Building Life Cycle Report

Residential Development
Woodtown
Ballycullen
Dublin 16

JFOCarchitects

CONTENTS

1. INTRODUCTION

This report has been prepared in accordance with section 6.13 of 'Sustainable Urban Housing: Design Standards for New Apartments. Guidelines for Planning Authorities' (July 2023), which states that any planning application for apartment developments "*shall include a building life-cycle report which in turn includes 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*".

This ensures compliance with the Multi-Unit Developments Act, 2011, which sets out legal requirements regarding the management of apartment developments, and consideration of the long-term running costs of the apartment building.

2. PROPOSED DEVELOPMENT DESCRIPTION

This Building Life Cycle Report relates to apartment units associated with a Large Scale Residential Development (LRD) in the townland of Woodtown, Ballycullen, Dublin 16. The lands are located to the east of Abbots Grove Park, south-east of Abbots Grove Avenue, south of Stocking Avenue and Stocking Wood estate, and west of White Pines Park.

The proposed development will consist of 502 no. residential units (108 no. 1-bed, 170 no. 2-bed, 162 no. 3-bed; 62 no. 4-bed) comprising 197 no. 2 storey houses (terraced / semi-detached / detached) (19 no. 2-bed, 116 no. 3-bed; 62no. 4-bed) and 28 no. 3 and 4 storey simplex/duplex apartment blocks providing 305 no. apartments (108 no. 1-bed apartments, 151no. 2-bed apartments, 46 no. 3-bed apartments). The proposed development also includes a crèche (c.475sq.m), public open space, car parking (surface/undercroft), bicycle parking, bicycle storage structures and lockers, bin stores, and 8no. ESB substations. Vehicular access to be provided from the existing spur road connection to Stocking Avenue to the west of the site, and via Stocking Wood Drive to the east of the site (with relocation of existing ESB substation and associated works to the existing hammerhead). Additional pedestrian only routes will be provided into Abbot's Grove Park and Stocking Wood Copse with future connections provided for into Stocking Wood Manor, White Pines Park and the future school site to the north of the application site. The proposed development includes all associated site development works (including site reprofiling, retaining structures and downing of ESB overhead lines), landscaping, boundary treatments and services provision.

3. ASSESSMENT OF LONG-TERM RUNNING & MAINTENANCE COSTS AS THEY WOULD APPLY ON A PER RESIDENTIAL UNIT BASIS

3.1. Property Management of the Common Areas

A Property Management Company would be engaged at early stages of the development to oversee the long term running and maintenance costs of the building's common areas on behalf of the Owners Management Company (OMC). The OMC will enter a contract with the property management company for no more than 3 years, after which it will be re-tendered, as prescribed by the PRSA.

Upon completion of Apartments, responsibilities of the Property Management Company will include:

- Timely formation of the OMC. All future purchasers will be obliged to become members of the OMC.
- Preparation of an annual Service Charge Budget for the development communal areas
- Equitable apportioning of annual operational charges in line with the Multi Unit Development Act (MUD) 2011
- Engagement of Independent Legal representation on behalf of the OMC in keeping with the MUD – including completion of Developer OMC Agreement and transfer of common areas.
- Estate Management
- Third Party Contractors procurement and management
- Accounting Services
- Corporate Services
- Insurance Management
- After-Hours Services
- Staff Administration

3.2. Service Charge Budget

The property management company has several key responsibilities including the compiling of the service charge budget for the development for agreement with the OMC.

The service charge budget covers items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security, property management fee, etc., to the development common areas in accordance with the MUD Act 2011.

This service charge budget also includes an allowance for a Sinking Fund, and this allowance is determined following the review of the Building Investment Fund (BIF) report prepared for the OMC. The BIF report once adopted by the OMC, determines an adequate estimated annual cost provision requirement based on the needs of the development over a 30-year cycle period. The BIF report will identify those works which are necessary to maintain, repair, and enhance the premises over the 30year life cycle period, as required by the MUD 2011. Each year at a General Meeting of members, the OMC will determine the contribution to be made to the Sinking Fund, having regard to the BIF report.

Note: the detail associated with each element heading i.e. specification and estimate of the costs to maintain / repair or replace, can only be determined after detailed design and the procurement/ construction of the development and therefore a BIF report is not included in this document.

4. MEASURES SPECIFICALLY CONSIDERED BY THE PROPOSER TO EFFECTIVELY MANAGE & REDUCE COSTS FOR BENEFITS OF RESIDENTS

4.1. Energy & Carbon Emissions

Measure	Description	Benefit
BER Certificates	A Building Energy Rating (BER) certificate will be provided for each dwelling in the proposed development which will provide detail of the energy performance of the dwellings. A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target an A2/A3 rating for the apartments this 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 /yea	A BER rating is a reduction in energy consumption and running costs
Passive Solar Design	Daylight in buildings creates a positive environment by providing connectivity with the outside world and assisting in the wellbeing of the building's inhabitants. Daylight also represents an energy source; it reduces the need for artificial lighting, particularly in dwellings where natural light alone is often sufficient throughout the day. The design intent is to maximise the use of natural daylight to enhance visual comfort and not compromise thermal performance. The proposed development will have glazing specified that will minimise thermal conduction (u-value) while allowing for sufficient daylight and maximising solar gain. Maximising solar gain within the limitations of thermal	Good level of daylight within the development will ensure that occupants rely less on artificial lighting and heating.

<table>
<tr><td></td><td>comfort allows for a portion of the space heating load to be met passively during the day.</td><td></td></tr>
<tr><td>Fabric Energy Efficiency</td><td>In order to limit the heat loss through the building fabric the thermal insulation for each of the plane elements of a new dwelling must meet or better the area weighted average elemental U-Values (Um) as specified by Part L, listed in Table 1 (column; Part L 2019).

<table>
<tr><th colspan="3">Table 1 Maximum elemental U-value (W/m²K)[1, 2]</th></tr>
<tr><th>Column 1
Fabric Elements</th><th>Column 2
Area-weighted Average Elemental U-value (Um)</th><th>Column 3
Average Elemental U-value – individual element or section of element</th></tr>
<tr><td>Roofs

Pitched roof
- Insulation at ceiling
- Insulation on slope

Flat roof</td><td>

0.16
0.16

0.20</td><td>

0.3</td></tr>
<tr><td>Walls</td><td>0.18</td><td>0.6</td></tr>
<tr><td>Ground floors[3]</td><td>0.18</td><td>0.6</td></tr>
<tr><td>Other exposed floors</td><td>0.18</td><td>0.6</td></tr>
<tr><td>External doors, windows and rooflights</td><td>1.4[4,5]</td><td>3.0</td></tr>
<tr><td colspan="3">Notes:
1. The U-value includes the effect of unheated voids or other spaces.
2. For alternative method of showing compliance see paragraph 1.3.2.3.
3. For insulation of ground floors and exposed floors incorporating underfloor heating, see paragraph 1.3.2.2.
4. Windows, doors and rooflights should have a maximum U-value of 1.4 W/m²K.
5 The NSAI Window Energy Performance Scheme (WEPS) provides a rating for windows combining heat loss and solar transmittance. The solar transmittance value g_{perp} measures the solar energy through the window.</td></tr>
</table></td><td>Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric, lower energy consumption and thus minimise carbon emissions to the environment.</td></tr>
<tr><td>ECAR Charging Points</td><td>E-car charging car park spaces and ducting for E-car charging has been provided. This will enable the management company the option to install E-car charging points within the carpark to cater for E-car demand of the residence. This system operates on a single charge point access card. A full re-charge can take from one to eight</td><td>Providing of E-car charging points will allow occupants to avail of the ever-improving efficient electric car technologies.</td></tr>
</table>

	hours using a standard charge point.	
LED Lighting	Lighting accounts for approximately 12% of all residential energy use. As homes become more energy efficient, lighting consumes an increasingly larger proportion of the total energy used. Selecting efficient fixtures and lamps helps reduce energy use. High-efficiency light fixtures and lamps use up to 75% less energy, produce less waste heat, and last longer than traditional incandescent lighting.	LED lighting will ensure that running costs are kept to a minimum. PIR sensors will be used in all circulation areas

4.2. Building Design

Measure	Description	Benefit
Daylight & Sunlight to Apartments	A Daylight & Sunlight Report has been included in the application. The report concludes that the proposed development has been successfully designed to provide recommended quality of daylight and sunlight exposure to the new dwellings and outdoor amenity spaces to the vast majority of its dwellings	Good daylighting reducing the expense of artificial lighting
External Lighting	External lighting will comply with the latest standards and achieve: Low-level lighting • Utilise low voltage LED lamps • Minimum upward light spill Each light fitting shall be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile.	Lighting will be designed to achieve the required standards, provide a safe environment for pedestrians, cyclists, and vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna. Having PECU allows for the optimum operation of lighting which minimizes

	Please refer to Waterman Moylan Consulting Engineers documentation for more information.	costs
Balconies and Openable Windows	Use of balconies & openable windows allow individuals to clean windows themselves	Reduces the cost and reliance on 3rd party contractors for cleaning & maintenance.

4.3. Materials

Measure	Description	Benefit
Implementation of the Design and Material principles to the design of the proposed development.	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and include reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'	Longevity, durability and low maintenance of materials
Brickwork to the building envelope	Refer to Materials & Finishes Report below	No maintenance required
Render to the building envelope	Refer to Materials & Finishes Report below	No maintenance required
Installation of aluminium triple glazed 0.8 U-value windows	Refer to Materials & Finishes Report below	Excellent airtightness and low maintenance

4.4. Landscape

Measure	Description	Benefit
Site Layout &	High quality landscaping both hard surface (for	Plenty of room for cycles

Landscaping Design	the cycle and pavements) and soft landscaping with planting and trees. The landscape design by NMP is fully compliant with requirements for Part M / K of the Technical Guidance Documents and will provide level access and crossings for wheelchair users and pedestrians with limited mobility. Please refer to NMP's 'Landscape Design Report' for further details on Landscaping Design.	and pedestrians. Wheelchair user-friendly.
Paving & Decking Materials	Sustainable, robust materials, with high slip resistance to be used for paving. Durable and hardwearing equipment (e.g. play, exercise, fencing etc.) to be used throughout. Please refer to NMP's 'Landscape Design Report' for further details on Landscape Materials.	Robust materials and elements reduce the frequency of required repair and maintenance.
Soft Landscape	Planting proposals have been formulated to complement the local setting as well as being fit for purpose in respect of private and public realm uses and spatial constraints imposed by garden sizes and the width of planting strips. Native tree species have been selected in significant numbers for planting along boundaries and across open spaces while non-native species have also been selected where spatial constraints are a factor.	Reduction in the frequency of required soft landscape maintenance
Sustainability & Biodiversity	Sustainability aspects of the proposed development include the retention of trees and hedgerows along site boundaries and the use of native trees where possible across the site. Other species have been carefully selected for compatibility with the size of available spaces which is an important factor in long term management of the housing estate. The overall objective is to enhance the biodiversity potential of the site in addition to providing	Enhanced sustainability of long-term estate management

	seasonal interest and variety. The existing mature trees running north-south through the site has been maintained and enhanced. Judiciously placed flowering shrub and groundcover planting have been included to further promote biodiversity (pollinator species attracting insects and birdlife) Please refer to NMP's 'Landscape Design Report' for further details on Sustainability & Biodiversity.	

4.5. Low Energy Technologies Considered

Measure	Description	Benefit
Mechanical Ventilation Heat Recovery (MVHR)	The proposed system for apartments will use mechanical ventilation with heat recovery (MVHR), which is a whole-house ventilation system that generally supplies fresh air to dry rooms and extracts stale air from wet rooms. Both air flows are to be ducted and driven by two fans, one on the supply side and one on the extract side. This will provide whole building ventilation as the mechanical extract fan will remove odours and excessive humidity to maintain a good air quality. A key component of the system is that a heat recovery unit is utilised to transfer heat from the warm exhaust air to the fresh air, achieving heat recovery.	Mechanical Heat Recovery Ventilation provides ventilation with low energy usage. The MVHR reduces overall energy and ensures a continuous fresh clean air supply.
ECAR Charging Points	E-car charging car park spaces and ducting for E-car charging has been provided. This will	Providing of E-car charging points will

	enable the management company the option to install E-car charging points within the carpark to cater for E-car demand of the residence. This system operates on a single charge point access card. A full re-charge can take from one to eight hours using a standard charge point.	allow occupants to avail of the ever-improving efficient electric car technologies.
Combines Heat & Power (CHP)	Combined Heat and Power, (CHP), is a technology being evaluated in the event a number of apartments remain in a single ownership. This technology generates electricity and captures the waste heat from the generation unit that can be used within the development.	CHP can achieve energy efficiencies by reusing waste heat from the unit to generate heat required for space heating & domestic hot water services in the apartment developments.
PV solar panels	PV Solar Panels are being considered which converts the electricity produced by the PV system (which is DC) into AC electricity The panels are typically placed on the South facing side of the building for maximum heat gain and in some instances, can also be used to assist the heating system.	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.

4.6. Health & Well Being

Measure	Description	Benefit
Natural Daylight	Design of the layout of the building has been optimized to achieve a good quality of natural daylight to the units.	Good level of daylight within the development will ensure that occupants rely less on artificial lighting
Accessibility	All units, including access and egress, will comply with the	Reduces the level of adaptation, and associated costs, potentially necessitated

	requirements of Part M/K	by residents' future circumstances.
Private Open Space	Provision of private open space	Facilitates interaction with outdoors, increasing health benefits.
Security	Passive surveillance is incorporated into the design CCTV for common areas Routine access fob audit	Reduce the risk of crime, littering within the scheme and reduction of potential waste charges.
Natural Amenity	A number of green spaces proposed throughout the scheme, connecting to large active and passive areas.	Facilitates community interaction, socialising and play – resulting in improved wellbeing

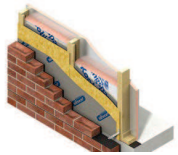
4.7. Waste Management

Measure	Description	Benefit
Construction & Operational Waste Management Plan	This application is accompanied by a Construction and Operational Waste Management Plan	The report demonstrates how the scheme has been designed to comply with best practice.
Storage of non-recyclable waste and recyclable household waste	Each Duplex and Simplex Unit has its own external bin store. Apartment block to have covered & locked bin storage adjacent to apartments Domestic waste management strategy: Grey, Brown and Green bin distinction.	Access to all residents to reduce the risk of littering within the scheme and reduces potential waste charges.

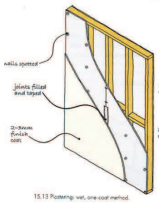
	Competitive tender for waste management collection.	
Composting	Addition of organic waste bin to be provided	Helps to reduce waste charges and the amount of waste going to landfill.

4.8. Transport & Accessibility

Access to Public Transport	The site benefits from excellent transport links and local amenities. A mobility plan has been included with the planning application documents.	The availability, proximity and ease of access to high quality public transport services contributes to reducing the reliance on the private motor vehicle for all journey types.
Cycling and Pedestrian Permeability	There is provision of dedicated pedestrian and cycle infrastructure within the site.	Ensures long-term attractiveness of walking and cycling to a range of local facilities.
Bicycle Storage	All apartments are provided with 1 bicycle space per bed space.	Accommodates the uptake of cycling and reduces the reliance on the private motor vehicle.

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
Walls - External & Internal	**External Brickwork:** Acheson & Glover Brick –from the Oakland or Stately Range Or similar proposed (OSP) Distinct colours dependin g on the Character Area - please refer to the Architectural Design Statement.	 	• Available in a variety of colours • Available in a variety of finishes • Factory made under quality controlled conditions	• Aesthetically pleasing • Durability • No maintenance • Free from soluble salt • Extremely low efflorescence levels • Consistency in supply quality • 100% renewable energy use in manufacture • 100% recyclable • Manufactured in accordance with BS EN 771-3:2011	• Low risk supply chain • Available in a multitude of colours • Uniformity of colour across all batches of production • Low lead times • Easy to attain the identical brick colour in the future, for example at the end of the 25 year period if the local authority wish to extend or adapt dwellings. • Manufactured on the Island of Ireland	• 60 years +	• No maintenance requirements
Walls - External & Internal	**External Rendering:** Kilsaran or Parex Dry-Dash System or similar proposed		• Dashed chippings are applied to a moist base coat layer of external plaster, creating a durable textured finish	• Aesthetically pleasing • Long life span and guarantee • Anti-graffiti • Low maintenance • Negligible moss growth when compared to other rendered finishes	• Readily available • Numerous suppliers • Anti-graffiti • Lower maintenance than a painted finish • No painting requirements • Less use of chemicals as opposed to painted finish	• 30 years	• No maintenance requirements
Walls - External & Internal	**External Render**		• 20mm traditional sand & cement plaster is a proven hard wearing robust material finished onto durable block walls.	• The cement product chosen to make up the render mix is an eco-efficient Irish product. In addition, the sand required for the mix will be procured from local quarries to each specific site.	• Render is easily maintained and capable of withstanding abuse. The installation of stainless steel beads and stop angles further extends the design life of the solution as they are more durable in adverse weather conditions than their plastic counterpart.	• 30 Years	• Repair surfaces if damaged
Walls - External & Internal	**Super-Structure Option 1:** Timber Frame Construction or		• Proprietary timber frame components constructed under factory controlled conditions and delivered and erected on-site	• U-Value of 0.15W/m^{2}K • Flexibility in the design • Irish Agreement Certificate • NSAI Certified • CE Declaration of conformity • FSC Certified • Excellent air tightness	• Rapid delivery • Suitability to unit types • Diversity in supply chain across the site • Proven construction method • Ability to provide non-load bearing internal walls • Excellent quality control • 3rd Party NSAI Certification	• 60 years	• No maintenance requirements

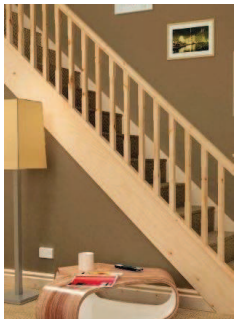
Note: Please refer to NMP Landscape Architects *Landscape Design Report* and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
	Super-Structure Option 2: Light gauge steel 2-D modular construction		• Light gauge steel frame, 2-dimensional panelised system, certified up to 10 storey construction of residential buildings. Panels are fabricated and assembled under factory controlled conditions and delivered and erected on-site under the same process as timber frame construction	• NSAI Certified • Complies with all relevant building regulations • U-Value of 0.15 W/m2k • Flexibility in design for future adaptability and lifetime homes • Complies with all relevant fire regulations • Provides excellent air-tightness	• Diversification in the supply chain • Rapid delivery • Quality construction and excellent quality control in the certification process • 3rd party NSAI certification	• 60 years	• No maintenance requirements
Walls - External & Internal	**Internal Walls:** Non load-bearing timber/ light gauge steel stud partitions with plasterboard either side (No. of layers to meet required Building Regulations Standard as appropriate) with tape and joint and 3 coat emulsion painted finish.		• Timber stud partitions with plasterboard either side (No. of layers to meet required Building Regulations Standard as appropriate) with skim coat and painted finish	• Flexibility and adaptability for tenants and authorities future requirements • Creation of the services void for M&E • Airborne sound insulation performance – Bedroom walls and kitchen and living room walls ≥ 38dB $D_{nT,w}$ • Fire resistant as required	• Rapid construction • Familiarity in design amongst sub-contractors • Proven construction method • Creation of a services void for M&E • Smooth and aesthetically pleasing finish • Easily cleaned	• 60 years	• Painting as required
Sills / copings	Killeshal Precast Sills or similar proposd		• Precast concrete window sill	• Durable • Low maintenance • Manufactured in accordance with BS 5642-1:1978+A1:2014	• High durability • Strength and robustness • Simple and clean cut aesthetics • Low maintenance requirements	• +60 years	• No maintenance requirements
Roof coverings	Roadstone Donard Roof Tile or similar proposed (Flat Concrete Tile)		• A smooth finished flat concrete leading edge roof tile	• Manufactured in compliance with I.S. E.N. 490: 2005 Concrete Roofing Tiles & Fittings • 100% Recyclable	• Rapid installation • Enhances the traditional design of the building • Aesthetically pleasing • Quality product • Durability	• 60 years	No maintenance requirements

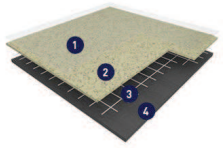
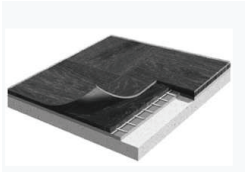
Note: Please refer to NMP Landscape Architects *Landscape Design Report* and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
Windows / roof lights / screens	**Windows:** Munster Joinery: Ecotherm Aluminum Triple Glazed Windows 0.8 U-Value (Or similar proposed)		• Aluminum Triple Glazed Windows 0.8 U-Value	• U-Value of 0.8W/m^{2}K • Triple glazed gas gilled window panes • Aluminium frame • Recyclable at end of life • Centrally operated espagnolette locking for enhanced security • Low maintenance • Lockable night vent position • Excellent airtightness and water tightness ratings	• Trusted Irish Supplier • Thermal performance • Aesthetically pleasing frame • Recyclable at end of life incorporating whole life design • Available in a range of RAL colours • Low maintenance • Excellent airtightness and water tightness ratings • Available in a number of design configurations • Enhanced security	• 30 years	• Cleaning as required
Doors	**External Doors:** Munster Joinery – Ecotherm doors with 5 point locking system (Or similar proposed)		• Powder coated aluminium profile door with an insulated thermal break and energy saving glazing	• FD30 fire door • Heavy-duty multi point locking system • Argon filled energy saving glass • Kite mark certified to PAS23 and PAS24 • U-value of 1.5W/m^{2}K • No letterbox • Safety glazing throughout • Excellent airtightness and water-tightness ratings • Low maintenance • Chrome ironmongery • U-Value of 0.8W/m2K	• Thermal properties • Trusted Irish supplier with a proven track record in housing • Availability in a range of RAL colours • Security and durability • Aesthetics • Secure by design • Enhanced security • Tried and tested on other social housing developments • Low maintenance	• 30 years	• Cleaning as required

Note: Please refer to NMP Landscape Architects Landscape Design Report and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
Doors	**Internal Doors:** Solid core timber doors		• Internal doors shall be solid core, paint grade timber doors with solid timber frame surround and painted finish	• Low maintenance • 100% recyclable • Level threshold for all unit types	• Standard sizing • Low maintenance • 100% recyclable • Colours can be changed in the lifetime of the door • Resistant to damage • Level threshold for all unit types enhancing accessibility and circulation within the dwelling	• 30 years	• Painting every 6 years
Stairs / galleries / balustrades	Timber stairs		• Pre-fabricated timber stairs. Delivered to site with risings and goings in-situ and rails and balustrades fitted on site and given a painted finish	• Low maintenance • Designed and Manufactured in accordance with Technical Guidance Document K of the Building Regulations	• Made under factory controlled conditions • Ease of maintenance • In keeping with the vernacular design of housing units in Ireland • Fully recyclable at the end of the life-cycle of the building unit • Range of suppliers available • Locally sourced materials and manufacture	• 40 years	• Cleaning by the tenant as required
Internal Glazing / Screens	**Bathroom:** Glass Bath/ Shower screen		• Where shower arrangements are provided over the bath, a shower screen will be provided using a glass shower screen with hinged wall fixing and integral seal that fits to the edge of the bath. This screen is to extend 900mm from the shower bath end and will be fitted with chrome type fixings.	• Low maintenance • Easily cleaned by the tenant • Glass component is 100% recyclable at the end of its life cycle	• Aesthetics • Ease of maintenance • Ease of cleaning for the tenant • Whole life design and recyclability • More durable than a curtain on rail	• 20 years	• Cleaning by the tenant as required

Note: Please refer to NMP Landscape Architects Landscape Design Report and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
Floor finishes	**Bathrooms:** Gerflor Tarasafe or similar proposed		The Gerfloor tarasafe is a heavy duty non slip vinyl flooring comprised of three layers: • Pressed wear layer & PUR treatment • Glass grid • Compact backing	• Permanent slip performance of R10 (high slip resistance even when wet) • Treated with PUR for easy maintenance • Reaction to fire classification Bfl-s1 • Indoor air quality certified	• Durability • Hard wearing • Easily cleaned • Enhanced slip resistance • Availability in a range of colours • Allowing for improved indoor air quality • Hygienic • PUR surface treatment helps stain resistance	• 15 years	• Cleaning by the tenant as required
	Kitchens: **Vinyl Sheet flooring to Kitchens – Gerflor Agrippa 3mm or similar proposed**		Agrippa is a practical slip resistant vinyl flooring with cushioned foam backing, making it comfortable underfoot with a sound rating of 19dB. It is slip resistant and has a hygienic and easy to clean Pureclean surface that doesn't trap dirt and needs less water and detergent to clean.	• Slip resistant finish, even when wet • Sound rating of 19dB • Pureclean surface for easy maintenance and cleaning	• Durable • Hard Wearing • Easily Cleaned • Non-slip surface • Easy to clean surface • 100% recyclable • Hygienic finish	• 15 years	• Cleaning by the tenant as required
Painting / clear finishing	**Internal Walls:** Dulux / Fleetwood/ Crown - Exact colour to be chosen at detailed design stage		Water-based environmentally friendly paints	• Environmentally friendly • Low solvent • Low VOC paint	• Environmental considerations • Trusted supplier • Availability in a range of colours • In compliance with schedule 3 works requirements • Oil based gloss and eggshell paints will **not** be used	• Re-coat required every 6 years	• Re-coat every 6 years
Fitted kitchens and wardrobes	Kitchens supplied by Comet and Cherrymore or similar proposed. Please note white goods and kitchen appliances are not included. Extractor fan is included		• Laminated faced timber kitchen with chrome handles. Worktop to be laminated face furniture grade chipboard. Available in a range of colours.	• Low maintenance • 100% recyclable at the end of its lifecycle • Kitchen furniture to achieve a maintenance cycle of 30 years • Sink base units to be constructed from moisture resistant plywood • Kitchen doors as per specification set out in schedule 3 works requirements section 4.12.12 • Shelves to be glued and dowel fixed • Carcasses to be as per specification set out in schedule 3 works	• Tested & Trusted supplier • Manufactured in Ireland • Low maintenance requirements • Easily cleaned • 100% recyclable at the end of the life cycle • Aesthetically pleasing, modern kitchen units	• 30 years for kitchen furniture • 20 years for cabinets • 25 years for carcass and shelves	• Daily cleaning by the tenant

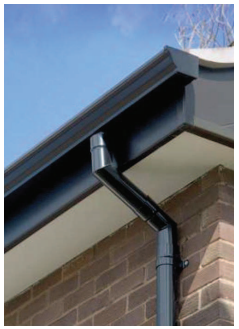
Note: Please refer to NMP Landscape Architects Landscape Design Report and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
				requirements section 4.12.9			
Sanitary appliances	**Bathrooms:** **Sonas Sanitary Ware or similar proposed** **WC**- Strata Close Coupled, Dual Flush WC with 6/4 L flush button **Wash Hand Basin** – Strata 485 & 530, with Strata Pedestal. **Taps** – Sonas Standard CP Metal Head Basin Taps.MHO1CP **Bath** – Universal Vitreous Enamel Steel	   	• All sanitary ware will be supplied by SONAS as this is the preferred brand of our facilities management provider d SISK have a trusted relationship with SONAS, whose sanitary ware is low maintenance and high performing. Images describing each of the proposed sanitary ware units and outline descriptions are given in the “Proposed product” column. Sisk Living also have experience in using this sanitary ware on a number of social developments, and are very happy with it’s selection.	• Low maintenance • WC’s are dual flush and have low water requirements • The combined water usage for all sanitary ware is approximately 110 litres/person/day (Water calculator online) which falls below the maximum allowable of 125 litres/person/day, when taking account of TGD’s and requirements for the Home Performance Index • Proposed shower mixers have a lid handle ensuring ease of use for persons of all ages and capabilities • Where required the SONAS Document M compliance packs will be used for WC and shower areas • CE certified	• Sisk Living’s experience with using and managing the products • Low maintenance requirements • Low water usage • Ease of cleaning for the tenant • Ease of use for the tenant • Robustness and durability • Supplier is located in Dublin • Supplier has been in business for 40 years, providing assurance that they will be here in the future, supplying replacements for damaged sanitary ware and maintenance advice • Availability of spare parts if required • Dedicated after sales support team • Consideration for certifying the scheme under the home performance index	• 20 years	• No maintenance requirements. • Daily cleaning required by tenant

Note: Please refer to NMP Landscape Architects *Landscape Design Report* and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
	Bath Taps – Cosmos Bath Shower Mixer.						
	Doc M WC- Sonas Close Coupled DocM pack.						
	Doc M Shower – INTA Doc M Shower Pack Exposed.						
	Kitchen Taps – Kitchen taps and sinks to be supplied by the kitchen supplier. Kitchen tap will be as per image reference – "Miami Chrome" by Reginox						
	Kitchen Sink – The kitchen sink will also be supplied by the kitchen						

Note: Please refer to NMP Landscape Architects *Landscape Design Report* and drawings for details of external and public realm materials & finishes

Element	Proposed product	Image reference	Outline description	Key performance characteristics	Reasons for selection	Life Expectancy	Key Maintenance requirements
	supplier and will be as per the attached image reference – "Daytona Inset" by Reginox						
Rainwater goods	Aluminum Gutters & Downpipes and fascia and soffits or similar proposed		• Powder coated black aluminium gutters and down pipes. Overflow spouts shall be fitted to all parapet gutters to give a visual indication of blockage.	• Provision for thermal movement • Resistant to damage • Easy maintenance • 100% recyclable • Rust resistant	• Low maintenance • Resistance to damage • Non-rusting • 100% recyclable • Availability of local suppliers and installers • Aesthetically pleasing • Higher life expectancy then PVC	• 40 years	• Cleaning as required • Clearing of gutters and down pipes of debris every 2 years
Ironmongery	**Proline Ironmongery** **Internal Door Handles** – Brushed stainless steel mitred "D" lever **Hinges** – Brushed stainless steel	 	• On the advice of our facilities management team (Sensori) we have chosen to use Proline Architectural Ironmongery on all dwelling units. SISK have a trusted relationship with Proline, whose ironmongery products are low maintenance and high performing as well as aesthetically pleasing and easy to use. Images describing each of the proposed ironmongery and outline descriptions are given in the "Proposed product" column. Sisk and Sensori	• Low maintenance • All products are CE certified • 100% recyclable • Door handle satisfies the dimensional reccomendations contained within BS8300:2009 for ever handles • Door handle fire tested to BS 476:Part 22:1987 • Door hinges are 1hr fire rated • Door hinges are ball bearing hinges	• Low maintenance requirements • Ease of cleaning and maintaining for the tenant • Ease of use for the tenant • Robustness and durability • Supplier is located in Dublin • Availability of spare parts if required • The company has been in business for over 12 years, providing assurance to the supply of spare parts (if required) in the future • Aesthetically pleasing and modern ironmongery and hardware	• 15 years	• Cleaning as required • Tightening of fixings once yearly as required

Note: Please refer to NMP Landscape Architects Landscape Design Report and drawings for details of external and public realm materials & finishes