

**OFFICES 9-13
STRATHCLYDE BUSINESS PARK**

SPECIFICATION

01073/AC(0)01

1.00 SUBSTRUCTURE

The proposed building shall be constructed with a suspended ground floor to accommodate a single level of basement car parking.

A bulk excavation shall be carried out to achieve basement level below the building and across the site. The substructure to the building shall consist of mass concrete pads to BS 5328 founded in the natural boulder clay subsoil across the site.

The proposed podium deck across the site comprises a steel frame designed to BS 5950 supporting precast units with an in situ concrete topping.

Damp Proof Membrane

DPM to be Visqueen 1200 super or equal

Lift Pit Tanking

One piece moulded proprietary GRP tank enclosure to lift pit installed to manufacturers instructions.

Refer to NBS J40

2.00 SUPERSTRUCTURE

2.01 Frame

Structural steel frame with composite reinforced concrete floor construction as shown on engineers drawings. Finished floor to ceiling heights to be 2700mm.

Ceiling Service zone at Ground, First & Second Floor Level 250mm from underside steel to underside of ceiling.

Ceiling service void – approx. 950mm between underside floor slab and top of ceiling support grid.

All structural steelwork shall comply with BS 5950: Parts 1-5 and part 8:1990. All structural works of aluminium shall comply with CP 118: 1969. All structural timber shall comply with BS 5268: Part 2: 1988 and BS 5268: Part 3 1985. Wind loads shall be calculated in accordance with CP 3: Chapter V: Part 2: 1972. All plain concrete, reinforced concrete, or prestressed concrete shall comply with CP 8110: Part 1 and 2.

All masonry construction shall comply with BS 5628: Part 1: 1978.

Steel Fire Protection

Structural fire protection to achieve min. 60 minute protection be in accordance with Part D of Building Standards (Scotland) Regulations 1999. Intumescent paint protection within ceiling zone, fire protection to steel columns below ceiling level will be British Gypsum Fireline system or equal. 60 minute fire protection to columns

Fabrication

Fabricate components carefully and accurately to ensure compliance with design and performance requirements. Do not permit contact between dissimilar metals in components which are to be fixed where moisture may be present or occur. Finished components are to be rigid and free from distortion, cracks, burrs and sharp arrises. Unless specified otherwise, mitre corner junctions of identical sections.

Finishing welded/brazed joints: Butt joints which will be visible in completed work to be smooth, flush with adjacent edges. Fillet joints which will be visible in completed work to be executed neatly. Grind smooth where specified.

Painting

All structural steelwork except that on the perimeter of the building shall not be painted. Perimeter beams, columns and secondary steelwork shall be shot blasted to SA2.5 and primed with high build zinc phosphate primer (75 microns, min. DFT). Shelf angles to support brick cladding shall be galvanized and bitumen painted.

All external exposed steel lintels to be galvanized with oil & grease removed, treated with mordent solution, one primer zinc phosphate, two under coats (mid grey) and one finish gloss (grey).

All exposed external steelwork to be factory shop-blasted to Swedish grade SA2.5 and galvanized.

Finishing coat to be high build chlorinated rubber (75 microns).

Colour ref. RAL 7000.

2.02 Upper Floors

General

Structural slab – Composite floor system comprising steel deck with reinforced concrete topping to overall depth of 140mm, powerfloat finish. Design to structural Engineer's details.

Design imposed floor load shall be 4.0kN/m² plus an allowance of 1kN/m² for partitions.

Dust proofing

Ensure all surfaces are clean, dry and free from dust and apply two coats of colour tinted sealer.

Flat Roof

Flat Roof deck, identical in construction to internal floor slabs, but with tamped finish.

Duct Holes

All duct areas to be fire sealed with corofil slurry.

Entrance/Toilet Core Areas

Floor slab to be built-up in core areas with 100mm thick Blockwork (7 N/mm²) loose laid with mortar infill. Blocks to be topped with sand/cement screed with k-bond additive to finished floor level 185mm to match raised access floor.

Refer to NBS M10

2.03 Raised Access Floor

Raised Access floor to ground to second floor office areas - not to core areas. Floor specification - 150mm Thorsman Torfloor Medium Grade System MEG 1 i.e. galvanised steel encapsulated woodcore floor panel screw-fixed to pedestals. Minimum performance of system to comply with current standards and specifications (PSA MOB PF2 PS).

Overall floor depth including floor 185mm.

Cavity barriers

Under floor cavity barriers are to be located such that the concealed void is no larger than 20m in any direction. The barriers are to be Rockwool Access Floor Fire Stop or equal approved providing a fire rating equal to 30 minutes integrity & 15 minutes insulation.

Refer to NBS K41

2.04 Roof

Monopitch Roof (Contractor Design Element)

Pitch 20° generally.

Roof construction to be fibre cement Eternit NT Thrutone plain flat square edge roof tiles with dual pitch mechanically fixed ridge and hips in accordance with manufacturers instructions to 38 x 25mm treated softwood roofing battens.

Frameshield 150 breather membrane.

38 x 19mm treated softwood counter battens (fixed to BS 5534: Pt1).

59mm thick Celotex GA2059 insulation – joints sealed with aluminium foil tape.

9mm OSB sheathing board.

Treated SW rafters to sub-contractors details supported on purlins & steel rafters to engineer's details.

U-Value= 0.25 W/m²K. to meet requirements of Part J3.2 (elemental approach) of Building Standards (Scotland) Regulations 1999.

Refer to NBS

Gutters

2mm thick Aluminium Bullnose Gutter profile in 3.0m lengths supported by frame formed from 50x5 galvanised butt straps - Polyester Powder Coated Finish-Ral 7000. Profiled
internal gutter lining formed from continuous 1.5mm galvanised steel sheets with 0.7mm butt straps.

Gutter sections to be sized and jointed to allow for movement, junctions between sections to be sealed and watertight. Overflows to be located at end of runs.

Refer to NBS R10

Verge soffits

2mm thick flat aluminium lining tray to overhanging verge soffits supported on 25X25 angle supports. Colour of lining tray – white; clear silicone pointing between panels.

RWP's

Wall Mounted Aluminium 1.0mm Polyester Powder Coated RWP Bracket 150mm centred off wall to receive 100mm Aluminium Polyester Powder coated dia pipe. Colour ref. RAL 7000.

Fascias

2.0mm Aluminium flashing above and below external U-Channel bonded onto 9mm Plywood. Flashing below U-channel to be glazed into strip window sections below. 25x25 steel angle fixings behind aluminium flashings to fix to U-Channel with clear silicone Mastic Pointing between.

Roof Fall Arrest System

Roof Fall arrest system-Centurian Latch way system wire access system comprising stainless steel roof anchors with connecting steel cables with transfers and harness system fastened in accordance with manufacturers requirements.

Cavity Barriers (for locations refer to Architect's drawings)

Rockwool wire reinforced mineral wool to BS 476 Part 8 or 20, sealed around all edges and penetrations at max. 20m centres to comply with Part D4.1 of Building Standards (Scotland) Regulations 1999. Fire rating – 30min. integrity/15 min. insulation.

Flat Roof Central Main Area (Contractor Design Element)

Warm roof construction comprising **Sarnafil S** single ply membrane or equal and approved lead grey colour, mechanically fastened through 60mm rigid mineral fibre insulation batts to steel deck. Vapour control layer (sarnavap 1000 or equal and approved) with sealed laps to be positioned between the deck & insulation.

Protection sheets to be adhered to membrane in plant areas to delineate walkways.

Surface protection to be 600x600x50 paving slabs on Caro paving slab support.

All as part of the proprietary system installed by approved contractors and covered by valid Agrément Certificate.

Nominal falls to gutters as per Architect's drawings

Sarnafil or equal and approved flashing trims with Sarnafil or equal and approved rainwater outlets and leaf guard.

Flashings to roof penetrations and around latchway poles for fall arrest system.

Roof U-Value= 0.45 W/m²C.(subject to revision 2001)

Refer to NBS J42

Flat Roof over main entrance

Warm deck flat roof to comprise: Sarnafil S327-15EL 1.5mm thick single ply roofing membrane (Lead Grey) on loose laid with welded joints on Polyfoam Plus 220 extruded polystyrene roof board on Sarnavap 1000 vapour control layer on 18mm plywood base.

U-value=0.45 W/m²K to meet requirements of Part J3.2 (elemental approach) of Building Standards (Scotland) Regulations 1999

Installation in accordance with manufacturers instructions.

Rwps through flat roof

Internal Cast Iron 150mm Dia RWP's

Water Tanks

Water tanks supported on piers on concrete floor slab over toilet core.

Blockwork walls to extend to underside of sarking boards to all 4 sides of core area in roof space.

2.05 Stairs

Entrance Stair

Entrance stair tread and landings to be metal pan construction with steel trays to take sand cement with ceramic tile flooring finish.

Stair to have 50mm diameter stainless steel handrails finished BRIGHT POLISHED (43/06) to BS1499 No. 7, *Grade 316 schedule 40 tube*, with 75x15mm balustrades at landings and mid-flights incorporating 15mm diameter bars @ 150mm Centres.

All steelwork to be factory shop blasted to Swedish grade SA2.5 and given 2 pack zinc rich epoxy (25 microns) with 2 pack epoxy M.I.O(2 coats of 85 microns). Undercoat and finish coats to be 3 coats of SEMI GLOSS fast drying acrylic urethane (120 microns) white. colour RAL 9016 PURE WHITE.

Minimum clear width to be 1200mm.

Balustrades to all stairs to be fully in accordance with Building Regulations.

Handrail both sides, fixed between 840mm and 1000mm vertically above pitch line.

Protective barrier to all landings 1200mm high.

Treads to have nosing of contrasting colour to comply with part S3.11 of Building Standards (Scotland) Regulations 1999

Rear Escape Stair

Escape stairs tread and landings to be metal pan construction with steel trays to take sand cement with carpet flooring finish.

Stair to have 50mm diameter mild steel handrails with 75x15mm balustrades at landings and mid-flights incorporating 15mm diameter bars @ 150mm Centres.

Paintwork specification as per entrance stair.

Stair to comply with all Building Control requirements.

Escape Stairs from Basement to Ground

Galvanised Escape stair tread and landings to be metal pan construction with 50mm diameter mild steel 75x15mm balustrades at landings and mid-flights incorporating 15mm diameter bars @ 150mm Centres.

Stair to comply with all Building Control requirements.

Welding to all stairs

Welding: Surfaces to be joined to be thoroughly cleaned. Accurate fit to be ensured using clamps and jigs where practicable, tack welds to be used only for temporary attachment. Joints to be made with parent and filler metal fully bonded throughout with no inclusions, holes, porosity or cracks. Weld spatter to be prevented from falling on surfaces of materials which will be self-finished and visible in completed work. All traces of flux residue, slag and weld spatter to be removed.

Finishing welded/brazed joints: Butt joints which will be visible in completed work to be smooth, flush with adjacent edges. Fillet joints which will be visible in completed work to be executed neatly. Grind smooth where specified.

Protective Barriers at edge of Parking area

50mm galvanised steel handrail 1100mm above ground floor level with 75x15mm balustrades and 50mm diameter bar @ 550mm Centres.

Access to Plant room, water tanks and external flat roof

Access to water tank area by way of fixed ladder, designed to comply with BS 5395:Part 3 1985. Ladder to be located within fire rated enclosure – FD60S fire rated door to be provided at first floor level.

Timber steps to be formed to take up change in level from top of plant room level to top of upstand threshold at door onto external flat roof.

2.06 External Walls

Cavity wall construction.

General-

100mm facing brick - Ibstock Nostell Harewood Weatherby buff with Tilcon Y6 mortar.

Contrasting Course-

100mm Blue contrasting brick-Ibstock Blue Brindle with Tilcon Dark Grey Mortar to match brick.

Inner Leaf-

100mm dense aggregate Blockwork (7N/sqmm) insulating block per BS 6073.

Refer to NBS F10

Concrete Fill to Cavity

Cavity to be filled with weak concrete mix angled to adjoining ground level maintaining a minimum 150mm between top of fill and ground level dpc.

Weep Holes

Weepholes to be Ryton Rytweep installed at not less than 1000mm centres immediately above base of cavity and external openings.

Partial Fill Cavity

50mm clear cavity minimum.

33mm thick Polysocyanate foam board insulation board by Celotex double RC CW2000 or equal dressed down outer face of inner leaf to foundation fixed per BS 8000.

Cavity Closers

Rockwool Rockclose at cavity closing positions

Wall Ties

To BS1243 Halfen type cavity ties ,sizes to be confirmed by Engineer stainless steel grade 304 fitted with plastic insulation retaining clips

Flexible Damp Proof Courses/Cavity Trays

Damp proof course to BS 743 to be provided at a minimum height of 150mm above external ground level throughout by Zedcor Zedex (co-polymer thermoplastic) or equal approved – pitch polymer products not acceptable.

Preformed DPC/Cavity tray

Zedex CPT by Visqueen or equal .Seal all laps with dpc

Installation to BS 8000: Part 3 section 3.3.

Leading edge of DPC's/Cavity trays to project 5mm from face of wall at all conditions to be trimmed to Employers Agent discretion

Movement joints to External walls

Filler to be 20mm flexible cellular polyurethane or similar to match design width of joint.

Sealant - two part polysulphide sealant (external finish - light bucket handle)

Colour – stone in areas of buff brickwork

grey in areas of blue brickwork.

Pre-stressed Lintols

Pre-stressed Concrete Lintols to be Robslee or equal and designed by Engineer.

Pre-stressed Steel Lintols to be Catnic Stainless steel or equal as designed by Engineer.

Refer to NBS F30

External Exposed Precast Concrete Cills/Copes/Features

Feature Precast Concrete Cills & continuous string course as shown on elevations, cill to entrance screen and cills to external door openings.

Finish to be smooth fair faced with consistent colour with 10 mm joint to line with brick expansion joints where applicable.Colour buff to match brickwork

Refer to NBS F31

Cavity Barriers/Fire stops External Walls

Cavity barriers as per Architects drawing to external cavity walls.

Vertical Rockwool SP60 Firestop Insulation fixed to all perimeter Columns.

Refer to NBS P31

Natural stone

Stanton Moor sandstone (buff), Ashlar.

Wall Cladding (Contractor Design Element)

7.5mm Eternit Glasal Panel on breather paper on 38x63mm SW grounds fixed back to 9mm Plywood on Framing. Colour -Pewter

Alucobond flat and curved panels to entrance on walls and to soffit.

Full Kasset unit on sZ 20 top hat section groove and tongue design with coloured mastic seal. Insulation packed behind and sealed with plasterboard.

External Circular Column Encasings-Ground Floor

2.0mm Aluminium curved to form semi-circular column encasure to the ground floor external columns.

Sunshading

Sunshading to be Levolux 920 Matrix Anodised Aluminium manufactured by Western Avery Ltd or similar and approved by Employers Agent and fixed in accordance with Manufacturers instructions. All aluminium components to have natural anodised finish, all plastic end caps, dust covers & clamps to be grey, all fixings to be stainless steel.

Louvers

External louvers to be polyester powder coated air inlet and extract by Colt Louvers 1U/L single bank. Colour ref. RAL 7000.

Anchor Bolts

One Anchor bolt required to top floor only to every bay (8500mm) to allow window cleaning fixed through to floor.

General**Thermal Insulation**

The following minimum thermal insulation values shall apply.

Masonry walls and roof $u=0.45W/m^2°C$. Glazing (including framing) $u=2.8W/m^2°C$.

All to satisfy part J2.3 elemental approach (method 1) of the Building Standards (Scotland)

Regulations 1990. Note U Values subject to revision 2001, all insulation to comply with current standards in force at time of warrant application.

Insulation to deck side of Ground slab to provide a u-value of $0.45W/m^2°C$.

External walls shall be designed in accordance with BS 5628 Part 1 1978 to transmit all lateral and vertical loads to the main structure and foundations from which they obtain support.

2.06 Window/External Doors/Curtain Walling

Aluminium Windows & Doors (Contractor Design Element)

Kawneer or similar and approved 502 series aluminium windows thermally broken with locking handles and 350 series aluminium doors.

Polyester powder coated to standard (syntha Pulvin) range double glazed with clear glass

Aluminium sections both internal & external to be Polyester powder coated, colour - BS 00 A 05 with lockable windows with satin anodised ironmongery, handles, strikes, etc.

Double glazed units – 6mm clear float glass/12mm cavity/6mm clear float glass.

All Windows to be Interlocking action with integral restrictor in the exposed Pivot.

Internal Pivot Action with Multi-point locking system.

Integral Restrictor with Pivot Action.

All windows to be lockable.

All windows to have trickle ventilators.

Glazing within 2m of protected zone enclosing main stair enclosure to be fire rated to min. 60minutes for integrity from inside to meet requirements of Part E4.12 of Building Standards (Scotland) Regulations 1999. Fire rated glazing units to have steel frame, colour BS – 00 A 05.

Refer to NBS L2

Strip window arrangement at first floor to incorporate panels as shown on Architect's drawings.

Panels to be constructed from 14 gauge pressed aluminium with integral insulation & stop ends.

Polyester powder coated finish, colour – RAL 7000.

Curtain Walling (Contractor Design Element)

Aluminium double glazed curtain walling, polyester powder coated entrance screen - Kawneer Series

1200 Curtain Walling. Aluminium sections both internal & external to be Polyester powder coated, colour - BS 00 A 05.

Double glazed units – 6mm clear toughened float glass/12mm cavity/6mm clear toughened float glass.

Opaque panels to be 6mm Graphite BS 18B27

Clear glazed incorporating double entrance doors with stainless steel cranked pull Handles both sides 900mm long, finished BRIGHT POLISHED (43/06) to BS1499 No. 7

Aluminium Pressings

1.5mm thick/250mm girth aluminium cill and window head flashings to all external screens and windows.

Revolving Door

To be Boon Edam Tourniket Manual Four Door Pivot Revolving Door.

All Sections to be aluminium Polyester Powder Coated (colour - BS 00 A 05).with stainless steel 300mm band above door. Overall 2500mm high.

Glazing to be 9mm Laminate Curved Walls.

Integral Matwell recessed in floor with aluminium strips.

Refer to NBS L10

General

Glazing (including framing) U-Value=2.8W/m²K to meet requirements of Part J3.2 (elemental approach) of Building Standards (Scotland) Regulations 1999.

All windows to be thermally broken.

Ability to clean windows to be in accordance with workplace Health and Safety and Welfare Regulations 1992 (approved code of practice) and CP 153 Part 1.

Limiting Air Infiltration

Junctions around external window and door frames to be sealed - external pointing to be Thioflex 600 by Fosroc, colour grey.

Vapour control membrane to the timber framed panels to the external walling to be sealed at laps and junctions.

Service penetrations through external enclosure to be sealed with proprietary flashings.

External doors and windows to be draught stripped.

2.07 Internal Partitions

Walls

Lift

All walls to be 215mm thick , 7.0N/mm² to achieve minimum 60 minutes fire resistance. Walls formed from blocks laid on side; blocks to be of size so that weight of each individual unit does not exceed 20Kg.

Main Core/Toilets

All walls to toilets to be 140mm and 100mm thick 7.0N/mm²

Finish to Blockwork Inner Leaf External Wall/Core Walls

All walls to receive finish of 12.5mm Gyproc wallboard on metal firings & filled, except feature walls in core area. For final finish see section 3 below.

Internal Columns

12.5mm Fireline Board on Gyproc Gypliner steel encasement system or equal. Galvanised metal bead to exterior corners.

Refer to NBS K10

Internal Stair Enclosure

Walls to be min.1 Hr. fire rated and continue to u/s of roof structure over. Junction with roof structure to be fire stopped to 60 minute F.R. with mineral wool.

Internal office entrance screens

Internal glazed screen doors with Steel Frame to have Pyran glass or equal to provide 60 minutes resistance (integrity).

Cubicles & Vanity Units & Baffle Panel

Laminated IPS access panelling to back of cubicles to have Postformed edges; Sentry by Thrislington or equal to concealed cisterns (colour – white Toscana 2578).

Full height *block* wall between Male and Female WC cubicles.

Fixtures include coat hook, indicator bolt, & toilet roll holder all stainless steel.

Laminated access panelling hiding plumbing below vanity top to be by Sentry by Thrislington or equal with Postformed edges.

Vanity Units

Vanity top to be Corian – Ref. Oceanic Sierra.

Vanity unit to be open below underslung sink with chrome trap to whbs.

All visible pipework below sinks to be chrome plated.

Vanity unit support to be galvanised mild steel bracket painted .

Laminated access panelling hiding plumbing below vanity top to be by Thrislington or equal with Postformed edges (colour – white Toscana 2578).

Mirrors

1 no. mirror to be located above each sink; by Hurry Bros. Or equal approved.

Mirrors to be formed from 6mm clear float glass with 25mm edge bevel, be silvered to give maximum reflection and have polished stainless steel frame. Mirrors to be surface mounted with secret fixings.

Refer to NBS L40

2.08 Internal Ceilings

Suspended Ceiling on Metal Framing

12.5mm Gyproc wallboard on Gyproc steel angles centres as per manufacturers recommendations.

Moisture resistant wallboard to be used in Toilet areas.

Hatches

Flush ceiling Hatch by Profilux

Suspended Ceiling Tiles

Ecophon advantage E15 mineral wool ceiling tiles 600x600mm with Tegular edge on exposed white 15mm tee grid

Perimeter trim to be Standard Zed angle

Provide 25x50mm SW shadow gap at all perimeter conditions.

Cavity Barriers

Cavity barriers to be Rockwool quilt above ceiling level to underside of Floor slab above and in the top level to the underside of roof in attic space.

Refer to NBS K40

2.09 Joinery

Fire Exit & Stair Door sets

All unit doors to be 54mm solid core (FD 60 S) ash veneered crown cut both sides with clear satin finish with Ash Hardwood frames both sides.

2100mm high with Pyran glazing vision panels as required.

Hardwood lippings all around with in tumescent seals and smoke seals as appropriate.
Frames to be Softwood painted gloss finish.

Duct Doors

All Duct & Toilet entrance doors to be 60 min. fire resistant 54mm solid core ash veneered crown cut both sides with clear satin finish with
Frames to be Softwood painted gloss finish.

General

All doors into escape stairs and external escape doors to be minimum 900mm clear width between stops.

A minimum of 300mm to be maintained between leading edge of door leaf and adjacent walls.

All doors must be selected from one of the following manufacturers: Leaderflush, Shapland & Petter, Bolton & Paul, Shadbolt, or Swedor.

All doors to be screwed & pelleted.

All doors and integral sets must be manufactured off site in the factory to ensure perfect seals for quality of noise reductions.

All electronic ironmongery to be fitted in factory by door manufacturer and not on site.

All woodgrains to be bookmatched.

Ironmongery

All ironmongery from Allgood D-Line range, in stainless steel.

All doors to have suitable ironmongery including handles, push plates, locks, thumb turns, door closers, kick plates, door stops, etc.

Key suiting:

-master cores

-master ducts/cleaners/roof

-revolving doors/external

Any electronic ironmongery to be fitted in factory by door manufacturer and not on site.

Trims, skirtings, etc.

Skirtings, cill boards, aprons, architraves & plinth blocks to be formed from Ash veneered MDF or solid ash all to be pinned – veneer to visible faces only. Veneer to match finish to internal door veneers.

Factory applied lacquer finish, 2 coats

3.00 INTERNAL FINISHES

3.01 WALLS/FLOORS/CEILINGS

RECEPTION:

FLOOR:	Ceramiche Keope verde 300x300mm (Keover) (laid diagonally). (Adhesive to be suitable for use with fully vitrified tiles) Sentinell Aluminium Mat well-Onyx
WALL:	Dulux Vinyl Matt Colour-TBA
CEILING:	Plasterboard on MF System Colour-Matt white emulsion
SKIRTING:	Ceramiche Keope verde 300x100mm (Keover) (Adhesive to be suitable for use with fully vitrified tiles)

ENTRANCE

STAIR:

FLOOR:	Ceramiche Keope verde 300x300mm tile to half landing. Cut Ceramiche Keope verde 300x300mm step tread tile to treads. Stainless steel trim to rear of treads.
WALL:	Dulux Vinyl Matt Colour-TBA
CEILING:	Plasterboard Border on MF System Colour-Vinyl silk white emulsion
SKIRTING:	Ceramiche Keope verde 100x300mm coved skirting tiles. (Adhesive to be suitable for use with fully vitrified tiles)

OFFICES

FLOOR:	Field Tile-Interface Caribbean Tile-Blue Marlin Border Tile-Interface Palette 2000 Dolphin
WALL:	Dulux Vinyl Matt Colour-TBA
CEILING:	Mineral Fibre Ceiling Tile in 15mm grid. 600x600 Ecophon Advantage E Shadow gap 35x50mm SW painted black
SKIRTING:	Hardwood Skirting

TOILETS:

FLOOR:	Ceramiche Keope verde 300x300mm (laid diagonally). (Adhesive to be suitable for use with fully vitrified tiles)
WALL:	Tonic Blanco
CEILING:	Plasterboard Border on MF System Colour-Vinyl silk white emulsion. Profilex access hatches.
SKIRTING:	Tonic Blanco

DISABLED

TOILETS:

FLOOR:	Ceramiche Keope verde 300x300mm (laid diagonally). (Adhesive to be suitable for use with fully vitrified tiles)
WALL:	Plkington Diamond white 150x150x6mm spalshback.
CEILING:	Plasterboard Border on MF System Colour-Vinyl silk white emulsion. Profilex access hatches.
SKIRTING:	Softwood skirting

3.02 Painting/Intumescent Paint

All internal unfinished timber surfaces (skirtings, cills and aprons)to receive one coat primer, one coat undercoat and one coat gloss.

All internal MDF to receive one coat primer, one coat undercoat and one coat gloss.

All plasterboard areas for painting 2 under coats put 1 coat vinyl matt emulsion.

All Hardwood surfaces 1 primer thinner white spirit with 2 coats clear satin varnish finish coats.

All paints from Dulux Range or equal.

Intumescent painting to steelwork to be approved by Engineer to required fire rating.

3.03 Internal Fire Spread

Class of surfaces

Class of Surface to walls and ceilings to be as follows:

Class 1 generally.

Class 0 within fire escape stair wells.

Class 0 within protected zones.

Cavity barriers

Cavity barriers to be provided as noted below;

Ceiling voids - cavity barriers are to be located such that the concealed void is no larger than 20m in any direction. The barriers are to be by Rockwool or equal approved providing a fire rating equal to 30 minutes integrity & 15 minutes insulation.

Floor voids – see section 2.03.

External wall cavity – see section 2.06.

Fire stopping

Head of blockwork walls forming protected zone to core to be firestopped with Conlit Firestop 2 &

Firestop 3B (trapezoidal strips for deck profiles) or equal to achieve 60 minute F.R.

Fire stopping of service penetrations through compartment walls/floors are to be firestopped to min. 60 minute F.R. with products as listed below or equal and approved;

PVCU pipework : Pipe collar – Quelfire Firestop seal

Cable Trays : Fire protection compound – Quelfire QF1

General sealant : Quelfire Intumescent Mastic

4.00 Services

4.01 Drainage

All internal drainage to be PVC-U to BS 4514 by Marley range or equal.

Foul drairage stack 110mm

Basin drainage stack 110mm,50mm branch

All related branch connectors to be provided in line with BS5572 Code of Practice for sanitary products with access provided at 450mm above ground floor level.

Drainage to be designed in accordance with BS 9301: 1985 and will be in accordance with Local Authority guidelines.

External Drainage designed by Engineer to Local Authority standards.

All underground external drainage systems shall be constructed to relevant Local Authority and West of Scotland Water adoptable standards and approval. Surface water pipelines shall be plastic 'twinwall' in accordance with BS 4660 or BS 5481 and foul drainage pipelines shall be plastic ultra-rib in accordance with WIS 4-31-05. All pipes shall have flexible joints and shall be bedded and surrounded in granular material to BS 882 or concrete as appropriate. Manholes shall be pre-cast concrete in accordance with BS 5911 and shall have heavy duty cast iron covers and frames to BS 497. All branches draining dedicated car parking areas shall be provided with petrol interceptors (Klargester ref. KB1 or equal). All drainage branches beneath roads and parking areas shall be backfilled with imported granular material conforming to the standard specification for D.O.T. Type 1 material, well compacted in layers.

4.02 Mechanical Services

Heating Installation

Heat losses from the building through the fabric and from infiltration, are dealt with by a VRV heat pump system.

The open plan office space are fitted with ceiling void mounted fan coil units.

Ancillary areas such as stairs and corridors are provided with electric panel heaters.

Cooling Installation

Heat gains from the building through the fabric, from infiltration, occupants and equipment casual gains are dealt with via a VRV heat pump system.

Ventilation Systems

The building is largely open plan and mechanical supply and extract ventilation has been utilised to ensure satisfactory indoor air quality, to allow respiration, and for odour dispersal.

The toilet cores are provided with dedicated extract systems, employing a twin fan arrangement, operated on time control. This ensures ventilation to all toilet areas throughout the occupied period.

Water Services

Two insulated water tanks supply cold water to the various toilet areas of the building. Two tanks have been selected to allow maintenance to the system without loss of supply.

Mains cold water is sized to allow for any kitchen area and tea prep areas.

Hot water is supplied to all toilet areas via central electrically heated calorifiers.

The entire water services network is designed in accordance with the latest CIBSE guidelines on minimising the risk of Legionella.

Waste Services

Waste and foul water is conveyed to the main sewer system via horizontal and vertical pipework systems. All pipework is accessible for maintenance purposes.

Building Energy Management System

Due to the nature of the systems installed a central BEMS system is not required for this building. This ensures that control of the internal environment remains with the local occupant(s). The VRV system is provided with a central controller.

General

Ensuring good standards of plant maintenance the design life periods listed in table 2.1 will be achieved;

Element	Design Life
• Engineering Plant	10-15 years
• Electrical Distribution Systems	20-25 years
• Engineering terminals and fittings	15-20 years
• Foul and surface water drainage	>25 years

4.03 Electrical Services

Lighting Installation

General

Illumination levels for the complete buildings comply with the requirements of the CIBSE 'Code for

Interior Lighting' and the appropriate Lighting Design Guides.

Office Areas

Office areas are illuminated using high frequency 600 x 600mm recessed direct/indirect luminaires employing high efficacy (high lumen output) low energy lamp technology. The design complies with the requirements of CIBSE Lighting Guide 3 (LG3), category 2 with lighting levels at 350 lux.

General Circulation Areas/Toilets

High frequency compact fluorescent luminaires with decorative glass attachments are used in general circulation and toilet areas.

External Car Park Lighting

Functional external lighting is provided which match the existing luminaires on the Park.

Energy Efficiency

High frequency compact fluorescent luminaires are used throughout. Where linear fluorescents are used high efficacy lamps are utilised. Low voltage sources are kept to the absolute minimum and used only for 'effect'. Significant energy savings are realised with this approach.

Emergency Lighting

The emergency lighting installation is designed to comply with the requirements of all current regulations and guides, principally BS5266.

The system is designed to provide a minimum of three hours duration in the event of mains failure.

Emergency exit signage is provided throughout the complete building.

The system comprises self contained emergency lighting battery/inverter packs contained within individual luminaires.

Main Electrical Power Supply

The building is supplied from a dedicated 11KV/0.433KV transformer located on the site. The incoming supply is derived from the Supply Authority's local high voltage network.

The building has a main electrical switchboard for each floor level metered by the Supply Authority at each single point only.

Sub Main Cabling

Sub main cabling to the distribution network are XLPE/SWA/LSF type cable installed on cable ladder/trays/basket to the distribution board locations.

Distribution Boards

Final circuit miniature circuit breaker (MCB) distribution boards are located throughout the building at strategic points. All distribution boards are capable of accepting residual current devices (RCD's).

Small Power

General purpose twin 13A socket outlets will be provided throughout the office area for cleaning purposes. These are supplied from the local distribution board. Socket outlets/fused connection units are also provided to toilet areas to supply hand dryers and ancillary services.

Fire Alarm Installation

An analogue addressable fire alarm system designed to comply with the requirements of L2, as specified in BS5839, is provided throughout all areas of the building. The system comprises the main analogue addressable control panel, automatic optical and heat detectors, manual break glass units and fire alarm electronic sounders located throughout the building. Additionally plant areas will be provided with flashing xenon beacons for visual indication of a fire alarm condition.

The system is suitable for the addition of components to suit revised floor/partition layouts.

The complete system is wired in fire rated cable. The fire alarm system is connected to a BT Redcare Communicator which under alarm conditions will transmit a signal to a manned 24 hour central station where the information will be logged. The central station will then contact the Fire Services informing them of the activation.

A line monitor is incorporated in the communicator to monitor the voltage of the BT line and to facilitate an audible and visual indication at the control panel if a problem occurs on the BT line.

Site Closed Circuit Television (CCTV) Installation

A full and comprehensive colour CCTV system including static and pan, tilt, zoom cameras, multiplexors monitors and controls is provided at strategic locations throughout the site/car park. The system covers main external access/egress routes to and from the building

The CCTV is linked to the existing system on the park.

Provisions for Disabled Persons

The following provisions are made for disabled persons:

Alarm pull cords are provided in disabled WCs. These are linked to the building intruder detection system and generate a visual and audible alarm together with a text display on the intruder control panel of the area where the alarm was raised.

The lift is designed, constructed and installed in accordance with the BSEN81 and the requirements of Part T of the Scottish Building Regulations.

Lightning Protection System

A lightning protection system is provided to the building in full compliance with the requirements of BS6651. The building structure is utilised where possible to minimise the installation of visible down conductors.

4.04 Lift

1 No 8 Person Hydraulic Lift.

Satin Anodised aluminium finished panels with central mirrors.

Floor finish – Ceramiche Keope Verde 300x300mm fully vitrified floor tiles.

FD60S doors.

Lifts to comply with BS 5655 & Part 2.6 of Building Standards (Scotland) Regulations 1999.

- Clear landing of at least 1500x1500mm in front of lift doors.
- Lift car size at least 1100x1400mm
- Tactile call buttons and visual & tactile storey identification at each level
- Tactile storey selector buttons within Lift
- Controls inside & outside lift car to be located between 900mm and 1200mm above finished floor level, and at least 400mm from corner within the car
- Signalling system to give 5 seconds notification that lift is answering a landing call & 5 second dwell time before lift doors close after they are fully open.

4.05 Sanitaryware

WC-Olympian (wall hung) –Twyfords with Twyfords Pan.

Wash Basin-Shires Bathrooms- Pavan

Cistern- Twyfords for Olympian unit-

Taps chrome plated Medici monoblock

Belfast Cleaners sink.

Disabled set to be Twyfords Avalon Doc M. or equal.

Toilet roll holders to be interleaved toilet tissue type with lockable dispenser.

Liquid soap dispensers by Kingfisher Bee.

Battery operated automatic air fresheners to be installed in all toilets (including disabled).

Hand dryers to be Warner Howard model A48, 230v.

5.00 SITE WORKS
5.01 LANDSCAPING

Proposed landscape categories to be incorporated around the built development are to meet the requirements set out by Christopher Palmer Associates.

The inclusion of deck/underground car parking gives the opportunity to develop a more formal "streetscape/courtyard" style of hard and soft landscape. With a proportion of segregation from traffic, the approaches and surrounds of each building will be developed to include the following elements:-

- specialised membrane over structural slab to all hard and soft areas
- light weight vehicular service access over pedestrian areas
- formal layout of hard and soft landscape based on the structural grid of the car park below
- planting techniques similar to roof gardens, ie lightweight materials where possible
- decorative pavings responding to the building constructions
- drainage to all hard and soft areas through the slab to car park levels below
- irrigation to key soft areas
- seating and litter bins
- ornamental lighting to pedestrian areas
- water features incorporated at the entrances
- high quality of specified plans in order to give instant impact and scale to the build development
- restrictive deck parking for disabled and visitors is included between the buildings