Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

EMPLOYER'S REQUIREMENTS

FOR

PROVISION OF APARTMENTS

IN

DUBLIN CITY COUNCIL'S ADMINISTRATIVE AREA

FOR

DUBLIN CITY COUNCIL

SECTION 1

OUTLINE PROJECT AND SCOPE OF WORK

1. OUTLINE OF PROJECT AND SCOPE OF WORK

1.1 Introduction

The purpose of this document is to communicate the Employer's Requirements in respect of the provision of New Apartments for Dublin City Council lands within Dublin City Council's Administrative Area on a number of separate project sites.

This document may be subject to amendment, and the final version together with any additional information will be issued to shortlisted applicants at Stage 2.

Dublin City Council Housing department requires the provision of new, quality apartment units which must:

- Deliver quality apartment accommodation for families in the form of three bedroom, 6 person units, two bedroom, 4 person units, and one bedroom, 2 person units. Apartments can be a mix of single, dual and triple aspect, and single storey or duplex units. In some locations own door access units may be desirable, or a requirement. All apartment buildings should sit comfortably in context with the surrounding existing established housing patterns, or in accordance with the current Dublin City Council Development Plan.

- Be of robust permanent construction and have a life span of 60 & 25 Years as set out below in section 2.9: Design Life.

- Be constructed of suitable quality materials to ensure maintenance requirements are minimised over time and take into account Dublin City Council's requirements set out in Section 2: Apartment Requirements.

- Be constructed using robust materials, in full compliance with the Building Regulations (see below).

- Conform to all relevant Department of Environment standards and codes of practice applicable to current Apartment developments.

  Be designed and constructed in accordance with all applicable Irish Building Regulations, codes and standards, and the requirements of the Building Control (Amendment) Regulations 2013-2015.

Building Regulations 1997-2017 (SI 497 of 1997 as amended – refer to www.environ.ie for latest)
Part A –Structure - 2012
Part B – Fire Safety - 2017
Part C – Site preparation and resistance to moisture - 2004
Part D – Materials and workmanship - 2013
Part E – Sound -2014
Part F –Ventilation - 2009
Part G – Hygiene - 2008

Part H – Drainage and wastewater disposal – 2016
Part J – Heat producing appliances – 2014
Part K – Stairways, ladders, ramps and guards – 2014
Part L – Conservation of fuel and energy - dwellings - 2011
Part M – Access and use - 2010

- Meet any additional requirements which exceed the Building Regulations and DECLG Best Practice Guidelines, in order to comply with the provisions of the Dublin City Development Plan, 2016-2022, and as listed in Section 2: Apartment Requirements of this document.

- Be certified as fully compliant with all applicable Irish Building Regulations, statutory codes of practice and other requirements as set out in the tender documents on completion of the development by the Assigned Certifier and the Builder in accordance with the Building Control (Amendment) Regulations (S.I. No. 9 of 2014, S.I. No. 243 of 2015, and those in force at the time of entering into contract).

The above criteria must inform the Developer's approach to the completed development and the individual apartment units, and are core objectives of the delivery of the New Apartments to be provided on these projects.

This document contains performance specifications for the new apartments and the various elements which combine to form a modern sustainable and liveable home & community for the long term.

The room data sheets collectively set out the requirements of the Employer of how the Apartments are to be designed, constructed, and finished.

It should be noted that room data sheets will be issued at Stage 2 to shortlisted applicants.

1.2 Programme

The successful applicant must be in a position to deliver the project/s to a programme which must be submitted at Stage II by the shortlisted developers, and which may form part of the marking process.

1.3 Location of Site

The sites identified in this competition for the provision of New Apartment Unit (including a Social Housing element) are within Dublin City Council's Administrative Area.

Individual site locations will dictate parking requirements, and the current DCC Development Plan standards should be applied for parking provision, location, basement requirements, etc.

Roads and streets, which define the boundaries of the subject sites for development will contain services e.g. water, foul and surface water drainage, gas, electricity, telecoms etc. Details of all existing services (where available) will be provided in Stage 2 documentation for shortlisted applicants for the Works Contract.

1.4 Scope of works

The Developer's scope of work for the project is as follows:

The Developer must:

- Provide a full design team that will design and certify the entire project in accordance with the provisions of the Building Control Amendment Regulations 2013-2017, all DCC Development Plan standards, DECLG Apartment Design Guidelines, and to DECLG size standards
- Design and install suitable superstructure with all necessary service connections, insulation, radon and damp protection, etc. in accordance with the Irish Building Regulations, as required.
- Design and complete all Mechanical and Electrical installation throughout.
- Complete all external and internal finishes.
- Complete all mechanical and electrical installations in accordance with the relevant service providers' standard requirements and Codes of Practice, and arrange and deliver connections to all necessary utilities in accordance with the Irish Building Regulations.
- Install all bathroom and kitchen fittings and finishes and ensure all services are properly and safely completed and commissioned in accordance with the requirements of Irish Water and the Irish Building Regulations.
- Provide all paving, hard standing, parking areas, roads, paths, etc., contained within the site boundary of the site to the appropriate Dublin City Council and NRA Road standards.
- Ensure that all testing is completed in accordance with all service providers standards and codes of practice, and to be fully certified by installers and testers as compliant on completion of testing.
- Provide all required testing Certificates to the Assigned Certifier as works and testing progress.
- Complete external public and private open spaces and services within the curtilage of the Apartment development including boundary treatments and landscaping in accordance with the Planning Permission for the development, and the DECLG Design Guidelines.
- Certify and complete the project in accordance with the new Building Control (Amendment) Regulations 2013-2017.
- Hand over completed apartment blocks & individual apartments fit for permanent residential occupation.

The Developer will be required to complete all necessary works, including but not restricted to the construction of such roads, paths, paving and external works, landscaping, ramps, utilities, services, etc. as may be required to facilitate this development as described above, and in accordance with all Stage II (Invitation to Tender) documentation

1.5 Certification & Documentation

The Developer must provide sufficient documentation to verify that all residential units within the development conform to the requirements and intent of these Employer's Requirements.

Sufficient information must also be given to demonstrate how the following can be achieved:

- Identification of Materials & Products proposed in Developer's Design & Construction of the Residential Development
- How operation, maintenance, cleaning, and replacement of the materials, finishes, and systems contained within the development can be undertaken sustainably and safely.

Prior to entering into contract, the Developer must submit a document schedule listing the specific documents it proposes to provide to meet these requirements.

This document schedule must include document numbers, title and proposed submission date. All documents must be produced in a timely manner, and at the latest, prior to handover.

All documentation must be in English.

S.I. units must be used in all cases.

1.6 SAFETY FILE

The following is a non-exhaustive list of items to be included in the Health & Safety File on completion of the apartment development, and all items on this list must be included as a minimum standard for the Health & Safety File which shall be submitted in both hard and soft copy versions to Dublin City Council on completion of the Social & Affordable Housing elements of the development. All apartment blocks must be included, and all apartment types must be included, along with all landscape – site layouts for all services connect to the development:

- A complete set of Architect's as built drawings including site plans, plans, sections, elevations, details, etc;
- A complete set of Civil & Structural Engineers as built drawings including plans, sections, elevations, details, mains services layouts, etc;
- A complete set of Fire Safety Certificate documentation, including all drawings, plans, sections, elevations, and all reports as submitted to achieve approval for the Fire Safety Certification of the site, building, block & apartment types.
- A complete set of Mechanical as built drawings for the apartment development on a Block by Block basis, including pipe layouts, sizes, positions, equipment details, tank details, meter rooms, locations of all isolation switches, service duct locations and layouts, etc., full technical

details, manufacturer details, photographic location details of all components which comprise the systems within the development, and including maintenance requirements for the systems and components;

- A complete set of Electrical as built drawings for the apartment development on a Block by Block basis, including individual panel layouts and locations, sub-station details, site electrical service ducting & wiring runs, cable tray details & positions, Public Lighting layout, amenity lighting layouts, etc., all light fitting locations and details, all power outlet locations and details, all electrical switch positions including manual, automatic, seasonal, etc. All fire Alarm and Detection systems installation layouts and details, full details of CCTV camera locations, wiring routes and conduit layouts, Security hub location and layout, details on connection to off-site monitoring, and modems hubs, etc including full technical details, manufacturer details, photographic location details of all components which comprise the systems as installed, and including maintenance requirements for the system and components;

- A complete set of Mechanical Ventilation / Air Conditioning as built drawings, including all details of boiler layouts, pump positions, valve details, pipe layouts, insulation materials and details, radiator positions & details, etc. etc;

- Full technical details, manufacturer details, photographic location details of all components which comprise the Mechanical Ventilation system, including maintenance requirements for the system, components, filters, etc.;

- A complete set of Hot & Cold Water system as built drawings for the apartment development on a Block by Block basis, showing pipe runs, insulation materials, valve positions, water storage tanks, cisterns, calorifiers, water pump details & positions, isolation switches, electrical connections, overflow pipe locations, expansion vessel locations, back-up power supply provisions for any Break Tank rooms, etc;

- Full technical details, manufacturer details, photographic location details of all components which comprise the Hot & Cold Water system, including maintenance requirements for the system and components;

- A complete set of Heating system as built drawings, showing heat generating equipment (boiler, heat pump, panels, etc.) all pipe runs, insulation materials, valve types locations and positions, water pump details, radiator positions, any automatic slam shut valves, shut off valves, etc., all electrical connections, isolation switches, pressure vessels, storage tanks, blow down valves, overflow pipe positions, expansion vessel locations, etc;

- Full technical details, manufacturer details, photographic location details of all components which comprise the Heating System, including maintenance requirements for the system and components;

- A complete set of security wiring system as built drawings showing alarm panel location, keypad location, contact / sensor locations, etc. etc., including full technical details, manufacturer details, photographic location

details of all components which comprise the system, and including maintenance requirements for the system and components;

- A complete set of Fire detection, CO detection, smoke / heat detectors & alarm system as built drawings showing alarm panel location, detector locations, sounder locations, etc. etc., including full technical details, manufacturer details, photographic location details of all components which comprise the system, and including testing carried out and certification of completed systems prior to handover, along with maintenance requirements for the system and components;

- Fully detailed technical literature for all sanitary ware to include full technical information, drawings & details, material details, plumbing connector details, components, etc.

- Installation, test and completion certificates for all pipe work, wiring, systems, plant and equipment installed in the buildings and individual apartments;

- Maintenance procedures and schedules for the buildings & its systems, plant and equipment;

- Operation manuals / procedures for the systems, plant and equipment installed in the buildings, including emergency procedures for shutting down suspect installations in the buildings, or in the event of Fire;

- Operation / maintenance manuals for all components in the building;

- Full details of all systems, plant and equipment installers & maintenance contact names and telephone numbers including 24 hr. callout numbers in case of emergencies;

- Full details of any hazardous materials present in the building, the locations of same, and methods for safely working in those areas, and removal or replacement procedures to be followed;

- Whilst the design of confined spaces, and necessity for maintenance being carried out in such areas is discouraged, and should be designed out wherever possible, full details of locations, dimensions, and nature of any such confined spaces contained in the development must be provided, along with method statements / and safe working procedures for working on any maintenance issues in those areas;

- Full details of any areas of high risk in terms of maintenance in the development, e.g. working at height, flat roof repairs & maintenance, etc. etc., and method statements / safe working procedures for working on maintenance in those locations.

1.7 Building Regulations – Minimum Requirements

Building Regulations: The Irish Building Regulations will apply in full to the proposed development as listed in the table below:

Building Regulations 1997-2017 (SI 497 of 1997 as amended – refer to www.environ.ie for latest)
Part A –Structure - 2012
Part B – Fire Safety – 2017 – Volumes 1 & 2
Part C – Site preparation and resistance to moisture - 2004
Part D – Materials and workmanship - 2013
Part E – Sound -2014
Part F –Ventilation - 2009
Part G – Hygiene - 2008
Part H – Drainage and wastewater disposal - 2016
Part J – Heat producing appliances - 2014
Part K – Stairways, ladders, ramps and guards -2014
Part L – Conservation of fuel and energy - dwellings - 2011
Part M – Access and use - 2010

The full requirements of the Building Regulations will also be applicable.

For products or systems that do not fall within the scope of existing standards, or deviate from established norms, third party certification must be used to demonstrate compliance with the Irish Building Regulations.

The Developer must comply with all relevant & applicable EN Standards & Codes of Practice, Irish Standards and British Standards (or equivalent) are applicable where no equivalent EN standard exists.

All Local Authority Codes of Practice are applicable, along with all statutory regulations appropriate to the provision of Housing.

All Codes of practice, standards, and requirements of the statutory service providers (ESBN, GBN, Irish Water, Dublin City Council, Eir, etc.) are applicable in full to the development.

1.8 Risk Assessment

The Developer shall prepare and issue to Dublin City Council's Technical Representative a full risk assessment for the completed Apartment development and all individual apartment types within the overall development detailing all risks to maintenance personnel, confined spaces, access to maintenance and working areas, emergency evacuation procedures etc.

The Risk Assessment document must set out clearly particular hazards which remain and will affect the ongoing management and maintenance of the apartments being provided to Dublin City Council, along with full details of what safety procedures have been considered and must be employed to ensure any such risks identified have been reduced of eliminated as appropriate.

SECTION 2

APARTMENT REQUIREMENTS

2. APARTMENT REQUIREMENTS

2.1 General

All apartment units must comply with the Building Regulations and other statutory approvals as noted above. These apartments are to be included in Dublin City Council's standard housing stock. All requirements as set out in this section must be included in the Developer's proposals.

The quality of the overall design is key to the long term success of the development not only with regard to maintenance and management of the development, but also in the interests of the residents and the quality of the environment that they will inhabit.

Kitchen, Dining and Living room areas should be designed to have as much natural light incorporated into the design as possible and take into account the orientation of the sun in relation to the main living areas within individual apartments.

The materials used must be robust and durable but also create a pleasant place to live for the residents. They should be made from sustainable and/or renewable resources and not present a health risk for the residents.

N.B. Developers may propose alternative materials & products where they have established and developed standard manufacturing methods, tested, and approved systems and / or products which have third party approval or certification.

Please find below more detail in relation to the performance specification for this development. Room Data Sheets will be provided at Stage II of the procurement process giving further information and details of the above. These should be read in conjunction with the employers requirements.

The Developer should note that the Room Data Sheets represent Dublin City Council's minimum requirements and the Developer must also allow for the adequate and safe provision of circulation, electrical / mechanical plant space, and access for maintenance of all services to all apartments units throughout the development including all building services.

2.2 Site Development Works:

The site development must include for the following for each apartment, (please note, this section should be read in conjunction with the civil engineering specification and documentation as issued at stage II of this competition):

- Landscaping and planting of open space to be prepared by a qualified Landscape Architect employed by the Developer.
- Topsoil and seeding to all private open space / garden areas throughout the development
- 2000mm high brickwork boundary walls shall form the main boundary walls to the development, with internalised boundaries to be completed in 2M high concrete blockwork walls with brick cappings on DPC.

- All solid, permeable, or monolithic Paving, paths and topsoil and seeding to all landscaped and public areas to be in accordance with the Landscape Architect's design proposals, and as agreed by Dublin City Council technical representative, prior to submission of the Planning application for Permission for this development.

- 1200mm high painted, galvanised steel post and bar railings to be employed to all public areas where railing is preferred to solid walling. Steel bars / rails to be a minimum of 10mm galvanised solid steel, all to Landscape Architects proposals, and in accordance with the Planning Permission to be granted for this development

- Individual gates to ground level apartment private open spaces, should be in the order of 1200mm high minimum 10mm solid steel bar railings in brickwork / concrete blockwork Piers / walls, with 100x100mm painted galvanised steel gate posts to take painted galvanised steel garden gates.

- Any electrically operated / automatic gates in the development are to be structurally sound, and designed, detailed and certified in compliance with the Building Regulations by specialist to all relevant design and construction Standards and Codes of Practice. All necessary precautions are to be included to prevent trapping of persons, limbs, arms, fingers or toes in the operation of the gate, and provision is to be made for emergency stopping and release of the gates in operation in the event of an accident.

- Minimum 150mm deep x 1200mm wide reinforced concrete paved apron to entire perimeter of all apartment blocks, to Landscape Architects design and construction details.

- All car parking areas are to be designed and laid out in accordance with the Landscape Architects design and construction details, using robust and durable materials suitably textured to provide slip resistance relevant to use proposed

- Car Parking bays are to be a minimum of 2500mm wide by 5000mm long, with appropriately located disabled parking bays to comply with Building Regulations Part M, and all other relevant design standards.

- Visitor car parking provision is to be included in accordance with current Dublin City Council Development Plan standards, and recommendations.

- All surface water, and foul drainage outlets and connections to each apartment building within the development are to be designed, installed & certified as compliant with Irish Water Code of Practice, and the Greater Dublin Sustainable Drainage Code.

- All surface water, and foul drainage connections from the development site to any mains drainage lines are to be designed, installed & certified as compliant with Irish Water Code of Practice, and the Greater Dublin Sustainable Drainage Code.

- All water supplies to each apartment building is to be designed and installed strictly in accordance with the Irish Water Code of Practice

2.3 Plan Form & Shape

The plan form and shape of the individual apartment types, and the entire apartment blocks within the development must take account of Dublin City Council's preferred requirements regarding unit mix ratios as set out in the DCC Development Plan and numbers of each apartment type required.

Design proposals should include a design rationale covering the site access, site layout, orientation of each block within the site, along with a traffic management plan setting out principal traffic routes – vehicular, cycles, and pedestrian within the development.

Bathrooms, kitchens and toilets should be located adjacent to each other, insofar as is practicable, and on external walls where this can be managed without compromising the quality of light and amenity provided in the main living, dining and bedroom areas.

Apartments should be laid out and designed to take maximum advantage of any possible views afforded from the site, and within the site to designed landscaped features.

Orientation must be carefully considered to ensure adequate sunlight, daylight, and visual amenity are afforded to each apartment, but also to account for solar gain / heat loss etc. to ensure comfort of the residents as far as is possible.

Detailed heat analysis may be required to ensure certain apartments within any block in the development do not overheat, and that all apartments can achieve the Building Energy Rating applicable at the time of construction of the apartments.

Locations of all Electrical and Mechanical plant and equipment installations must be carefully considered to avoid or minimise the impact of noise, emissions, ventilation requirements, fan operation, maintenance, fuel provision requirements, etc. on the residential amenity of any of the apartments within the development.

There shall be no exposed or boxing out of exposed mechanical and electrical plant / equipment within the apartments or any common / shared areas on the development at any level.

All service pipes and conduits shall be fully concealed within designated service zones in floors, ceilings, service riser shafts, and partition walls within the apartments and buildings throughout the development.

2.4 Headcount

Each four bedroom house will cater for a total of seven persons.

Each three bedroom house will cater for a total of six persons.

Each two bedroom house will cater for a total of four persons.

Each one bedroom house will cater for a total of two persons

Cold & Hot water services to each dwelling must be sufficient to accommodate a minimum of three visitors per day, or as defined in the Irish Water Code of Practice.

2.5 Critical Dimensions

The overall dimensions for services and structural zones must be designed to accommodate the structure / structural frame and the extent of services to be provided. Moreover, adequate provision must be made for future flexibility in terms of use or occupation over the life of the building.

The minimum finished floor to ceiling height must be no less than 2.7M to ground floor throughout, and 2.4M minimum floor to ceiling height to all upper floors.

The finished floor to ceiling height to the "visitable" WC must have 2.4m over at least 50% of the floor area, with an absolute minimum headroom of 2.1m in any location within the WC area.

All room dimensions must comply with the requirements as set out in the DECLG best practice Guideline 'Quality Housing for Sustainable Communities' – Published 2007, and in accordance with Clause **16.10.2 Residential Quality Standards – Houses** of the Dublin City Development Plan 2016-2022.

For minimum dimensions for carriageways, roadways, access ramps, turning circles, junction geometries, etc. please refer to all relevant NRA design guidelines along with the Construction Standards for Roads and Street Works in Dublin City Council, and the DECLG 2015 document - "Sustainable Urban Housing : Design Standards for New Apartments – Guidelines for Planning Authorities"

2.6 Acoustics

The buildings must be designed to control flanking noise and noise transmission through the Party walls and external walls as per the requirements of the Technical Guidance Document for Part E (Sound – 2014) of the current Irish Building Regulations.

Care must be taken in detailing party walls and party floors to minimise transmission of mechanical noises through existing structures.

Transmission of noise from building services and equipment within apartments and tank rooms between the various spaces must be attenuated. All mechanical pumps must be on noise & vibration isolation pads, and selected on criteria of energy efficiency, pump performance, warranty period, and minimum noise output.

Standard construction detailing as set out in the Acceptable Construction Details – TGD Part L 2011 General (or latest update) should be considered wherever valid.

2.7 Sustainability

All Apartments and all Apartment Buildings must be fully compliant with relevant latest version of Building Regulations Technical Guidance Document Part L, and the requirements of the Energy Performance of Buildings Directive.

In addition to this standard, the development must be designed for low maintenance with ease of maintenance being a key requirement. Whole life costs must also be borne in mind when selecting design solutions. Issues to be considered include but are not limited to:

- The Developer shall ensure that Building Regulations & Energy Directive compliant BER Certificate is provided for each unit upon completion,
- Overall extent and quantity of insulation standards and other energy-saving design features;
- Automatic temperature and lighting controls with manual override facility;
- Water conservation;
- Use of durable Sustainable and/or renewable materials is a requirement
- The use of non-renewable materials is to be avoided where possible;
- Flexibility in design for adaptation & extension
- The building service systems must provide and maintain a comfortable indoor environment with minimum adverse impact on the environment with optimum whole life costs.

2.8 Future Expansion

Whilst future expansion of the development is not envisaged, where possible the layout and design of upper level apartments within apartment buildings should consider the possibility of a future addition of 2 floors to be overall building height, and structural calculations should provide capacity for this additional loading. Mechanical and electrical capacity should be based on the number and types of apartments which the developer proposed to construct under this contract only.

2.9 Design Life

The buildings must be designed and constructed using materials, systems and components with a minimum life as set out below from Substantial Completion (exceptions listed hereunder) given that normal maintenance will be carried out and fair wear and tear accepted.

Element	**Minimum Required Lifespan**
Structural elements	*60 years*

Floors, Walls, Roofs & Ceilings	*60 years*
HVAC & Mechanical Services	*25 years*
Electrical Services	*25 years*

Note Where proprietary materials or systems are mentioned in the accompanying performance specifications or data sheets it shall be the Developer's responsibility to assess such materials and systems and select only those materials and systems which achieve the minimum life spans set out above.

Please note that the information provided below in sections 2.10 – 2.25 is issued for information only, and a full specification shall be provided to the shortlisted parties with the stage II documentation.

2.10 External Finishes

The external finishes for all apartment buildings must be durable, robust, and selected to reflect Dublin City Council Requirements as set out in 1.1 above. Materials will be sympathetic to existing surrounding developments using natural materials where possible including clay brickwork / stone / metal / rainscreen cladding, glass etc.

Timber cladding is not recommended, and should not be proposed as an exterior finish unless it is used in limited areas where a comprehensive and detailed method statement is provided setting out safe access arrangements and frequency for maintenance.

All major finishing materials and finishes including colour selection to be clearly set out in the Developer's Proposals and agreed with the Dublin City Council Planning Department prior to submission of the developers Application being submitted for Planning Permission. All Conditions of any Planning Permission must be fully satisfied and verified prior to handover of the apartments.

All materials shall be selected to reflect the overall quality of the development, design life and ease of maintenance as set out above.

Additional performance specifications will be issued during the second stage of the procurement process. All external materials and finishes must be fire resistant and in accordance with the requirement of the Irish Building Regulations.

2.11 Glazing & External Doors

External glazing throughout must be of a proprietary triple glazed superior quality thermally broken glazing system designed, built and installed to latest relevant European standards, Codes of Practice, and installed in accordance with the Manufacturers requirements and recommendations.

Whole frame U value of 0.8W/m2K will be required for all windows and external doors

All glazing must be internally beaded/secured.

External doors must be "High security" impact resistant timber hall doors to EN 1627, with level access threshold, & 5 point locking system. Architraves to external doors must be of 100x19mm hardwood detailed to match architraves to internal doors.

A Manufacturer's Thermal Performance Certificate will be required for each window type in each house type throughout the development for inclusion with the BCAR information and Certification process, and shall be included in the Health & Safety file to be handed over at Substantial Completion stage or the project prior to occupation of the development.

Alu-clad, timber framed windows are preferred where cavity closers are employed to provide fire protection to the wall cavities.

PVC windows cannot be used.

2.12 Roofs

Any pitched roof must be of natural slate / clay tiling / concrete tiling etc. non combustible material, screw fixed to pressure preservative impregnated timber battens on vapour permeable roofing underlay, on timber / steel roof structure to a suitable roof pitch to meet with tile / slate manufacturers requirements and recommendations.

Party walls must be sealed to underside of roof finish with suitable fire resistant sealant to provide smoke-tight joint preventing smoke and fire infiltration from across party walls.

All facia, soffits and rainwater goods must be finished in minimum 0.7mm gauge powder coated aluminium – developer to propose appropriate system and colours.

PVC is not acceptable as a fascia or soffit material for finishing around roofs.

All timber used for roof construction must be pressure preservative impregnated to EN standards.

2.13 Building & Street Identification Signage

The Developer shall include external signage to clearly identify each apartment block / core entrance, and individual numbering to each apartment within the development. Proposals must include postbox locations, along with address / location / directional signage for the development which shall be of individual lettering on an enamelled / stainless steel plate fixed to steel posts, or solid brick / blockwork walls similar to the existing signage to streets in the vicinity, in accordance with "Construction Standards for Road & Street Works in Dublin City Council".

2.14 Internal Materials & Finishes

The internal materials and finishes must be selected to reflect Dublin City Council's Employer's Requirements as set out in 1.1 above. All major finishing materials and finishes including colour selection must be indicated in the Developer's Proposals and agreed with the Dublin City Council Housing City Architect's Representative prior to commencement of works on site. Materials must be selected to reflect the overall high quality of the development, design life and ease of maintenance.

Room Data Sheets will be issued at Stage II for further detail. Additional performance specifications will be issued during Stage II of the procurement process.

2.15 Floors

All floors throughout apartments shall be on concrete construction, and to structural engineers design and certification.

All ground bearing floor construction must include a moisture and radon barrier, thermal insulation, and be detailed to avoid thermal bridges.

Floors as constructed, must achieve compliance with the current Irish Building Regulations and Technical Guidance Documents, as Listed in the table at Section 1.6 above.

2.16 2.16.A – Internal (Non-party) Walls

Internal partition walls must be insulated timber / metal stud partitions with minimum 12.5mm Moisture Resistant or Fire Resistant plasterboard / etc. boards each side with filled and taped joints – such walls to span from top of structural slab to structural soffit.

All jointing, external / internal corners, etc., to be smooth finished.

Any service penetrations in concealed ceiling voids through internal partitions to escape routes shall be adequately fire stopped to prevent smoke / fire infiltration of the escape route.

Internal partitions generally to be finished with 3 no coats of selected colour emulsion paint finish, and fitted with minimum 125x19mm solid timber skirting boards mechanically fixed to partition studs, and filled, primed, undercoated, and gloss paint finished on completion throughout.

MDF or PVC skirtings cannot be used.

All partition walls to wet areas such as kitchens, bathrooms and toilets must be lined with 12.5mm Moisture resistant plasterboard / etc. boards finished in accordance with relevant Room Data Sheets.

2.16.B – Party Walls

All party (Compartment) walls must be so designed and constructed as to achieve compliance with Part B – Fire of the current Irish Building Regulations and Technical Guidance Documents as listed in section 1.6 above.

All party (Compartment) walls must be adequately fire stopped in accordance with Building Regulations Part B – Volume 1 to underside of structural soffit / roof, and external wall junctions, and in accordance with the Fire Safety Certificate issued prior to commencement of the development.

2.17 Internal Doors and Screens

All internal doors must be solid core flush doors with hardwood lipping and vision panels where required by Building Regulations and in all circulation areas.

All doors within apartments shall be a minimum FD30 grade or higher. Fire rated door sets must be fitted with mechanical self closing devices, and bear the manufacturer's "Fire Door" tags, along with "Fire door keep shut" tags fitted.

All doors must have three no. 100mm satin finished stainless steel ball bearing hinges, with brushed stainless steel lever handles on roses & escutcheon plates to both sides.

Two lever mortice locks must be used on all internal doors throughout.

Five lever mortice locks / five point security locking must be employed to all external doors.

All internal door sets must be installed / constructed to allow for full width architraves (125mm) to each side. All architraves to be ex 125 x19mm solid timber with chamfered leading edges.

All internal doors must be paint finished including base coat / primer, undercoat and final satin coat painted on completion, or three coat clearcoat finish to Developers proposals.

2.18 Ceilings

All suspended ceilings throughout the development must be of minimum 12.5mm plasterboard with filled and taped joints and three coats of emulsion paint throughout in accordance with specification.

A ceiling void of a minimum 150mm shall be provided above all suspended ceilings to provide a service zone for water, heating, electrical services, and ventilation ductwork.

All board joints must be fully scrim taped with 75mm wide scrim tape, and filled and sanded prior to finishing with 3 no coats of selected colour emulsion paint.

Fire rated downlighter housings must be installed where recessed downlighters are proposed by the developer.

2.19 Bathroom / Toilet Facilities

Sanitary Ware & Fittings - A matching suite of ceramic Wash Hand basin, quality ceramic low level close couple suite with integral cistern, dual flush, and back to wall – concealing the soil pipe connection / multiwick at back of floor mounted w.c. pan, a 750mm wide by 1800mm acrylic bath (not fibreglass) with fixed side and end panels to match.

Adequate & visitable WC facilities must be provided for persons with disabilities and be so designed and constructed as to achieve compliance with Parts M & G of the current Irish Building Regulations as listed at section 1.7 above.

All wall construction for timber/steel stud framing to provide suitable grounds for fixing of W.C., WHB, towel radiator, etc., and for future fixing of support handrails, folding rails, etc. for disabled assistance in W.C. area.

2.20 Common Staircases, Landings, Lobbies, Hallways, Corridors, etc.

All staircases to Apartment buildings (both external and internal) must be of solid concrete construction, and may be finished in selected floor finishes to accord with the Fire Safety Certificate Application documentation, and the Fire Safety Certificate on completion and handover of the works.

Soffits to stair flights and landings shall be smooth skim plaster finished and blemish free with three coats emulsion / eggshell painted finish to developers proposed colour scheme.

The Rise of each step must be consistent throughout rise of each staircase, and shall conform with Part K and Part M of the Building Regulations TGD's.

The Going of each step must be consistent throughout the each staircase, and shall conform with Part K and Part M of the Building Regulations TGD's.

Minimum headroom throughout staircase must be 2000mm.

Ballustrades to staircase shall be of mild steel painted finish throughout with stainless steel handrails provided throughout all in compliance with Building Regulations.

Strings, trims, and skirting boards to all shared Landings, lobbies, hallways, corridors and staircase areas shall be robust, and of suitably durable solid material such as hardwood timber, ceramic tile, stone, etc.

MDF or plywood cannot be used in common areas for strings, trims, skirtings, architraves, etc.

2.21 Mechanical Installations

The apartments must be fitted with standard hot / cold water services including cold water storage tank, calorifier (hot water cylinder), isolation valves, non return valves, taps, and all necessary hot and cold supply pipe work throughout.

Adequate cold water storage must be provided within each apartment in accordance with all applicable Dublin city council, and Irish Water codes of practice.

Hot & Cold water supplies must be provided to bathroom, W.C. and wash hand basin, kitchen including sink, utility area / room (if provided) washing machine & dishwasher. Washing machine and dishwasher water outlets must be fitted with suitable shut off valves for direct connection of supply pipes to white goods.

All pipe work must be copper, and must be concealed within timber / metal stud partitions, floors and ceilings.

Additional performance specifications may be issued at Stage II of the procurement process.

Visible boxing out of services outside of partition walls, ceilings or floors is not permitted.

All service routes must be accommodated within internal partitions, ceilings and floor voids.

Fire resistant construction to party walls must be imperforate.

Any services which are required to penetrate party walls to common areas must be run in suspended ceiling void / services zone with plasterboard slab and skim finish to underside, and all such penetrations must be fire stopped in accordance with the Building Regulations Part B, and as set out in the Fire Safety Certificate documentation, and certified by the Fire Safety Consultant as compliant on completion of the works at handover stage of the project

The proposed Heating System to each apartment must be energy efficient, and designed and installed to minimise Carbon footprint of the development.

Heat pumps, exchangers, generators, boilers, etc. must be sited and designed to enable optimum efficiency and performance in operation. CHP / mini CHP plant will be considered, and the Energy strategy must be detailed, and clearly set out with the developers proposal on submission of tender.

All mechanical equipment and systems meter rooms, pump rooms, break tank rooms, boiler / heater exchanger / CHP plant rooms, etc., must be suitably located within individual apartments, blocks, or the overall development to ensure ease of maintenance and security of the service area within which they are located in the individual apartment of the development.

Mechanical ventilation will be required to all internal W.C. / bathroom / en suites located in inner locations. Additional mechanical ventilation may be required in order to comply with the overall ventilation strategy for the apartment. This needs to be coordinated with the air-tightness strategy for each individual apartment.

A separate mechanical ventilation duct / shaft will be required to the kitchen cooker area.

Details of the ventilation strategy are to be agreed with Dublin City Council relevant Mechanical, Electrical, and City Architect's Representative prior to commencement of works on the houses.

2.22 Electrical Installations

Developer will be responsible for all necessary applications for new supplies & connections along with arrange for the provision of power distribution within the development including all incoming mains, power distribution circuits, Public Lighting, traffic signals, external lighting throughout the development, and all electrical supply requirements within each apartment building including but not limited to all common areas, corridors, staircases, lobbies, storage areas, waste management areas, delivery areas, plant rooms, parking areas etc on Substantial Completion of the development prior to handover of the Housing units to Dublin City Council.

The Developer must ensure that an individual metered electricity supply is delivered to each apartment, and within each apartment building all common areas, common, lobby, staircase, corridors, staircases, lobbies, storage areas, waste management areas, delivery areas, plant rooms, parking areas etc., lift, lift motor room, break tank room, etc., etc. are supplied by separate landlord metered supply on Substantial Completion of the development prior to handover of the Housing units to Dublin City Council.

General power requirements including electrical power outlets in each room must be in accordance with the Room Data Sheets to be issued with Stage II documentation.

Electrical switches, sockets, power outlets, data / telecom outlets, cover plates, etc., to all apartments and common areas must be of switched, brushed / stainless steel.

Entire electrical installation, wiring, panels meters, etc., must be completed in accordance with the requirements of the ETCI, and RECI standards.

Additional performance specifications will be issued at Stage II of the procurement process.

Mains powered maintained Emergency lighting, wired smoke / heat detectors must be suitably located throughout all apartments, common areas, lobbies, staircases, storage rooms, plant rooms, etc. area in accordance with Building Regulations Part B.

Mains wired smoke detector must be suitably located in the hall & landing areas.

All wiring throughout the apartment building and individual apartments must be contained in galvanised steel conduit.

Visible boxing out of services outside of walls, ceilings or floors is not permitted.

All electrical service routes must be contained in steel conduit throughout, and must be accommodated within internal partitions, ceiling and floor voids within apartments, and all electrical service routes in common areas, staircases, lobbies, etc., shall be in steel conduit concealed within wall finishes, service voids, and service risers, will all necessary fire stopping provided in accordance with the Fire Safety Certificate Application documentation.

All the as-constructed drawings must accurately reflect the locations of conduits within walls, and service voids.

Fire resistant construction to separating / party walls must be imperforate.

Electrical system to every apartment, and each apartment building must be fully earthed, with earth rod / mat location clearly identified with coloured junction box.

All electrical panels must be located at high level in entrance lobbies and individual apartment entry hallway with all circuits clearly marked and identified.

Electrical meter cabinets must be fitted in secure locations and at the ground floor level in proximity to the main entrance of each apartment block / core, for ease of access for meter reading, Fire Brigade access, and tenant access, etc.

All meter installation panels shall be fully designed and approved with ESBN prior to installation, and fully certified on completion of the works prior to handover of the development.

2.23 Gas Installations

Where any proposed Heating systems involve a gas fired boiler, the Developer must ensure that the natural gas supply is delivered to each boiler via a metered supply, in accordance with the service providers requirements, recommendations and all relevant Codes of Practice, Building Regulations, etc.

The entire development must be fully commissioned, certified and operated for a period of at least 24hrs. prior to Substantial Completion of the development prior to handover of the Apartment units to Dublin City Council.

Any Gas installation must be fitted, tested, completed and commissioned in accordance with the requirements of RGI and Bord Gais, and Certified as compliant by an RGI registered installer prior to connection to the Bord Gais network.

All gas meters must be fitted in secure locations and at the ground floor level in proximity to the main entrance of each apartment block / core, for ease of access for meter reading, Fire Brigade access, tenant access, etc., and all fitted strictly in compliance with Gas Networks installation requirements, recommendations and codes of practice.

2.24 Heat Pump installations

Where any proposed Heating systems involve a ground source, air source, or exhaust air source heat pump, the Developer must ensure that the Heat pumps are located in suitably secure Plant room locations throughout the development, and that a heat meters are fitted for each apartment unit in order to monitor and charge for heat supply.

The developer must propose a viable and valid heat tariff with appropriate provision for adjustment to accord with market influences on energy costs.

Any heat pump installation should be powered via an independently metered electrical supply so that heat pump efficiency can be monitored and managed in an efficient manner.

The fitting of individual heat pumps to the development must make provision for safe "turning off and isolation" of the Pump from electrical and water service connections, to allow for ongoing maintenance of the pump on a regular and planned maintenance regime.

2.25 Photovoltaic Panel Installations

The Developer must ensure that all photovoltaic panel installations as designed to provide alternative energy requirements to Part L of the Building Regulations, are fully isolatable by the installation of an isolation switch at or near the

apartment building entrance – in the vicinity of the main entrance of the apartment block.

The PV Isolator Switch must be clearly marked for identification and ease of operation. It will be required to facilitate the Fire Brigade in isolation of the PV output from the main electrical panel boards throughout the development in the event of a fire in any particular building in the development, and as may be a requirement under Building Regulations TGD Part B.

2.26 Water Installations

The Developer must ensure that Irish Water will supply water to each apartment within the development and carry out and complete all necessary testing, commissioning of the Water and heating systems within the apartments well in advance of Substantial Completion of the development prior to handover of the Apartment units to Dublin City Council.

All installations must be carried out in accordance with the requirements and recommendations of Irish Water, and in accordance with the Irish Water Code of Practice.

All water supplies to individual apartments must be fitted with a proprietary water meter which must be located in proximity to the apartment it is serving, and it must be clearly marked & labelled as supplying that particular apartment.

All necessary water supplies to Apartment Buildings must be designed and fitted strictly in accordance with the requirements of Irish Water and Dublin City Council Water Division requirements, recommendations and Codes of Practice.

No Apartment building is to be handed over in the absence of a fully potable water supply being provided to every apartment within the building.

2.27 Waste Management

Refuse collection & recycling bin storage must be provided to each Apartment building within the development. The developers design team is to fully explore requirements from Dublin City Council waste Management Division regarding all aspects of the proposed Waste Management Plan.

Locations of individual bin storage areas, details of the proposed enclosure of these areas, proximity of these Waste management areas must be carefully considered to ensure that they do not become problematic in the management of the apartment building which it serves. Security in use, safety of operation, passive oversight, and odour control are all considerations to be addressed in selecting appropriate locations for waste Management areas within the development.

Access arrangements for residents / tenants living in the development must be clearly set out in the waste management plan.

The landscaping design must take account of the screening of these areas in terms of visual amenity.