clongriffin development is supplied by the 450mm/560mm North Fringe Watermain, which runs along Marrsfield Avenue at the north of the site. The existing network has been designed and constructed to accommodate the subject blocks, with capped ends provided to enable future connection. As part of the applications it is proposed to complete the loop of the 250mm trunk main from Station Street to Marrsfield Avenue, which is the primary connection from the North Fringe Watermain.

A comprehensive landscaping scheme is proposed for the development focusing a range of high quality outdoor spaces for residents which include public parks, communal amenity gardens within the blocks for resident's use, play areas with passive supervision within podium landscaped communal outdoor areas, extensive sedum roofs and roof gardens for residents providing for a wide range of resident's needs.

Informal meetings have been held with the ESB to assess service needs and each block will have 1 or 2 dedicated ESB substations depending on the size of the blocks, number of residential units and commercial area.

A de-centralised heating network will serve the new development which will be known as the Clongriffin District Heating Network (CDHN). District heating offers not only advantages in terms of higher efficiencies and reduced consumption but also on capital cost savings and reduced operating and maintenance costs.

The Clongriffin District Heating network allows for efficient use of thermal energy using mainly combined heat and power giving the project a 23% energy saving and a 38% carbon dioxide saving. The CDHN also provides the main input for compliance to the new Nearly Zero Energy Building requirements for both the residential (Part L 2018) and commercial (Part L 2017) elements. The CDHN will also fulfill renewable energy requirements under Part L 2017/18 thus saving in capital cost, roof space requirements and maintenance of photovoltaic and solar thermal installations. This has an added benefit of allowing extensive areas of roofs to be dedicated to extensive sedum roofs and roof gardens to aid SuDS and drainage measures.

Waste management facilities are provided for residents and commercial tenants within each block. The property management company will facilitate pick up requirements weekly with the waste collection company.

3.0 ASSESSMENT OF LONG-TERM RUNNING AND MAINTENANCE COSTS

3.1 Property Management of the Development

The overall development will benefit from the utilisation of a Planned Preventative Maintenance (PPM) programme. The PPM will be completed annually for each building to include the shared internal and external common areas. This programme will also detail the requirements to be met for the overall area to be developed resulting in a coordinated centralised plan. Consideration will be given to the ongoing maintenance of the buildings assets in an effort to protect the asset lifecycle and to identify when replacements/upgrades are required. Items covered will guide which services are required, the timing and number of occurrences of same. Typical PPM programmes will detail the timing of the visits for fire alarm maintenance, lift maintenance, the landscaping specification, waste management protocols, along with day to day cleaning requirements. It is expected that Build To Rent blocks will benefit from daily cleaning of the amenity and meeting rooms. Build To Rent will further be serviced by a concierge to facilitate residents requirements in relation to shared services.

3.2 Service Charge Budget

A service charge budget will be compiled to put in place funding requirements as costed in the Planned Preventative Maintenance programme and also in the Building Investment Fund report. The budget will be apportioned to unit owners with the collection of fees into dedicated Owners Management Company (OMC) bank accounts. The service suppliers will be discharged the payment for their services from these bank accounts. Monthly reports of operational and financial matters will be provided to the OMC executives and annual to the members at the general meeting.

4.0 MEASURES TO EFFECTIVELY MANAGE AND REDUCE COSTS FOR THE BENEFIT OF RESIDENTS

4.1 External Building Fabric Material Selection

Building materials proposed for use on block elevations and in the public realm achieve a durable standard of quality that will not need regular fabric replacement or maintenance outside general day to day care. The choice of high quality and long-lasting materials such as brickwork, render, steel and aluminium as well as hardscape in the public, semi-public and private realm will contribute to lower maintenance costs for future residents and occupiers.

This report reflects the outline material descriptions and examples of typical materials and systems used for schemes of this nature and their associated lifespans and maintenance requirements. All information is therefore indicative subject to detailed design development.

As the building design develops this document will be updated and a schedule will be generated from the items below detailing maintenance and replacement costs over the lifespan of the materials and development constituent parts. This will enable a robust schedule of building component repair and replacement costs which will be available to the property management company so that running and maintenance costs of the development are kept within the agreed annual operational budget.

A general outline of the primary materials used in the scheme can be found below. Detailed particular conditions to each block can be found in Appendix B.

Measure	Description	Benefit
Brickwork facade	Primary facade cladding material used. Lifecycle of 86 years. Mortar pointing has shorter lifecycle of 25-50 years.	Extremely durable, with low maintenance requirements. Preventative maintenance by monitoring plant growth and mortar joint deterioration ensures longevity of material.
Metal Cladding	Metal facade panels on galvanised metal rainscreen support system with typical life expectancy of 25 years.	Aesthetic impact, durability and weathering. Annual inspection and cleaning every 5 years.
Render	Minimal Use, Only to internal courtyard elevations in some blocks. Pigmented render system with lifecycle of circa 25 years. Cleaning of algae and other staining is recommended annualy by property maintenance team.	Finish does not require re-painting every few years.
Metal Roofing	Standing seam metal or similar with 40-70 year life span.	Durable, resistant to corrosion and minimal maintenance required.
Sedum Roof	Extensive Green Roof System. Average life cycle of 13-35 years. Life cycle extended with robust proven detailing and appropriate regular maintenance quarterly every year.	Attenuation for storm water runoff and less burden and maintenance of rainwater goods. Increased thermal and sound insulation to the building, aesthetic appeal and increased biodeversity.
Flat Roof	TPO or similar roofing membrane with 22-30 year lifespan installed to manufacturer's proven details and with warranty of up to 25 years. Appropriate protection for access will be provided to ensure maintenance of any	Proven roofing system with regular maintenance prevents needs for repairs and additional cost to residents.

	roof equipment will be carried out without any damage to the membrane. Regular maintenance checks by property maintenance team.	
Monopitch slate roof	At Block 11 and 29 only. Lifecycle of 80-100 years.	As well as general aesthetic appeal, this durable and long-lasting material requires minimal maintenance and repair.
Factory Finished Alu-clad Windows and Doors	All units double glazed with thermally broked frames. Lifespan of 44 years.	Minimal ongoing maintenance
Steel Balconies	Prefinished and capability to be manufactured off site	Minimal ongoing maintenance
Steel and Glass Balustrades	Powder coated steel finish	Requires minimal ongoing maintenance

4.2 Internal Building Fabric Material Selection

Measure	Description	Benefit
Floors – apartment stair cores and entrances	Selected anti-slip porcelain or ceramic floor tile with inset mat well at entrance doors as required. Life span of 20-25 years.	Low maintenance and easily cleaned.
Floors – lobbies/corridors	Selected carpet inlay on underlay. 13 years life span typically. Regular cleaning by property maintenance team.	Allows for flexibility for residents during the building lifespan.
Walls	Selected contract vinyl wall paper feature or selected paint finish with primer. Wall protection at heavy traffic areas with plasterboard substrate adjacent to lift cores where furniture moving will damage wall fabric. Finish lifespan of 2-10 years, regular maintenance required.	Attractive aesthetic for residents and flexibility to change appearance in the future.
Ceilings	Selected paint finish with primer to skimmed plasterboard ceiling.	Decorative and durable finish
Internal balustrades and handrails	Painted metal balustrade or proprietary glazed panel system face fixed to stair stringer/landing edge with polished stainless steel brackets and clamps to manufacturers installation details.	Durable finish
Internal Doors and Frames	Selected primed and painted solid internal doors with 31 year life span. All fire rated doors and joinery items to be manufactured in accordance with B.S. 476. Prefinished painted steel doors to car park service rooms. Glass and aluminium door system to glazed entrances.	Durable finish with regular inspection and maintenance.

4.3 Energy and Building Services

The energy proposal for Clongriffin is envisioned at a master plan level. A city district heating network (CDHN) for the overall infill site will provide a sustainable energy source for the 15 apartment blocks with approximately 1950 units and a further +/-27,727.5m2 commercial space. The CDHN will have the capacity to serve another 3 future blocks which would further increase the viability of the system.

The benefits which a city district heating networks offers not only includes higher efficiencies and reduced consumption but it also offers capital cost savings and reduced operating and maintenance costs. The Clongriffin CDHN will allow for efficient provision of thermal energy using mainly combined heat & power (CHP) giving the project a 23%-25% primary energy saving and a 38% carbon dioxide (CO2) saving. The CDHN also provides the bulk of the statutory renewable energy requirement under the new Part L 2017 and Part L 2018 better known as the NZEB (Nearly Zero Energy Building) requirements.

District heating systems are approximately 10%-15% more economical to install and run compared to conventional individual unit boiler / flue / gas service pipe work systems. The plant sizing of central equipment due to diversification is significantly lower than conventional systems which lowers the overall construction / capital cost. Since the primary energy savings from Combined Heat and Power/District Heating are accepted under Part L as a renewable energy provision and the fact that in most cases the CHP primary energy savings cover the Part L renewable energy contribution for both the residential and commercial elements it avoids the need for biomass, photovoltaic or thermal solar systems. With the CDHN providing most of the renewable it also frees up roof spaces for gardens and an extensive green roof network to aid SuDS and minimise surface water runoff from the subject blocks.

The following approach has been taken in the general design in terms of energy and building services to ensure costs for residents are minimised:

Measures	Description	Benefit
Nearly Zero Energy Building specifications (NZEB)	The new Part L 2017 and Part L 2018 will be applied for both commercial and residential units	Reduce primary energy by 60%-70% Reduce CO2 emissions by 50%-60%
BER targets	Residential A2 / A3 Commercial B1 / A3	Reduce primary energy by 60%-70% Reduce CO2 emissions by 50%-60%
Low façade thermal resistance	Ground floors : U =<= 0.110 W/m2K External walls : U <= 0.130 W/m2K Curtain walling U <= 1.20 W/m2K Party walls : U= 0.0 W/m2K (solid party wall) Roof : U <= 0.08 W/m2K Window & frame : U <=0.80 W/m2/K, Solar transmittance <= 0.66 External (unglazed) door & frame : U <= 1.0 W/m2K Cold bridging : U <=0.07 W/m2K ..	Good effect on thermal energy reduction
Airtightness	3 to 3.5 m3/m2.h @ 50 Pa maximum	Good effect on thermal energy reduction
General ventilation	Mechanical heat recovery will be employed	Good effect on thermal energy reduction
Heating / hot-water controls	Time clocks and thermostats for each heating / hot-water zone will be used	Good effect on thermal energy reduction
Pumping	Variable speed pumps will be installed	Good effect on electrical energy reduction

Energy source	City District Heating network with combined heat & power technology – see benefits outlined above.	Very effective energy & Co2 reduction. Reduced operating cost.
Lighting	100% LED lighting	Effective reduction of electrical energy
White goods	Use of A, AA or AAA rated white good appliances	Reasonable effective on electrical energy usage
TV / other social media equipment	Use of LED powered technologies	Reasonable effective on electrical energy usage

4.4 Landscape

The landscape site design approach is to provide a variety of high-quality durable streetscapes, urban parks and private communal recreation areas for residents within the blocks which feature bespoke seating elements and a range of quality tree, shrub and herbaceous planting. This encourages natural attenuation. Green roofs are provided at a rate of 70% across the blocks which is integral to the SuDS strategy for the scheme and reduces the burden on rainwater goods and subsequent maintenance. A maintenance strategy for the green roof systems, both extensive and intensive will be prepared and overseen by the property management company.

Hard landscape paving and decking materials will be robust and durable and installed using proven details to minimise maintenance requirements. High slip resistance paving materials will ensure safety for all. Play equipment will be durable and robust to ensure repair and maintenance are kept to a minimum.

Proven planting details for trees, shrubs and hedging will ensure growth will be robust and future maintenance as minimal as possible. Tree pit systems along the pedestrian and cyclist priority Market Street allow for flush details with the surrounding paving, elimination of litter trap and ease of maintenance. A landscape maintenance company will be retained by the property management company to ensure regular maintenance improves the quality of the living environment for all residents. A detailed pollinator plan is in place for Clongriffin also which will lead to increased biodiversity in the town. Further details of this can be found in the landscape architects report included as part of this application.

4.5 Waste Management

Each block has its own dedicated separate bin store which is typically located within the parking area. Residential and commercial tenants have separate dedicated bin store areas for security. This will be easily accessible by all residents.

Waste will be separated into green, brown and black bins with separate glass recycling facility. The waste management for the scheme will be competitively tendered to a waste collection contractor by the property managers to help minimise charges for residents.

4.6 Health & Well Being

Apartments have been designed to maximise natural daylighting which will reduce costs for residents in supplementing with artificial lighting. Buildings have been sited to optimise separation distances within the block as well as to neighbouring existing and future developments. The block design also aims to maximise daylighting potential for communal recreational areas as well as providing seating and play areas encouraging outdoor recreation for all residents to promote health and well being.

Apartment buildings and commercial spaces will comply with Part M and Part K allowing accessibility for all future end users.

Passive surveillance and passive security were key design principles for the scheme. The perimeter block design with overlooking to a central ground floor or podium level open space allows for passive surveillance of both the adjacent public realm and the communal outdoor areas. CCTV will be employed by the property management company. Fob secure access control to residential cores will be employed. Build to rent blocks will have a dedicated building manager on site to address security issues and act as an added deterrent to antisocial behaviour. Secure bicycle and car parking within a centralised area of the block with CCTV monitoring provide security to residents.

4.7 Transport

Measure	Description	Benefit
Site Planning	All of the proposed blocks are within a 5-10 minute walk of Clongriffin Train Station with access to the City Centre in 18 minutes. Station Square adjacent to the train station has a frequent bus service to the city centre and is designed as a high quality transport hub which is future proofed for improved transport plans such as BusConnects.	High quality public transport links give residents more options to be less reliant on car transport leading to improved commute times.
Site Permeability and Connections	The masterplan design for Clongriffin is for a highly permeable street network with a strong emphasis on pedestrian and cycle connections. Market Street Green Way designed for pedestrian and bicycle priority will provide a key link for existing and future residents between Beltree Park and Station Square. Secure bicycle parking is provided at Station Square.	Encourages alternate transport use including a combination of bicycle, walking and public transport.
Car Sharing	A number of GoCar car sharing locations will be provided throughout the scheme.	Reduces need for individual car ownership and costs for residents who do not need a car all the time.
E-Car Charging Points	E-car charging points will be provided within the ground floor or basement car parks.	Ensures long term facilitation of future car ownership needs as more people will own hybrid and electric cars.
Secure Bicycle Parking	Each block provides a high level of secure bicycle parking spaces for both residents and visitors.	Encourages the use of bicycles as a cost effective and healthier mode of transport.

4.8 Management & Tenure

A licenced Property Service Provider (PSP) will be contracted to the Owners Management Companies (OMC's) that are formed for the members. The PSP will ensure that the interests of the members are protected by executing the block management plans efficiently. The PSP will be responsible for the good management of other support services to include finance, administration, insurance, emergency assistance support, company secretarial and communications. As governed by the Multi Unit Development Act 2011 an OMC shall not enter into a contract in excess of 3 years with any supplier. The OMC by good practice will retender the services received at least each 3 years.

Janitors will be in place to complete handyman type services and ensure that the blocks are clean and presentable. A janitor will be onsite for the number of hours and at the times deemed most suitable for each block

The BTR blocks will be will have an operational onsite team. Each block during normal working hours will have a concierge that will manage residential move in, daily queries, room management and organise building maintenance. The responsibilities of the concierge will be supported by teams in place to cater for the cleaning and maintenance on the buildings on a daily/weekly basis as appropriate.

Blocks forming part of this development benefiting from internal communal amenity space have provision for additional residential services.

- Private meeting rooms
- Media Room
- Gym services
- Private rented guest services
- Bulky storage facilities
- Postal/Parcel storage

The buildings will be located in an area with easy access to a number of transport systems.

The area is very well serviced by bus routes and also Clongriffin train station is minutes walking from any of the proposed blocks.

It is proposed that for resident's transport convenience relationships will be in place with popular car rental providers (e.g. GoCar) and bike rental providers.

Appendix A

The BIF table below illustrates what would be incorporated in the calculation of a Sinking Fund:

Building Investment Fund (Sinking Fund)		
Ref.	**Element**	**Life Expectancy**
1.0	Roofs	
1.1	Replacement felt roof covering incl. insulation to main roofs	18
1.2	Replacement parapet, fascia details	18
1.3	Replace roof access hatches	25
1.4	Specialist Roof Systems - Fall arrest	25
1.5	Waterproofing details to penthouse paved areas	12
2.0	Elevations	
2.1	Brick Re-pointing	80
2.2	Metal Panels – recoating	25
2.3	Minor repairs to render areas	18
2.4	Replace exit/entrance doors	25
2.5	Replace rainwater goods	25
2.6	Replace balcony floor finishes	25
3.0	External Areas/Car Parking	
3.1	External handrails and guarding	18
3.2	Surface finishes	18
3.3	Check drains for accumulation of debris and other sediments	6
3.4	Repaint parking spaces and numbering	7
3.5	Replace bike stands	25
3.6	Replace access control at entrances	12
4.0	M&E Services	
4.1	Internal re-lamping common areas	7
4.2	Replace internal light fittings	18
4.3	Replace external light fittings	18
4.4	Replace smoke detector heads	18
4.5	Replace manual break glass units	18
4.6	Replace fire alarm panel	18
4.7	Replace lift car and controls	25
4.8	Replace AOVs	25
4.9	Sump pump replacement	15
4.10	Emergency lighting	20
4.11	Overhaul and replace waste pipes/stacks/vents	20
4.12	External mains water connection	20
4.13	External mains and Sub Mains distribution	20
4.14	CHP engine	12

Appendix B

The proposed layouts make the most efficient use of the Land. The buildings have been designed around the minimum number of Stair and Lift Cores in order to increase efficiencies and ensuring that service charges and maintenance costs faced by residents into the future are kept at reasonable levels.

Lifecycle costs are also determined by the durability and maintenance requirements of materials. We have selected the very highest standard of finishes across the project. Low maintenance cladding materials such as brick and self-finished render are proposed to minimize the impact of façade maintenance. Balconies are designed to be capable of fabrication off-site, resulting in higher standard of finish, reducing damage during construction and improved durability.

Block 3
The proposed building comprises of one commercial, and three residential blocks arranged around a central courtyard which is raised as a landscaped podium level to the first floor. Ground floor dwellings, retail, and ancillary accommodation occupy the street level. The building heights are five and six storeys. The building's form, shape, and length of each block varies with its relationship to the street. The residential blocks enjoy east-west, and south orientation whilst the commercial block brings civic scale and presence to a prominent street corner. The proposal has efficient use of circulation with lift and stair cores to each block accessed from the car park and the communal entrances at street level.

Block 4
The building proposal is designed on a triangulated site with the ground floor accommodation fronting three street patterns of varying character. Access to dwellings and private garages, retail, and community facilitates operates at street level. There are two main residential blocks at six storeys located to the north and south-east of the site. Three lift and stair cores operate in the buildings making efficient use of circulation with the layout. At first floor there is a raised landscaped podium level. The dwellings balconies and the landscaped podium enjoy good south and west daylight orientation.

Block 5
The building is designed around a central courtyard as a raised landscaped podium at first floor. Building heights vary on all four sides with six to seven storeys to the east and north, and three to four storeys to the south and west. The residential block's position, size and orientation allows for good daylight factor to the courtyard and the balconies overlooking the space. The fourth floor roof garden also enjoys great aspect to the south and Beltree Park to the west. The building has four lift and stair cores with retail and some dwellings accessed at street level.

Block 6
The overall form of the building is comprised of 5 blocks above podium level. These blocks are then further broken down by varying heights, setbacks and material selection. This selection of materials will enhance the buildings contribution to the urban fabric and allow Block 6 to weather elegantly overtime.

Block 8
The proposed building is located adjacent to the railway. The design comprises of three residential blocks of three, six and eight storeys. There is a raised landscaped podium at first floor. The three blocks enjoy good east-west, and south orientation. Dwellings and balconies have good aspect overlooking the landscaped podium and Railway Park to the south. The scale and location of the three and six storey blocks is appropriate to this amenity and the railway. The main residential block at eight storeys provides an important urban scale to the main thoroughfare to Station Street. There are four lift and stair cores, providing an efficient circulation layout.

Block 11
The building proposal is also located adjacent to the railway, south of Railway Park. The design is a C-shape plan layout. The building is continuous ranging in height from four to six storeys. The mono-pitch roof design gives scale to Station Street, alongside the neighbouring residential buildings. A rhythm of contrasting brick types and balconies divides up the building's form and appearance. The dwellings also have good orientation east-west and to the south. The landscaped area, play space and green roof pavilions offer an attractive aspect to the residences. The circulation is designed with wide communal access decks including planting areas and daylight voids providing privacy and attractive spaces.

Block 13
The building design comprises of four blocks, including one commercial and three residential buildings. These are arranged around a raised landscaped podium at first floor. The ground floor layout incorporates community facilities, retail, and direct access to dwellings and lift/ stair cores. The building heights are six and seven storeys. The form, shape, and length of each block differs depending on its relationship to the street and context. The residential blocks aspect is orientated east-west, and south. The central courtyard and Grant Park to the north provide good visual amenity to the residences. The dynamic form and location of the commercial block gives a prominent street corner good civic presence. Green roofs provide important biodiversity to the building design and centre to the masterplan layout.

Block 14
The proposed layout of Block 14 makes the most efficient use of the Land. Using resources in a sustainable way and minimises impacts on the environment. The scheme comprises of two blocks, A and B, of 6-8 storeys over basement. The two blocks are orientated to form a central landscaped courtyard providing for amenity and biodiversity. The scheme accommodates 288 apartments, a mix of studios to 3Bed units. The density of Block 14 is appropriate taking into account its central location in Clongriffin. The design has maximised the number of dual aspect apartments increasing the efficiency of the scheme.

A total of 8 stair cores are proposed for the two blocks serving an average of 36 apartments each. This limited number of stair and lift cores increases the efficiencies of the blocks and ensures that service charges and maintenance costs faced by residents into the future are kept at reasonable levels.

Block B is sited at the junction of Main Street and Lake Street. A feature corner of 8 storeys clad in stone addresses this location and creates distinctiveness. Lifecycle costs are determined by the durability and maintenance requirements of materials. Stone has low embodied energy, is readily available as a naturally occurring material and has exceptional durability for low maintenance and structural permanence. Other material finishes include brick, cladding, fibre cement cladding with Aluclad windows and steel and glass balustrades. Materials are durable, hardwearing and require little maintenance. The roof of Block B incorporates a sedum roof, green roofs are promoted as a means of achieving more sustainable buildings as they improve the durability of waterproofing materials, provide flora, fauna and reduce rainwater run–off. Also, less maintenance tends to be required for this type of roof, improving the Life cycle of the development.

Block 15
The proposal is a unique combination of residential and entertainment buildings. The design is split into the following elements. Apartments are accommodated in two buildings to the south and west fronting the street layout. A cinema complex is located to the east and opens onto the public realm at Station Square. The height of the residential buildings and cinema are six storeys. A raised landscaped podium at first floor separates the two building types. This space has south-facing aspect with overlooking dwellings and balconies and is further enhanced with planting and vertical growers which screen the cinema exterior.

Block 17
The proposal is a flagship building for the masterplan. This landmark design provides a gateway to the area. The building is split into two residential blocks. The seventeen storey tower exterior is a combination of glass and aluminium panels. The second block of seven storeys is a brick rectilinear form. The roof terraces to the sixth and seventh floors enjoys good east-west and south orientation. At street level there is access to ancillary accommodation, community facilities, retail, and lift/ stair cores circulation. The Bridge Street landscaped area connects to Station Square and the railway station.

Block 25
The overall form of the building is simple yet elegant. 10 units per core are access off a single core. The proposed building maintains a consistent architectural language throughout its design and utilizes a minimal material palette. It is set back from the street at the uppermost level to break down the form and lessen the visual impact of this block, this set back is then to be clad in zinc to articulate it further, from the rest of the block.

Block 26
Block 26 is a Potential landmark building providing height at axial termination points to Marrsfield avenue and Station Street. The building raises to 15 storeys overlooking the Lake Side Park. It reduces to 8 storeys at the East West end adjacent to the train line.

The design has maximised dual aspect /south facing apartment design around a single core. The core is centralised with each floor divided into separate halves with a shorter corridor serving fewer units. The break-down of the units in plan form is taken a step further expressing this break-down with a variety of materials and a variety of heights.

Block 27
The form of the block is informed by the arc created by referencing the centre of the adjacent Lake. The consistent use of brick along this curving elevation helps to emphasise the natural beauty of the neighbouring public realm. The size and shape of the site means that in is not possible to double stack apartments either side of a central corridor. In order to increase efficiencies and ensuring that service charges and maintenance costs faced by residents into the future are kept at reasonable levels, the revised proposal is based on 11 apartments around three cores.

Block 28
The proposal is located adjacent to the railway. The building design incorporates three residential blocks all to seven storeys. The central landscaped podium is raised to the first floor, with car and cycle parking below. Retail units and the residential lift and stair cores are accessed to Station Street. The three blocks have good aspect with east-west, and south orientation. The dwellings and balconies overlook onto the landscaped podium. The location and scale of the three blocks is appropriate to the amenity area and the railway adjacent. The main residential block to Station Street continues the important building edge and urban scale to the main thoroughfare.

Block 29
The design proposed is a modest four storey apartment building. The site is located to the south-west of the masterplan. The scale is appropriate to its context and neighbouring buildings. The building form and materials are contrasting brick types including a mono-pitch roof and cladding panels to the top floor. The building layout has good east-west, and south orientation including good aspect to living rooms and balconies. A single lift and stair core provides efficient circulation to all floors and dwellings.