Project: **1076 – 72 Broadwick Street**

Architectural specification: **Section L20: Doorsets, fire curtains, hatches**

Original date: **January 2019**

Revision		By	Checked	Date
	Section set-up	MA	BKEO	07.01.2019
	Developed to reflect T-Sheet 1076-3.06 TS	MA	BKEO	09.01.2019
T1	Issued for second stage tender	RO	BKEO	11.04.2019
T2	Issued for second stage tender	RO	BKEO	22.05.2019
T3	Issued as part of door package	RO	BKEO	20.06.2019
T4	BREEAM credit Hea 02 requirements, clause 452 added, clauses 411 & 510 amended	RO	BKEO	05.07.2019
T5	Clauses 422, 463 & 472 updated	RO	BKEO	29.07.2019

To be read with all other sections of the Architect's specification, together with other Consultants' documentation and the Preliminaries / General Conditions.
This specification is derived from the NBS version current at the time of preparation and applies to the architectural work.
In the event of any conflict with other requirements obtain formal clarification from the Architects, Buckley Gray Yeoman.

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01 SCOPE OF SPECIFICATION

- This section of the specification is:
  - Prescriptive for proprietary components;
  - Descriptive for purpose made new components.
- The specification includes requirements for proprietary / certified doorsets that may be modified to suit the particular design intent, purpose made doorsets and proprietary roof hatches.
- The specification must be read with the Architect's T sheet, Door Schedule, Window & Shopfronts Schedule / drawings and other relevant sections of the Architect's specification, including section A, Architectural general requirements.
- All visible metalwork to be of high-quality Architectural metalwork standard. If in doubt prepare samples for review and comment by the Architect, refer to section A.
- All visible spacers, safety marks, and other marking to the glazing to be agreed in colour and location with the Architect during the submittals process.
- The work is to be fully integrated with, and make provision for, work in connection with structural and services installations as applicable.
- See section A regarding air-tightness, thermal continuity, fire / acoustic performance.
- Also refer to sections L40, N14 & H31.

02 DESCRIPTION

- The work includes external doors and shopfronts, internal doorsets in various materials / configurations, roof hatches for access and for smoke ventilation and smoke curtains as listed in the contents list and included in the specification.
- Refer to Architect's Door, Shopfronts & Windows and Ironmongery Schedules and other sections of the Architect's specification as applicable.
- Do not place order/s until the Specialist Contractor/s has confirmed that design intent as shown on the Architect's drawings is achievable and the required performance and appearance can be achieved.
- Windows / doors of each type are to use co-ordinated and fully compatible sections and details and all glass is to be low iron and appear similar in order to achieve a consistent appearance throughout the work.
- Refer also to Structural and Services Engineers' documentation.
- See section A regarding fire / acoustic / security performance and responsible sourcing of timber products.

03 PRIMARY REFERENCES

- Carry out the work in accordance with this specification and those prepared by other Consultants and all applicable legislation / regulations / industry standards, including:

  BS 476 Fire tests on building materials and structures.
  BS 644 Timber windows and doorsets
  BS 4787 Internal and external wood doorsets, door leaves and frames.
  BS 6206 / BS EN 12600 Spec for impact performance requirements for flat safety glass
  BS 6262 CP for glazing of buildings
  BS 8214 CP for fire door assemblies with non-metallic leaves
  BS 8220 Guide for security of buildings against crime

DD 171 Guide to specifying performance requirements for hinged and pivoted doors, including test methods.
BS EN 356 Glass in building. Security glazing. Testing & classification of resistance against manual attack
BS EN 942 Timber in joinery
BS EN 1634 Fire resistance tests for door and shutter assemblies
BS EN 1991 Actions on structures
BS EN 12101 Smoke and heat control systems. Specification for smoke barriers
BS EN 12400 Windows and pedestrian doors. Mechanical durability
BS EN 14351 Windows and doors. Product standard, performance characteristics
BS EN ISO 717 Acoustics. Airborne sound insulation
BS EN ISO 10140 Acoustics. Laboratory measurement of sound insulation of building elements
BS EN 1634 Fire resistance tests for door and shutter assemblies
BS EN 15269 Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows
ISO 9381, BS EN 948 & 947 Hinged or pivoted doors
BS EN 1192 Doors
BS EN 12400 Windows and pedestrian doors
Building hardware various standards, as applicable
Manufacturer's recommendations
Fire Strategy report
Acoustic report

04 DURABILITY

- Service life, as defined in BS 7543 / BS ISO 15686, of the work in this section is to be not less than 30 years, 10 years for operable handles, locks, closers – see section P21.
- Submit, with tender, a statement setting out the expected life of any components incorporated with the work that will have an expected life less than the specified service life.
  - The statement is to include recommended inspection and maintenance to maximise expected life, together with recommendations for replacement.

05 PERFORMANCE

- Generally as clauses 03 and 04, as specified in the Door Schedule, Windows & Shopfrotns Schedule and particular requirements where specified.
- See section A, Architectural general requirements, that is an "umbrella" statement of requirements that apply to all aspects of the project.
- Refer to other Consultant's documentation:
  - Fire Engineer's report for performance and certification / test requirements for all components including those interfacing with walls.
  - Acoustic Consultants report for performance requirements.
  - Structural Engineer's specification for loadings, including wind load.
  - Mechanical and electrical engineer's documentation for access control and other services integration
- Integrity: The glazing systems / doors must resist wind loads, dead loads, and accommodate deflections and movements noiselessly and without damage.
- Glazing: Clear low iron content float glass - see also section L40.
- Glass safety: The inner pane of double glazed units and both panes of double glazing to doors are to be laminated in all cases and comply with Building Regulations requirements unless shown otherwise by a glass safety risk assessment carried out by an independent specialist and accepted by the Architect.
  - Glass-to-glass silicon jointing where shown on the drawings.
  - Glazing configuration to take account of installation of internal fabric curtains / roller blinds, shading from adjacent construction – refer to drawings.
  - See also security rated glazing where required - refer to Architect's Window Schedule.
- Thermal stress in glazing: All toughened glass to be heat soak tested.

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.
  - Such certification must cover door and frame, glass and glazing and their installation, essential and ancillary ironmongery, hinges and seals.
- Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door / doorset / assembly supplied will comply with the specified requirements for fire performance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3 and as required by the Fire Consultant.
- Evidence of acoustic performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant test report or engineering assessment, that each acoustic door / doorset / assembly supplied will comply with the specified requirements if tested to BS EN ISO 140-3 and as required by the Acoustic Consultant.
- Non fire rated assemblies: Provide certified evidence, in the form of a product conformity certificate or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements to BS EN 14351-1.
- Components and assemblies are to be marked to the relevant product standard and/ or third party certification rating.
- Fixing of signage, ironmongery and other fixtures shall maintain the performance and integrity of the doorsets.

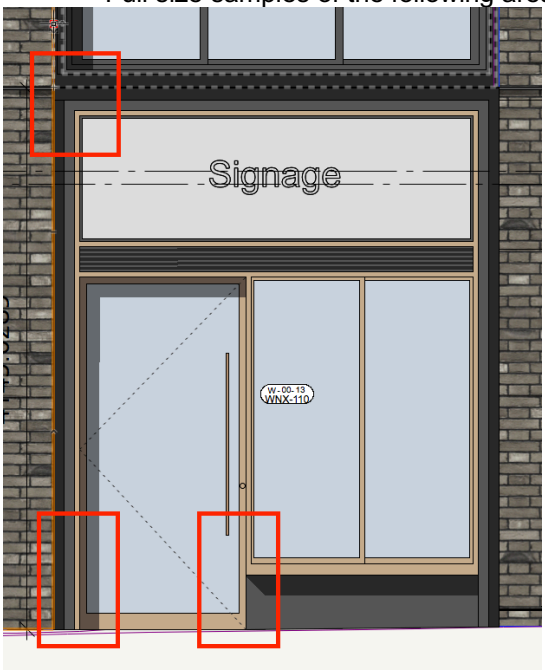
06 INTERFACES / CO-ORDINATION

- The design of interfaces with this section of the work is the Contractors responsibility to develop. The Contractor must ensure that the design intent and all performances requirements are met.
- Co-ordinate details, setting out and installation with related work / incorporated components – refer to Architect's drawings.
- The relationship between glazing / doors and surrounding construction / finishes is as shown on the Architect's drawings and includes components which require careful detailing, fabrication, setting out and installation to ensure a neat appearance while achieving weather-tightness without cold bridges.

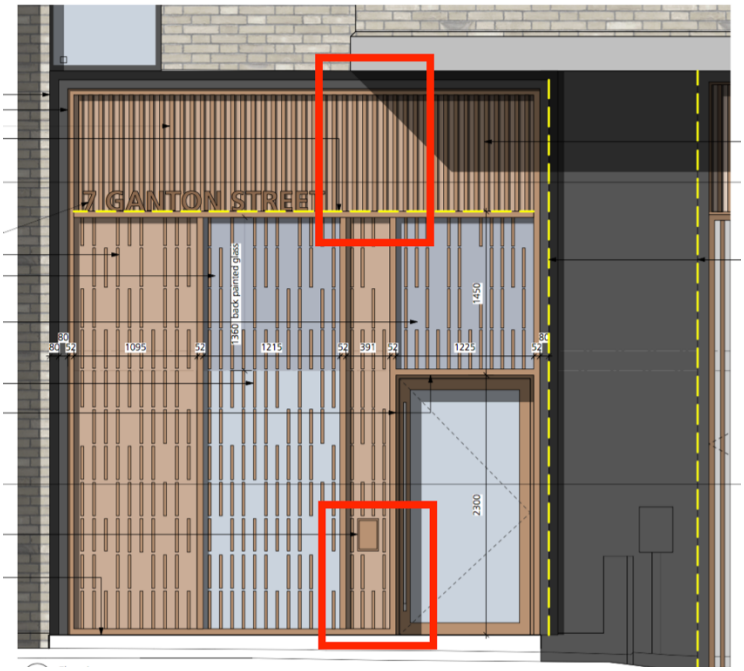
07A SUBMITTALS - SHOPFRONTS

- With Tender submission include: Proposals for future maintenance including: strategy, programme and annual costs.
- Samples: Submit fully finished samples of all visible components, including ironmongery, co-ordinated with adjacent work, for review / acceptance by the Architect.
- Control samples: After finalisation of all details, prepare sample areas for each type of work in locations to be agreed and with all incorporated components / accessories.
  - Provide lighting for viewing in conditions similar to the completed building.
- Prototypes: Prepare one of each of the following and arrange for inspection by the Architect before starting repetitive fabrication:

- Full size samples of the following areas of WNX-110



- Full size samples of the following areas of WNX-180



- Do not proceed without the Architect's agreement to all samples and control samples and ensure the completed installations match the accepted samples and control samples.

07A SUBMITTALS - DOORS

- Submit workshop drawings, to the architect for approval, prior to manufacture
  - Dimensions indicated on the design drawings are indicative of the design intent. The contractor shall maintain these dimensions and clearly state them on the working drawings. Any deviations to the indicated dimensions shall be stated within the tender return
- Samples: Submit fully finished samples of all visible components, including ironmongery, co-ordinated with adjacent work, for review / acceptance by the Architect.
- Control samples: After finalisation of all details, prepare sample areas for each type of work in locations to be agreed and with all incorporated components / accessories.
  - Provide lighting for viewing in conditions similar to the completed building.

08 PROFILES, TRIMS, ETC
- Generally as clauses 01 – 07.
- Description: Throughout the work there are various profiles, trims, accessories, etc. in timber to match the doorsets and in fabricated metal.
  - These are to be developed to complete the detailed design and carried out in accordance with clause 09, following agreement of fully finished samples by the Architect.
  - Finishes / colours to match the work in which they are to be incorporated unless otherwise specified.

09 JOINERY AND METALWORK
- See also sections Z10 and Z11.
- All visible metalwork and joinery is to be detailed, fabricated and installed to architectural standard, including provision of all necessary fittings, fixings, accessories, etc. to achieve the standard required and agreed by submission of samples and control samples.
- Prepare and finish materials / components to match samples to be agreed to show quality of finish, fabrication and assembly of joints, etc.
- Prepare control samples, together with those for adjacent work, to show the quality of installation, including accurate alignment, consistent joint widths, flatness / regularity of finished surfaces, etc.
- Fixings:
  - Generally concealed; any visible fixings to be approved by the Architect.
  - Incorporate details, shims, packings, etc. as necessary to achieve accurate positioning and alignment of the finished work.
  - Incorporate isolation to prevent noise from normal use, wind, thermal movements, etc.
- Complete all cutting, drilling, fabrication, etc. prior to final finishing.

10 SITE DIMENSIONS
- Procedure: Before starting work take site dimensions, record on shop drawings and use to ensure accurate fabrication.

11 EVIDENCE OF PERFORMANCE
- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

12 TIMBER PROCUREMENT
- Refer to section A, including;
- Timber (including timber for wood based products): Obtained from well managed forests and/ or plantations in accordance with:
  - The laws governing forest management in the producer country or countries.
  - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
  - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
  - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
- Certification scheme/ Other evidence: Refer to section A.
- Procedure: Before starting work take site dimensions, record on shop drawings and use to ensure accurate fabrication.

13 SUITING OF IRONMONGERY
- Description: To be confirmed with the Client.

25 BREEAM
- This project is required to meet BREEAM VOC/Formaldehyde specification credit under Hea 02 to ensure compliance with the Volatile Organic Compound emission levels. The table below details the requirements.

- No work must be started until these requirements are met and the Architect has given their written approval to do so from submitted reports, guarantees or other agreed evidence.

Product category - Wood panels (including timber doors, particle board, fibreboard including MDF, OSB, cement bonded particle board, plywood, solid wood panel and acoustic board) **NBS Section G20, H21, K10, K11, K20, K21, K30, K32, L20, L30, N10, N11, N15, P20, Z10**	
ALL PRODUCTS LISTED ABOVE MUST MEET OPTION 1 OR OPTION 2 OR ONE OF THE APPROVED ALTERNATIVE VOC SCHEMES	
Option 1	
Performance requirements	Formaldehyde E1 class
Compliant performance standard	BS EN 13986:2004 Wood-based panels for use in construction - Characteristics evaluation of conformity and marking
Compliant testing standard	BS EN 717-1:2004 Wood-based panels – Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method
Manufacturer also to confirm	The absence of prohibited wood preservatives/biocides.
Option 2	
Performance requirements	Formaldehyde level of 0.1mg/m^3
Compliant performance standard	1. BS EN ISO 16000-9:2006 Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method. OR 2. Standard method for the testing and evaluation of volatile organic chemical emissions from indoor sources using environmental chambers, version 1.1 - Emission testing method for California Specification 01350, Californian Department for Public Health, 2010. Note: For either method the resultant emission/surface area obtained from the chamber test method must be extrapolated to predict what the emissions would be in a theoretical model room (as detailed in the standard) and this extrapolated emission rate compared with the required formaldehyde level of 0.1mg/m^3.
Manufacturer also to confirm	The absence of prohibited wood preservatives/biocides.
Approved Alternative VOC Schemes for Wood-based products	• eco-INSTITUT-Label (2015 version) • GREENGUARD Certified (2013 version) GREENGUARD Gold (2013 version) GREENGUARD to confirm there are no measured carcinogens • Indoor Advantage TM Gold - Building Materials (2014 version) Products must also comply with SCS Global's "Verification Guidelines: Post-November 2015 Launched BREEAM and HQM scheme requirements for Emissions from Building Products - ECS Indoor Air Quality Technical Guidance Document 002", and product certification must state: "Measured concentration of Total Volatile Organic Compounds (TVOC) is less than/equal to 0.5 mg/m3 for the school classroom and private office parameters" AND "Category 1A and 1B Carcinogens are less than 0.001 mg/m3 "

	• Indoor Air Comfort® (2015 version) • Indoor Air Comfort Gold® (2015 version) • M1 Emission Classification of Building Materials (2015 version)

GENERAL

115 FIRE RESISTING DOORS/ DOOR ASSEMBLIES/ DOORSETS
- Door products: As defined in BS EN 12519.
- Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door/ door assembly/ doorset supplied will comply with the specified requirements for fire or smoke resistance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
- Components, assemblies or sets will be marked to the relevant product standard and/ or third party certification rating.
- Door systems shall include fixings, framing, bracketry, seals, ironmongery and all other components necessary to complete the works, Where not specified, they shall be suitable for the service conditions and be to the acceptance of the architect

120 NON FIRE RESISTING DOORS/ DOOR ASSEMBLIES/ DOORSETS
- Provide certified evidence, in the form of a product conformity certificate or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements to BS EN 14351-1. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
- Components and assemblies will be marked to the relevant product standard and/ or third party certification rating.
- Door systems shall include fixings, framing, bracketry, seals, ironmongery and all other components necessary to complete the works, Where not specified, they shall be suitable for the service conditions and be to the acceptance of the architect

130 ACOUSTIC DOORS/ DOORSETS
- Refer to the Acoustic Consultants drawings.
- Evidence of acoustic performance, if required. Provide certified evidence in the form of a producer conformality certificate, directly relevant test report or engineering assessment, that each type of acoustic door/ doorset/ assembly supplied will comply with the specified requirements detailed in BS EN ISO 140-3 equivalent.
  - Such certification must cover door and frame materials, glass and glazing, materials and their installation, essential and ancillary ironmongery, hinges and seals.

140 SERVICES
- Refer to the mechanical & electrical engineer's documentation and the fire strategy report with regard to door operations, security and additional devices
- Systems shall accommodate services, sensing devices ad final connections as indicated in the Mechanical and Electrical engineer's documentation, in a concealed manner to the acceptance of the architect
- Locations / positions of services shall be agreed with the architect where not indicated on the Design Drawings
- Provide all necessary seals, gaskets and suppory framing where services penetrate or interface with the works

145 VISION PANELS
- Vision panels shall maintain the performance of the doorsets
- Vision panels shall be, unless otherwise stated, clear, unwired, Kite marked safety glass in accordance with BS 6209 and BS EN 12600

PRODUCTS

410 APARTMENT ENTRANCE DOORS; DRS-A01

- Description: Solid hardwood door with painted finish
- Locations: Refer to drawings.
- Operation: Single side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Solid hardwood door with painted finish & routed V-grooves.
  - Thickness: as required to meet the requirements of PAS 24:2012 & Approved document Q
  - Dimensions and spacing of grooves as shown on 1076_sD series drawings
  - Finish as delivered: High quality factory spray finish, 20% sheen, submit samples to the architect for approval prior to manufacture.
  - Colour: TBC, allow for custom RAL
- Frame: Align face of frame with wall finish, both sides.
  - Wood species: Hardwood - Submit proposals and fully finished samples.
  - Appearance class to BS EN 942: J2.
  - Finish as delivered: Painted to match door leaf
  - Colour: TBC – allow for custom RAL
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
- Preservative treatment: Not required.
- Moisture content on delivery: 9 – 13%.
- Ironmongery: Refer to door schedule and section P21.
  - To be provided are part of doorset and include:
    - Butt hinges
    - Multipoint locking
    - Lever handle
    - Thumb turn & escutcheon
  - Access control: Not required
  - To meet the requirements of PAS 24:2012 & Approved document Q
  - Flat matt black finish to all
- Signage: Apartment door number, see section N14
- Perimeter seals: Timber packing and intumescent seals as required to achieve fire performance.
- Security resistance: To meet requirements of PAS 24:2012 & Approved document Q
- Vision panel: Not required
- Acoustic performance: Refer to door schedule.
- Fire performance: Refer to door schedule.
- Thermal performance (U-value maximum): N/A.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

411 INTERNAL APARTMENT DOORS; DRS-A02, DRS-A04 & DRS-A05

- Description: Single (DRS-A02 & DRS-A05) and double (DRS-A04) panelled door, refer to drawings and schedule for details.
- Locations: Refer to drawings.
- Operation: Single & Double side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Solid hardwood panelled door.
  - Thickness: 44mm
  - Dimensions of panels as shown on 1076_sD series drawings

  - Finish as delivered: High quality factory spray finish, 20% sheen, submit samples to the architect for approval prior to manufacture.
  - Colour: TBC, allow for custom RAL
- Frame:
  - Wood species: Hardwood - Submit proposals and fully finished samples.
  - Appearance class to BS EN 942: J2.
  - Finish as delivered: Painted to match door leaf
  - Colour: TBC, allow for custom RAL
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
  - 4 sided frame to DRS-A05
- Preservative treatment: Not required.
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to Door schedule and section P21.
  - Access control: Not required
- Security resistance: Not required
- Vision panel: Not required
- Acoustic performance: Refer to door schedule.
- Fire performance: Refer to door schedule and fire plans.
- Thermal performance (U-value maximum): N/A.
- Signage: Not required
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.
- Timber packing and intumescent seals: Not required.
- Other requirements: DRS-A05 doors to be sealed to maintain the apartment airtightness. These doors are to ventilated gas meter cupboards. The maximum permissible air exfiltration rate through the building envelope system must not exceed: 3 cu m / hr / sq. m at an internal to external pressure difference of 50 Pascals in accordance with CIBSE TM23.

412 PROPRIETARY SINGLE SLIDING INTERNAL APARTMENT DOORS; DRS-A03

- Description: Sliding door pocket door
- Operation: Single sliding pocket
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Manufacturer: Selo
  t 020 3880 0339
  e sales@selo-uk.com
  - Product Reference: Enigma Pocket door system
- Locations: Apartments, refer to drawings.
- Performance: As recommended by manufacturer.
- Arrangement/ Track system: As recommended by manufacturer.
- Door leaf: Solid hardwood panelled door.
  - Thickness: 44mm
  - Dimensions of panels as shown on 1076_sD series drawings
  - Finish as delivered: High quality factory spray finish, 20% sheen, submit samples to the architect for approval prior to manufacture.
  - Colour: TBC, allow for custom RAL
- Frame: Timber shadow gap frame. Size to suit wall build-up.
  - Finish as delivered: Primed for site painting
  - Finish: Painted to match door leaf
  - Colour: TBC, allow for custom RAL
- Sliding Gear: Top hung anodised aluminium sliding track
- Security resistance: Not required
- Vision panel: Not required
- Acoustic performance: N/A
- Fire performance: N/A

- Thermal performance: N/A.
- Ironmongery: As section P21, refer to door schedule and drawings.
  - Access control: None.
- Accessories: Soft closer
- Other requirements: Reinforced wall supports as part of door system, suitable for use with tiled walls.

413 STEEL FRAMED GLAZED DOOR WITH FIXED SIDE PANEL
- Description: Steel framed single door with fixed glazed side panel
- Locations: Refer to drawings.
- Operation: Single side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Manufacturer: Crittall Windows Ltd
  - Product Reference: Corporate W20 range
  - Or equal and approved
- Operation and strength characteristics: To BS 6375: Part 2
- Construction: All frames have welded corners and are flat and square within normal manufacturing dimensional tolerances of +/- 1.5 mm. Intermediate bars are hot tenon riveted.
- Galvanising: All components including steel attachments, coupling members and ancillaries: hot-dipped after manufacture to BS EN ISO 1461:1999
- Door Leaf: Steel framed glazing
  - Finish: Powder coated
    - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.
    - Colour: TBC Allow for Interpon Futura: Gris 2900 Sable YW355F.
- Frame: Steel
  - Finish: to match door leaf
- Glazing: laminated glass to match performance of door
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Ironmongery: Refer to door schedule and section P21.
  - Hinges, D-shaped pull handle to both sides, fixed through glazing, flat matte black finish
- Access control: not required
- Fixing: To manufacturers recommendations.

420 DOUBLE DOOR (GLAZED), WITH FIXED GLAZED FIRE RATED PANEL; DRS-C01
- Description: Glazed timber frame double door in joinery, with glazed overpanel.
- Locations: Refer to drawings.
- Operation: Double door with floor pivot
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Timber framed glazed door.
  - Framing dimensions: as per design intent shown on 1076_sD series drawings
  - Species: Solid European oak – provide samples for acceptance
  - Finish office side: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
  - Finish lobby side: High quality paint finish, allow for custom RAL colour
- Frame:
  - Wood Species: to meet performance requirements
  - Finish: concealed
  - Office Side: Overclad with joinery WF-20 and as shown on the drawings

- Lobby side: Powder coated metal reveal to frame, wall finished to abut metal reveal, as shown on drawings. Reveal lining to be 10mm powder coated aluminium, secret fixed.
  - Finish: PPC, allow for Interpon Collection Futura Gris 2900 Sable YW355F
- Appearance class to BS EN 942: J2.
- Glazing details: Fire rated glazing, performance to match door.
  - Manifestation: as specification L40/210 and drawing 1076-SK-190424-2
  - Beading: concealed
- Overpanel: Fire rated glazed panel, performance to match door
  - To office side: 25mm timber battens to fixed seamlessly over glazed panel, as shown on the drawings
- Preservative treatment: Not required.
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21. To include:
  - Floor spring with pivot guide recessed in door.
  - Pull handles both sides, height as per drawings.
  - Lollipop fire signage routed into leading edge of door.
  - Also refer to door schedule for signage requirements.
- Access control: Refer to door schedule and MEP documentation.
- Acoustic performance: N/A.
- Fire performance: See door schedule.
- Thermal performance (U-value maximum): N/A
- Perimeter seals: As required to achieve fire performance
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

421 SINGLE TIMBER DOOR WITH VISION PANEL, IN JOINERY; DRS-C10

- Description: Glazed timber single door in joinery, with vision panel and glazed overpanel.
- Operation: Single side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Timber veneer.
  - Core: Solid - Submit proposals and fully finished samples.
  - Veneer species: Birch – provide samples for acceptance.
  - Configuration: Crown cut, random matched.
  - Finish: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
- Frame:
  - Wood Species: to meet performance requirements and to match door leaf
  - Finish:
    - Office Side: Overclad with joinery WF-20 and as shown on the drawings
    - Lobby side: To match door leaf
    - 10mm shadow gap formed with powder coated aluminium reveal bead to lobby side
    - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
- Preservative treatment: Not required.
- Vision panel: Fire rated, clear glazed vision panel to match door performance, frame to be flush with door leaf.
  - Manifestation: as specification L40/210 and drawing 1076-SK-190424-2
  - Beading: concealed behind veneer
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer ironmongery schedule and section P21.
  - Kickplate to be installed flush with face of veneer (thickness of kickplate to match veneer)
- Access control: Refer to door schedule and MEP security information.
- Perimeter seals: as required to meet performance requirements
- Security resistance: Refer to door schedule.

- Acoustic performance: N/A.
- Fire performance: See door schedule.
- Thermal performance (U-value maximum): N/A.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

422 SINGLE TIMBER DOOR; DRS-C02, C03 & C06

- Description: Fire rated timber door.
- Locations: Refer to drawings.
- Operation: Single & double side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Solid - Submit proposals and fully finished samples.
  - Finish as delivered:
  - DRS-C02 & Door 06-14: Veneered
    - Veneer species: Birch – provide samples for acceptance.
    - Configuration: Crown cut, random matched.
    - Finish: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
  - DRS-C03 & C06: High quality factory spray finish, 20% sheen, submit samples to the architect for approval prior to manufacture. Colour: TBC, allow for custom RAL
- Frame: To match door leaf
  - Align face of frame with wall finish, both sides.
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
  - Wood species: Submit proposals and fully finished samples.
  - Appearance class to BS EN 942: J2.
  - Finish as delivered: to match door leaf
- Preservative treatment: Not required.
- Glazing/ Infill details: Fire rated glazing.
  - Manifestation: as specification L40/210 and drawing 1076-SK-190424-2
  - Beading: to DRS-C02 & Door 06-14 – concealed behind veneer. To DRS-C03 & C06 – screw fixed and pelleted, finish to match door
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21.
  - Kickplate to be installed flush with face of door (DRS-C02 & Door 06-14 - thickness of kickplate to match veneer. DRS-C03 & C06 to be routed – thickness of door increased to allow for routing while maintaining fire performance)
- Access control: Refer to door schedule and MEP security information.
- Security resistance: Refer to door schedule.
- Vision panel: See door schedule. Performance requirements to match door
- Acoustic performance: See door schedule, except DRS-C06 which is N/A.
- Fire performance: See door schedule.
- Thermal performance (U-value maximum): N/A.
- Perimeter seals: Timber packing and intumescent seals as required to achieve fire performance.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

428 SINGLE GLAZED TIMBER FRAME DOOR TO CORES; DRS-C04

- Description Glazed timber frame single door.
- Locations: Refer to drawings.
- Operation: Single side hung

- Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
- Opening force: to comply with requirements of Approved document M

- Materials: Generally to BS EN 942.
- Door leaf: Timber framed glazed door.
  - Framing dimensions: as per design intent shown on 1076_sD series drawings
  - Finish: High quality paint finish, allow for custom RAL colour
- Frame:
  - Wood species: Hardwood - Submit proposals and fully finished samples.
  - Appearance class to BS EN 942: J2.
  - Finish as delivered: Painted to match door leaf
  - Colour: TBC, allow for custom RAL
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
- Preservative treatment: Not required.
- Glazing details: Fire rated glazing, performance to match door.
  - Manifestation: as specification L40/210 and drawing 1076-SK-190424-2
  - Beading: screw fixed and pelleted, finish to match door
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21.
- Access control: Refer to door schedule and MEP security information.
- Security resistance: Refer to door schedule.
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Perimeter seals: Timber packing and intumescent seals as required to achieve fire performance.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

430 SINGLE TIMBER DOOR IN JOINERY; DRS-C05

- Description: Single timber door, overlcad with joinery and battens to one side.
- Locations: Refer to drawings.
- Operation: Single door on floor pivot
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Timber veneer with batten cladding.
  - Veneer species: Birch – provide samples for acceptance.
  - Configuration: Crown cut, random matched.
  - Finish: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
  - To office side: also overclad with battens as joinery WF-20
- Frame:
  - Wood Species: to meet performance requirements and to match door leaf
  - Finish:
    - Office Side: Overclad with joinery and battens WF-20 and as shown on the drawings
    - Lobby side: To match door leaf
    - 10mm shadow gap formed with powder coated aluminium reveal bead to lobby side
    - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
- Preservative treatment: Not required.
- Glazing/ Infill details: Vision panel, over clad with battens on office side.
  - Manifestation: Not required
  - Beading: concealed behind veneer

- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21.
  - Kickplate to be installed flush with face of door (thickness of kickplate to match veneer)
- Access control: Refer to door schedule and MEP security information.
- Security resistance: Refer to door schedule.
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Perimeter seals: to meet performance requirements
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

440 PAINTED FIRE RATED DOOR; DRS-C07 & DRS-C08

- Description: Single (DRS-C07) and Double (DRS-C08) timber door with architrave.
- Locations: Refer to drawings.
- Operation: Single & double side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Painted timber finish.
  - Core: Submit proposals and fully finished samples.
  - Finish as delivered: Painted, allow for custom RAL colour.
- Frame and architraves:
  - Architraves: Both sides, timber square profiled architrave, painted finish.
  - Wood species: Submit proposals and fully finished samples.
  - Appearance class to BS EN 942: J2.
  - Finish as delivered: Submit proposals and fully finished samples.
  - Colour: Custom RAL see door schedule.
- Preservative treatment: Not required.
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21.
- Access control: Refer to door schedule and MEP security information.
- Security resistance: Refer to door schedule.
- Vision panel: N/A.
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Perimeter seals: as required to achieve performance requirements
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.
- Other requirements: Timber packing and intumescent seals as require to achieve fire performance.
  - Door B2-06 to have magnetic hold opens on both doors, linked to fire alarm, to release doors to close in the event of a fire

445 SINGLE GLAZED TIMBER FRAME DOOR WITH GLAZED SIDE PANEL; DRS-C09

- Description: Glazed timber frame single, architrave-free, door with glazed side panel.
- Locations: Refer to drawings.
- Operation: Single side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Timber framed glazed door.
  - Framing dimensions: as per design intent shown on 1076_sD series drawings
  - Species: Solid European oak – provide samples for acceptance

- Finish office side: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
- Finish lobby side: High quality paint finish, allow for custom RAL colour
- Frame:
  - Wood Species: to meet performance requirements
  - Appearance class to BS EN 942: J2.
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
- Glazing details: Fire rated glazing, performance to match door.
  - Manifestation: as specification L40/210 and drawing 1076-SK-190424-2
  - Beading: concealed
- Side Panel: Timber framed fixed, fire rated glazing.
  - Fire performance: 30 minutes integrity
  - Frame: species and dimension to meet fire performance
  - Frame finish: to match door
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
- Preservative treatment: Not required.
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21.
- Access control: Refer to door schedule and MEP security information.
- Acoustic performance: N/A.
- Fire performance: See door schedule.
- Thermal performance (U-value maximum): N/A
- Perimeter seals: As required to achieve fire performance
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.
- Other requirements: Align pull handle and glazed door panel as detailed on the drawings.

446 WC LOBBY DOORS; DRS-WC03

- Description: Single timber veneered door
- Locations: Refer to drawings.
- Operation: Single side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Solid - Submit proposals and fully finished samples.
  - Finish as delivered:
  - Lobby side:
    - Veneer species: Birch – provide samples for acceptance.
    - Configuration: Crown cut, random matched.
    - Finish: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
  - WC side: to match joinery WF-10
- Frame: To match door leaf
  - Lobby side:
    - Align face of frame with wall finish.
    - 10mm shadow gap formed with powder coated aluminium reveal bead
    - Finish as delivered: to match door leaf
  - WC side:
    - Overclad with joinery WF-10
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent

- Wood species: Submit proposals and fully finished samples.
- Appearance class to BS EN 942: J2.
- Preservative treatment: Not required.
- Moisture content on delivery: 9-13%.
- Ironmongery: Refer to ironmongery schedule and section P21.
- Access control: Not required
- Security resistance: Refer to door schedule.
- Vision panel: Not required
- Acoustic performance: N/A
- Fire performance: N/A
- Thermal performance (U-value maximum): N/A.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

448 GLAZED METAL FRAMED SINGLE DOOR TO COURTYARD; E04

- Description: Metal framed glazed double doors to residential courtyard
- Locations: Refer to drawings.
- Door Operation: Single, side hung door
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Manufacturer: submit proposals for Architect's approval
- Fabricated and installed: By a manufacturer approved and agreed account holder of the approved manufacturer.
  - Product reference: Submit proposals to achieve performance requirements
- Finish as delivered: Powder coated.
  - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.
  - Colour: TBC Allow for Interpon Futura: Gris 2900 Sable YW355F.
- Dimensions: Refer to 1076_sD-101 and door schedule. Contractor must complete on site dimensions survey before production of workshop drawings and manufacturer.
- Materials and workmanship: As section Z11.
- Performance:
  - Acoustic performance (Noise reduction dB): Refer to acoustic consultant's report.
  - Thermal performance (W/m^2K): 1.3
  - G-Value: 0.61
  - Light transmittance target: 80%
  - Barrier loading (kN/m): Not applicable
  - Security glazing: Heat strengthened laminate outer pane.
  - Fire performance: Refer to door schedule
  - To comply with requirements in BS8300 for all use classes
- Glazing details: As per manufacturer's recommendations to meet the performance criteria.
  - Also refer to section L40 for Glass and glazing generally.
    - Either:
      - Windows and glazed doors to be fitted with internal square glazing bead glazed with EPDM gaskets, or
      - Windows to be bonded glass glazed with EPDM gaskets.
  - It is the contractor's responsibility to use glass of suitable thickness size and coating to meet the performance requirements set out in the specification and schedule. This includes but not limited to thermal, acoustic, structural and glass photometric data and samples for visual assessment.
  - Manifestation: As section L40 and when indicated on the window & shopfronts schedule.
- Threshold: Level threshold to meet Part M of the Building Regulations. Waterproof seal to frame
- Ironmongery: Also refer to section P21.
  - Door Handle: Matt black finish pull handle to both sides, dimensions as shown on drawings

- Butt hinges
- Automatic opening & closing: where indicated on the door schedule
- Locking: not required

- Other requirements: Concealed fixings to all frames; refer to section Z20
  - Sealants: Refer to clause H10/820.
  - EPDMs: Refer to clause H10/825.
  - Timber packers: Refer to section G20.
  - Allow for shims, straps or other secondary structure, as required, back to structural opening
  - Metal flashing, glazed into curtain walling, as required to complete interface with surrounding wall and as shown on the drawings
  - When indicated on the door schedule to open automatically in the event of fire
  - To comply with BS EN 12101

450 EXTERNAL DOOR; DRS-E06

- Description: Single & double external, back of house, metal door
- Locations: Refer to drawings.
- Operation: Single & double side hung- refer to door schedule
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Manufacturer: submit proposals
  - Product reference: submit proposals
  - Size: Refer to door schedule and drawings.
  - Height: Refer to door schedule and drawings.
- Materials and workmanship: As section Z11.
- Door leaf: Metal wrapped timber
  - Finish: Powder coated
  - Colour: TBC, allow for custom RAL colour
- Frame members: Metal wrapped timber
  - Finish: Powder coated, refer to door schedule.
  - Colour: TBC, allow for custom RAL colour
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule and fire plans.
- Thermal performance: to achieve a U-Value of 1.6W/m2K
- Security resistance: Refer to door schedule.
- Glazing details: N/A.
- Ironmongery: by door manufacturer, to include:
  - Butt hinges
  - Closers where indicated on door schedule
  - Fire signage as indicated on schedule
  - Digilock where indicated on schedule
  - Eurocylinder, with thumb turn, escutcheon and lever handle, where digilock is not provided
- Access control: Refer to door schedule and MEP security information.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

451 DOUBLE DOOR TO SERVICE YARD WITH CHEQUER-PLATE FINISH; DRS-E07

- Description: Double external, back of house, metal door
- Locations: Refer to drawings.
- Operation: Double side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Manufacturer: submit proposals
  - Product reference: submit proposals
- Materials and workmanship: As section Z11.

- Door leaf: Metal wrapped timber
  - Finish: Powder coated
  - Colour: TBC, allow for custom RAL colour
  - To bottom half: Chequer-plate WF-07
- Frame members: Metal wrapped timber
  - Finish: Powder coated
  - Colour: TBC, allow for custom RAL colour
- Acoustic performance: N/A.
- Fire performance: refer to door schedule and fire plans.
- Thermal performance: to achieve a U-Value of 1.6W/m2K
- Security resistance: Refer to door schedule.
- Glazing details: N/A.
- Ironmongery: by door manufacturer, to include:
  - Butt hinges
  - Closers where indicated on door schedule
  - Fire signage as indicated on schedule
  - Digilock where indicated on schedule
  - Eurocylinder, with thumb turn, escutcheon and lever handle, where digilock is not provided
- Access control: Refer to door schedule and MEP security information.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

452 SINGLE DOOR TO 5TH FLOOR LOWER LEVEL; DRS-R10

- Description: Single, back of house, metal door
- Locations: Refer to drawings.
- Operation: Double side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Manufacturer: submit proposals
  - Product reference: submit proposals
- Materials and workmanship: As section Z11.
- Door leaf: Steel or aluminium, to meet performance requirements
  - Finish: Powder coated
  - Colour: White
- Frame members: Steel, to meet performance requirements
  - Finish: Powder coated
  - Colour: Whte
- Acoustic performance: N/A.
- Fire performance: refer to door schedule and fire plans.
- Thermal performance: not required
- Security resistance: Refer to door schedule.
- Glazing details: none
- Ironmongery: by door manufacturer, to include:
  - Butt hinges
  - Fire signage as indicated on schedule
  - Digilock where indicated on schedule
  - Eurocylinder, with thumb turn, escutcheon and lever handle, where digilock is not provided
- Access control: not required
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

462 RISER DOOR; DRS-R01 & DRS-R03

- Description: Double and single riser door
- Locations: Refer to drawings.
- Operation: Single & double side hung

- Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
- Opening force: to comply with requirements of Approved document M

- Materials: Generally to BS EN 942.
- Door leaf: Solid - Submit proposals and fully finished samples.
  - Finish as delivered: High quality factory spray finish, 20% sheen, submit samples to the architect for approval prior to manufacture. Colour: TBC, allow for custom RAL
- Frame: To match door leaf
  - Align face of frame with wall finish, both sides.
  - Finish as delivered: to match door leaf
  - 10mm shadow gap formed with powder coated aluminium reveal bead
  - Frame and shadow gap shall be finished to achieve the required performance and visual design intent
  - Appearance class to BS EN 942: J2.
- Ironmongery: Refer to ironmongery schedule and section P21.
- Access control: not required
- Security resistance: Refer to door schedule.
- Vision panel: Not required
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Special features/ other requirements: Timber packing and intumescent seals as require to achieve fire performance.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

463 SINGLE CONCEALED RISER DOOR; DRS-R02 & DRS-R07

- Description: Single plasterboard finish riser door
- Locations: Refer to drawings.
- Operation: Single side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
- Manufacturer: Profab Access Limited
  T: 01827 718222,
  E: sales@profabaccess.com,
  W: www.profabaccess.com
  - Product Reference: 4000 Series 2FR PD Double Door
  - Or equal and approved
- Door Leaf: Plasterboard door face with 12.5mm fireline board to front and rear face. With door bead.
  - Finish: Onsite application of polished plaster / skim coat, see 1076_WF series drawings.
- Frame Profile: Beaded
- Locking arrangement: 3-Point Lock
- Security resistance: Refer to door schedule.
- Vision panel: None.
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Ironmongery: Refer to door and ironmongery schedule and section P21. Proprietary ironmongery to be provided as part of doorset to include hinges and budget lock, with fire persons key to Dry riser outlet doors.
- Access control: not required
- Fixing: To manufacturers recommendations. Trim to form aperture in frame generally by positioning 'C' studs either side of panel long edges, & snipping & bending (head & base) Channel at the top & bottom forming a 'window aperture'. Timber supports within the studs either side of the panel can be used if required. Screw fix access panel into formed aperture using suitable (e.g. Drywall) screws.

465 CONCEALED RISER DOOR; DRS-R04 & DRS-R05
- Description: Single and double riser doors concealed within wall panelling
- Locations: Refer to drawings.
- Operation: Single & double side hung
  - Clear width: see door schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Materials: Generally to BS EN 942.
- Door leaf: Timber veneer with batten cladding to office side.
  - Veneer species: Birch – provide samples for acceptance.
  - Configuration: Crown cut, random matched.
  - Finish: Contractor to apply clear PU lacquer, max. 20% sheen or less to provide matt appearance, with lightly brushed finish to reveal organic wood grain. Provide sample panel for acceptance.
  - Also overclad with battens as joinery WF-20, as shown on the drawings
  - To riser side: Painted finish
- Frame:
  - Wood Species: to meet performance requirements
  - Finish:
    - Office Side: Overclad with joinery and battens WF-20 and as shown on the drawings
    - Riser side: Painted finish
    - Frame shall be finished to achieve the required performance and visual design intent
- Acoustic performance: Varies; refer to door schedule and acoustic consultant's report and drawings.
- Ironmongery: Refer to ironmongery schedule and section P21.
  - Access control: not required
- Security resistance: Refer to door schedule.
- Vision panel: N/A.
- Acoustic performance: N/A.
- Fire performance: Refer to door schedule.
- Thermal performance: N/A.
- Special features/ other requirements:
  - Timber infill frame to match door frame between single and door riser door assemblies.
  - Join of double doors is off-centre, to align with batten edge.
- Fixing: In accordance with manufacturer's recommendations to meet the required performance.

472 DOUBLE ARCHITRAVE FREE DOOR WITH PLASTERBOARD FINISH; DRS-R08
- Description: Generally as clause L20/463 except the following;
- Locations: Refer to drawings.
- Double door configuration.

480 RESTAURANT ENTRANCE WITH FIXED WINDOW SEAT; WNX-100
- Description: Restaurant shopfront with timber framed glazed door, window seat, signage and profiled metal surround
- Locations: Refer to drawings.
- Drawing Reference: 1076_sW_110 & 1076_ED_52
- Door Operation: Single, side hung door
  - Clear width: see window & shopfronts schedule, calculated in accordance with approved document B2, diagram C2
  - Opening force: to comply with requirements of Approved document M
- Window Operation: Fixed projecting window seat
- Manufacturer: Shopfront Contractor, submit proposals
- Dimensions: Refer to 1076_sW-01_Window & Shopfronts Schedule and drawings. Contractor must complete on site dimensions survey before production of workshop drawings and manufacturer.
- Materials and workmanship: As section Z10 & Z11. Accuracy: To BS 4787-1..
  - Door & Window Frame members:

- Dimensions: as shown on drawings
- Material: European Oak
- Finish: Multiple layers of clear lacquer, as recommended by manufacturer for durability and stain resistance
- Finish Service Life: minimum 7 years

- Extended reveals:
  - Dimensions: as shown on drawings
  - Material: European Oak, 25mm shadow gap to junction with external paving, with recessed Sapele plinth
  - Finish: Multiple layers of clear lacquer, as recommended by manufacturer for durability and stain resistance
  - Finish Service Life: minimum 7 years
- Window cill & lining to window:
  - Dimensions: as shown on drawings
  - Material & Finish: to match window frames
- Profiled metal surround & cladding below window
  - Dimensions: as shown on drawings
  - See T-Sheet reference RSW-450
- Metal beading to signage:
  - Dimensions: as shown on drawings
  - Finish: to match profiled metal surround

- Performance: Also refer to the 1076_sW-01_Window & Shopfronts Schedule.
  - Acoustic performance (Noise reduction dB): Refer to acoustic consultant's report.
  - Thermal performance (W/m^2K): 1.6 to doors, 1.3 to windows
  - G-Value: 0.52
  - Light transmittance target: 79%
  - Barrier loading (kN/m): Not applicable
  - Security glazing: Heat strengthened laminate outer pane.
  - Fire performance: Not required
  - To comply with requirements in BS8300 for all use classes
- Glazing details: As per manufacturer's recommendations to meet the performance criteria.
  - Also refer to section L40 for Glass and glazing generally.
    - Either:
      - Windows and glazed doors to be fitted with internal square glazing bead glazed with EPDM gaskets, or
      - Windows to be bonded glass glazed with EPDM gaskets.
  - It is the contractor's responsibility to use glass of suitable thickness size and coating to meet the performance requirements set out in the specification and schedule. This includes but not limited to thermal, acoustic, structural and glass photometric data and samples for visual assessment.
  - Manifestation: As section L40 and when indicated on the window & shopfronts schedule.
- Threshold: Level threshold to meet Part M of the Building Regulations. Waterproof seal to frame
- Ironmongery: Also refer to section P21.
  - Door Handle: Bronze finish pull handle to both sides, dimensions as shown on drawings
  - Concealed floor spring to allow for dual action
  - Automatic opening & closing: with concealed hardware at door head or in floor spring
  - Locking: Deadlock with eurocylinder and panic bar or thumb turn internally, as indicated on the windows & shopfronts schedule
  - Other requirements: **Door to open inwards during normal use. In the event of a fire to open outwards. Mechanical latch, linked to fire alarm to control direction of opening.**
- Other requirements: Integrated signage – see T-sheet reference SI-25
  - Secondary steelwork to support projecting window seat, to S.E's details
  - Sealants: Refer to clause H10/820.
  - EPDMs: Refer to clause H10/825.
  - Timber packers: Refer to section G20.

- Allow for shims, straps or other secondary structure, as required, back to structural opening
- Additional requirements: All other components required to complete installation as shown on the Architects drawings.

481 RESTAURANT ENTRANCE WITH WINDOW SEAT; WNX-110
- As Clause 480, except:
- Description: Restaurant shopfront with timber framed glazed door, sliding window seat, vent panel, signage and profiled metal surround
- Drawing Reference: 1076_sW_112 & 1076_ED_54
- Window Operation: 2 pane horizontal sliding windows to projecting window seat
- Thermal performance (W/m^{2}K): 1.6 to door, 1.3 to window
- Vent Panel:
  - Metal panel with slotted perforations to achieve 60% free area
  - Removable insulated backing panel to be provided to the rear of the vent panel, to ensure thermal continuity and weathertightness
  - Dimensions: as shown on drawings
  - Finish: to match profiled metal surround
- Other requirements: **Door to open inwards during normal use. In the event of a fire to open outwards. Mechanical latch, linked to fire alarm to control direction of opening.**

482 RETAIL ENTRANCE WITH FIXED WINDOW; WNX-120
- As Clause 480, except:
- Description: Retail shopfront with timber framed glazed door, fixed glazing, vent panel, signage and profiled metal surround
- Drawing Reference: 1076_sW_112 & 1076_ED_55
- Window Operation: Fixed
- Thermal performance (W/m^{2}K): not required
- Vent Panel:
  - Metal panel with slotted perforations to achieve 50% free area
  - Removable insulated backing panel to be provided to the rear of the vent panel, to ensure thermal continuity and weathertightness
  - Dimensions: as shown on drawings
  - Finish: to match profiled metal surround0
- Ironmongery: Also refer to section P21.
  - Door Handle: Bronze finish pull handle to both sides, dimensions as shown on drawings
  - Concealed floor spring to allow for dual action
  - Locking: Deadlock with eurocyclinder and internal thumb turn
- Other requirements: Integrated signage – see T-sheet reference SI-20
  - Sealants: Refer to clause H10/820.
  - EPDMs: Refer to clause H10/825.
  - Timber packers: Refer to section G20.
  - Allow for shims, straps or other secondary structure, as required, back to structural opening
  - Additional requirements: All other components required to complete installation as shown on the Architects drawings.

483 FIXED WINDOW TO RETAIL; WNX-130
- As clause 482, except:
- Description: Retail shopfront with fixed glazing, vent panel, signage and profiled metal surround
- Drawing Reference: 1076_sW_113 & 1076_ED_55
- Door Operation: N/A
- Ironmongery: Not required

484 RETAIL ENTRANCE AT CORNER; WNX-135
- As Clause 482, except:
- Description: Retail shopfront with timber framed double glazed door, vent panel, signage and profiled metal surround at corner
- Drawing Reference: 1076_sW_113 & 1076_ED_56
- Door Operation: Double, side hung door
  - Clear width: see window & shopfronts schedule, calculated in accordance with approved document B2, diagram C2
- Window Operation: N/A
- Additional requirements: Profiled metal surround and backing to allow for installation at corner, as shown on drawings

485 DOUBLE ENTRANCE DOORS WITH GLAZED SIDE PANELS; WNX-140
- Description: Metal framed glazed double doors to gym with fixed glazing either side
- Locations: Refer to drawings.
- Drawing Reference: 1076_sW_111 & 1076_ED_200, 201, 602, 620 & 621
- Door Operation: Double, side hung door
  - Clear width: see window & shopfronts schedule, calculated in accordance with approved document B2, diagram C2
- Manufacturer: submit proposals for Architect's approval
- Fabricated and installed: By a manufacturer approved and agreed account holder of the approved manufacturer.
  - Product reference: Double doors with curtain walling either side. Maximum frame face widths as shown on drawing 1076_sW_111. Extended capping to mullions as shown on drawings
- Finish as delivered: Powder coated.
  - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.
  - Colour: TBC Allow for Interpon Futura: Gris 2900 Sable YW355F.
- Dimensions: Refer to 1076_sW-01_Window & Shopfronts Schedule and drawings. Contractor must complete on site dimensions survey before production of workshop drawings and manufacturer.
- Materials and workmanship: As section Z11.
- Performance: Also refer to the 1076_sW-01_Window & Shopfronts Schedule.
  - Acoustic performance (Noise reduction dB): Refer to acoustic consultant's report.
  - Thermal performance (W/m^2K): 1.6 to doors, 1.3 to fixed glazing
  - G-Value: 0.52
  - Light transmittance target: 79%
  - Barrier loading (kN/m): Not applicable
  - Security glazing: Heat strengthened laminate outer pane.
  - Fire performance: Not required
  - To comply with requirements in BS8300 for all use classes
- Glazing details: As per manufacturer's recommendations to meet the performance criteria.
  - Also refer to section L40 for Glass and glazing generally.
    - Either:
      - Windows and glazed doors to be fitted with internal square glazing bead glazed with EPDM gaskets, or
      - Windows to be bonded glass glazed with EPDM gaskets.
  - It is the contractor's responsibility to use glass of suitable thickness size and coating to meet the performance requirements set out in the specification and schedule. This includes but not limited to thermal, acoustic, structural and glass photometric data and samples for visual assessment.
  - Manifestation: As section L40 and when indicated on the window & shopfronts schedule.
- Threshold: Level threshold to meet Part M of the Building Regulations. Waterproof seal to frame
- Ironmongery: Also refer to section P21.

- Door Handle: Bronze finish pull handle to both sides, dimensions as shown on drawings
- Concealed floor spring to allow for dual action
- Automatic opening & closing: with concealed hardware at door head or in floor spring
- Locking: Deadlock with eurocylinder and with panic bar or thumb turn internally, as indicated on the windows & shopfronts schedule
- Other requirements: **Door to open inwards during normal use. In the event of a fire to open outwards.** Mechanical latch, linked to fire alarm to control direction of opening.

- Other requirements: Concealed fixings to all frames; refer to section Z20
  - Sealants: Refer to clause H10/820.
  - EPDMs: Refer to clause H10/825.
  - Timber packers: Refer to section G20.
  - Allow for shims, straps or other secondary structure, as required, back to structural opening
  - Metal flashing, glazed into curtain walling, as required to complete interface with surrounding wall and as shown on the drawings
  - Additional requirements: All other components required to complete installation as shown on the Architects drawings.

486 SINGLE ENTRANCE DOOR WITH GLAZED SIDE PANEL; WNX-145

- As Clause 485, except:
- Description: Metal framed glazed single entrance door with glazed side panel and signage above
- Drawing Reference: 1076_sW_112 & 1076_ED_634 & 635
- Door Operation: Single, side hung door
  - Clear width: see window & shopfronts schedule, calculated in accordance with approved document B2, diagram C2
  - Concealed V-lock at head & solenoid lock at threshold, linked to video entry panel with integral card reader, push-to exit internally at doors and reception & green break glass
- Product reference: Single door with curtain walling or fixed glazing to one side. Maximum frame face widths as shown on drawing 1076_sW_112.
- Profiled metal surround
  - Dimensions: as shown on drawings
  - See T-Sheet reference RSW-450
- Other requirements: **Door to open inwards during normal use. In the event of a fire to open outwards. Mechanical latch, linked to fire alarm to control direction of opening.**

487 SINGLE DOORS WITH FIXED GLAZING ABOVE; WNX-200

- As clause 485, except:
- Description: Metal framed glazed single door with fixed glazing above
- Drawing Reference: 1076_sW_111
- Door Operation: Single, side hung door
  - Clear width: see window & shopfronts schedule, calculated in accordance with approved document B2, diagram C2
  - Concealed V-lock at head & solenoid lock at threshold, linked to access control system
- Product reference: Single door with fixed glazing above. Maximum frame face widths as shown on drawing 1076_sW_111.
- Threshold: Stepped. Waterproof seal to frame. Metal cladding to step base to match window frame
- Ironmongery: Also refer to section P21.
  - Door Handle: Bronze finish lever handle to both sides
  - Concealed floor spring to allow for dual action
  - Door closer: Concealed

- Locking: Deadlock with eurocyclinder and internal emergency panic pad
- Access control: Concealed V-lock at head & solenoid lock at threshold, linked to video entry panel with integral card reader, push-to exit internally at doors and reception & green break glass
- Other requirements: **Door to open inwards during normal use. In the event of a fire to open outwards. Mechanical latch, linked to fire alarm to control direction of opening.**

488 SINGLE DOOR TO BASEMENT; WNX-205
- As clause 487, except:
- Description: Metal framed single door with curtain walling W-01-09 above
- Product reference: Single door. Maximum frame face widths as shown on drawing 1076_sW_111.
- Threshold: Level threshold to meet Part M of the Building Regulations. Waterproof seal to frame
- Additional requirements: to connect with curtain walling W-01-09 above

489 DOUBLE DOORS WITH LOUVRED OVERPANEL; WNX-210
- As Clause 485, except:
- Description: Metal framed glazed double doors with louvred over-panel above, in finish to match window frame, to concrete soffit
  - Louvre requirements: weather louvre with minimum free area 60%, insect mesh to be provided to inside face.
- Locations: Refer to drawings.
- Drawing Reference: 1076_sW_110
- Ironmongery: Also refer to section P21.
  - Door Handle: Bronze finish lever handles to both sides
  - Automatic opening & closing: with concealed hardware at door head or in floor spring
  - Locking: Deadlock with eurocyclinder and internal emergency panic pad
  - Access control: Maglock & solenoid lock linked to video entry panel with integral card reader, push-to exit internally at & green break glass
  - Additional requirements: door control linked to fire alarm to allow automatic opening in the event of a fire

492 RESIDENTIAL ENTRANCE UNIT; 180
- Description: Residential entrance including recessed glazed single door, fixed glazing, louvred panel, metal panels, decorative metalwork, profiled metal surround and signage lettering
- Locations: Refer to drawings.
- Drawing Reference: 1076_ED_53
- Door Operation: Single, side hung door
  - Clear width: see window & shopfronts schedule, calculated in accordance with approved document B2, diagram C2
- Manufacturer: submit proposals for Architect's approval
- Fabricated and installed: By a manufacturer approved and agreed account holder of the approved manufacturer.
  - Product reference: Single doors, fixed glazing, louvred and pre-insulated spandrel panels
- Finish as delivered: Powder coated.
  - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.
  - Colour: TBC. Allow for Interpon Futura: Patah 2525 TW2671
- Dimensions: Refer to 1076_sW-01_Window & Shopfronts Schedule and drawings. Contractor must complete on site dimensions survey before production of workshop drawings and manufacturer.
- Materials and workmanship: As section Z11.
- Performance: Also refer to the 1076_sW-01_Window & Shopfronts Schedule.
  - Acoustic performance (Noise reduction dB): Refer to acoustic consultant's report.
  - Thermal performance (W/m^2K): 1.6 to doors, 1.3 to fixed glazing, 0.28 to solid panels
  - G-Value to glazing: 0.52

- Light transmittance target: 79%
- Barrier loading (kN/m): 1.5 kN/m to upper panes
- Security glazing: Heat strengthened laminate outer pane.
- Fire performance: Not required
- To comply with requirements in BS8300 for all use classes

- Glazing details: As per manufacturer's recommendations to meet the performance criteria.
  - Also refer to section L40 for Glass and glazing generally.
    - Either:
      - Windows and glazed doors to be fitted with internal square glazing bead glazed with EPDM gaskets, or
      - Windows to be bonded glass glazed with EPDM gaskets.
  - It is the contractor's responsibility to use glass of suitable thickness size and coating to meet the performance requirements set out in the specification and schedule. This includes but not limited to thermal, acoustic, structural and glass photometric data and samples for visual assessment.
  - Manifestation: As section L40 and when indicated on the window & shopfronts schedule.
- Threshold: Level threshold to meet Part M of the Building Regulations. Waterproof seal to frame
- Profiled metal surround & cladding below window
  - Dimensions: as shown on drawings
  - See T-Sheet reference RSW-450
- Signage lettering:
  - Dimensions: as shown on drawings
  - Material: solid metal laser cut letters, finish to match framing
- Decorative metalwork bars:
  - Dimensions: as shown on drawings
  - Metal: solid metal, finish to match framing
  - Fixing: concealed, to specialist subcontractor's details
- Weather louvres:
  - Free-area: 50%
  - Finish: to match framing
- Ironmongery: Also refer to section P21.
  - Door Handle: Bronze finish pull handle to both sides, dimensions as shown on drawings
  - Hinges: Concealed
  - Closer: Concealed
  - Locking: Deadlock with eurocyclinder and internal thumb turn
  - Access control: V-lock concealed at head and solenoid lock concealed at threshold linked to video entry panel with integral card reader, push-to exit internally & green break glass
- Other requirements: Concealed fixings to all frames; refer to section Z20
  - Sealants: Refer to clause H10/820.
  - EPDMs: Refer to clause H10/825.
  - Timber packers: Refer to section G20.
  - Integrated LED strip lighting as shown on drawings, performance requirements to M&E engineer's details
  - Allow for shims, straps or other secondary structure, as required, back to structural opening
  - Metal flashing, glazed into curtain walling, as required to complete interface with surrounding wall and as shown on the drawings
  - Additional requirements: All other components required to complete installation as shown on the Architects drawings.

510 SINGLE SWING GATE; DRS-E08

- Description: Single lockable swing gate, WNX-00-01 to have solid and hollow fixed metalwork screen above and hold-open latch
- Locations: Refer to drawings.

- Drawing Reference: 1076_sW_110 & 1076_ED_51 for cycle entrance gate, 1076_sD_101 for 6th floor gate
- Door Operation: Single, side hung door
  - To comply with requirements in BS8300 for all use classes
  - Clear width: see window & shopfronts and door schedules, calculated in accordance with approved document B2, diagram C2
- Manufacturer: submit proposals for Architect's approval
- Finish as delivered: Powder coated.
  - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.
  - Colour: TBC. Allow for Interpon Futura: Patah 2525 TW2671
- Dimensions: Refer to schedules and drawings. Contractor must complete on site dimensions survey before production of workshop drawings and manufacturer.
- Materials and workmanship: As section Z11.
- Profiled metal surround & cladding below window
  - Dimensions: as shown on drawings
  - See T-Sheet reference RSW-450
- Ironmongery: Also refer to section P21.
  - Hinges: size & number to subcontractor's design to suit weight of gate. Finish to match gate
  - Closer: Not required
  - Locking: Deadlock with eurocyclinder and thumb turn
  - Access control: To WNX-00-01 only: Concealed V-lock at head and solenoid lock at threshold linked to video entry panel with integral card reader, push-to exit internally & green break glass
- Other requirements:
  - Allow for shims, straps or other secondary structure, as required, back to structural opening
  - Decorative metalwork as shown on drawings, by differing depths of metal bars
  - Additional requirements: All other components required to complete installation as shown on the Architects drawings.

515 DOUBLE SWING GATE WITH PASS DOOR; DRS-E03

- As Clause 510, except:
- Description: Double lockable swing gate with single pass door and solid fixed metalwork screen above
- Drawing Reference: 1076_ED_58
- Door Operation: Double, large format, side hung gates, with single pass door integrated in larger openable part
- Ironmongery: Also refer to section P21.
  - Hinges: size & number to subcontractor's design to suit weight of gate. Finish to match gate
  - Closer: Not required
  - Locking: Deadlock with eurocyclinder and internal thumb turn to both gates
  - Access control: Maglock to both gates linked to video entry panel with integral card reader, push-to exit internally & green break glass

EXECUTION

710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.
- Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

715 APPEARANCE AND FIT TO EXTERNAL DOORS

- Requirement: Design window / door systems:

  - To ensure position and alignment of all parts and features as shown on Architect's drawings.
  - To accommodate deviations in the primary support structure.
- Primary support structure: Before commencing installation, carry out survey sufficient to verify that required accuracy of installation can be achieved.
  - Give notice: If the structure will not allow the required accuracy or security of installation.
- Design tolerances: As applicable for work described and as shown on the Architect's drawings.
- Maximum permitted component and installation tolerances: No component to be more than 10mm from its designed position, unless that would be detrimental to the required appearance / relationships and / or the specified performance.

717 PRELIMINARY INSTALLATION
- Requirement: Complete the first section of each type of work for inspection and approval of appearance.

718 INSTALLATION
- Securing to fixing anchors: Through holes formed during fabrication only.
- Tightening mechanical fasteners: To manufacturer's recommended torque figures. Do not over-tighten fasteners intended to permit differential movement.
- Protective coverings: Remove only where necessary to facilitate installation and from surfaces that will be inaccessible on completion.

719 WELDING
- In situ welding: Not permitted.

720 INTERFACES
- Flashings, closers, etc.: Locate and form correctly to provide weather-tight junctions.
- Interfaces between curtain wall, punched windows, doors and other works will not be more than 1.5m3/hr per metre length of the perimeter of the interface at the maximum pressure i.e. 600pa for the specified facade and window class.

730 PRIMING/ SEALING
- Wood surfaces inaccessible after installation: Primed or sealed as specified before fixing components.

740 CORROSION PROTECTION
- Surfaces to be protected: Metals in contact with cementitious materials; different metals in contact with each other; similar metals of different grades.
- Protective coating: Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
  - Timing of application: Before fixing components.

750 FIXING DOORSETS
- Timing: After associated rooms have been made weathertight and the work of wet trades is finished and dried out.

760 BUILDING IN
- General: Not permitted unless indicated on drawings.

770 DAMP PROOF COURSES ASSOCIATED WITH BUILT IN WOOD FRAMES
- Method of fixing: To backs of frames using galvanized clout nails.

780 DAMP PROOF COURSES IN PREPARED OPENINGS
- Location: Correctly positioned in relation to door frames. Do not displace during fixing operations.

790 FIXING OF WOOD FRAMES

- Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb and at 600 mm maximum centres.

791 FIXING OF STEEL FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel.
  - Spacing: When not predrilled or specified otherwise, position fasteners not less that 50 mm and not more than 190 mm from ends of each jamb, adjacent to each hanging point of opening lights and at maximum 900 mm centres.

792 FIXING OF ALUMINIUM FRAMES
- Standard: As section Z20.
- Fasteners: Stainless steel.
  - Spacing: When not predrilled or specified otherwise, position fasteners not more than 250 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.

800 FIXING OF LOOSE THRESHOLDS
- Spacing of fixings: Maximum 150 mm from each end and at 600 mm maximum centres.

809 FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS/ ROLLER SHUTTERS/ CURTAINS
- Installation: By a firm currently registered under a third party accredited fire door installer scheme in accordance with instructions supplied with the product conformity certificate, test report or engineering assessment.

810 FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS/ ROLLER SHUTTERS/ CURTAINS
- Gaps between frames and supporting construction: Filled as necessary in accordance with requirements for certification and/ or door/ doorset manufacturer's instructions.

815 WEATHERING & GLAZING GASKETS – EXTERNAL DOORS
- Only dry non-mastic glazing systems will be permitted. Gaskets must comply with the properties specified in ‘Non-Cellular Gaskets’, to BS 4255 Part 1.
- The use of visible polyisobutylene-shimmed glazing tape as a means of sealing the interior face of double-glazed units within the facade system will not be permitted.
- Cellular gaskets to be manufactured to dimensional tolerances defined in ‘Gaskets and Weather Strips should comply with the requirements of BS ISO 3302-1:2014, BS 3734 and BS 2571.
- Gaskets within the system should be designed and installed to provide and/or exceed the performance as specified.
- The material used for gaskets should not be capable of sustaining a fire should it catch fire (highly flammable EPDMs should be avoided).
- Gaskets will be free from contact- and migration-stain, and shall be compatible with all substances, sealants and finishes with which they are likely to come into contact.
- The pre-formed corners will be free from mould flash.
- All glazing gaskets will be manufactured slightly oversize to ensure that the gaskets do not pull back from the corners after installation.
- Continuity: Outer gaskets of single front sealed systems and inner gaskets of drained and ventilated or pressure equalized systems must be formed in a complete frame with sealed joints. Vulcanized rubber gaskets must have factory moulded corner joints.
- Durability: Resistant to oxidation, ozone and UV degradation.

816 WEATHERSTRIPPING OF OPENING UNITS – EXTERNAL DOORS
- Material:
  - Non-cellular rubber to BS 4255-1.
  - Cellular rubber to ASTM-C509.
  - Polypropylene woven pile, silicone treated.

- Attachment: Fixed in undercut grooves in framing sections using preformed corners, without any joints in the length.
- To manufacturer's recommendations, to CA approval of colour.

817 GENERAL SEALANTS
- Selection: In accordance with BS 6213 from:
  - Silicone.
  - One-part polysulfide.
  - Two-part polysulfide.
  - One or two-part polyurethane.
- Classification and requirements: To BS EN ISO 11600.
- Reaction to contact products and finishes: Stable and compatible.
- To manufacturer's recommendations, to Architect's approval of colour.

820 SEALANT JOINTS
- Description: Refer to fire engineers report for performance and certification / test requirements.
- Compatibility: Ensure compatibility with all membranes and other interfacing elements
- Design life: Design life – 30 years.
- Sealant: Contractor selection to Architect approval.
- Colour: To Architect approval.
- Application: As section Z22 to prepared joints. Finish triangular fillets to a flat or slightly convex profile.

825 EPDMs
- Description: Refer to Fire Engineer's report for performance and certification / test requirements.
- Compatibility: Ensure compatibility with all membranes and other interfacing elements
- Design life: Design life – 30 years.
- Membrane: Contractor selection to Architect approval.
- Colour: To Architect approval.
- Application: As recommended by the membrane manufacturer to achieve the required performance.

830 FIXING IRONMONGERY GENERALLY
- Fasteners: Supplied by ironmongery manufacturer.
  - Finish/ Corrosion resistance: To match ironmongery.
- Holes for components: No larger than required for satisfactory fit/ operation.
- Adjacent surfaces: Undamaged.
- Moving parts: Adjusted, lubricated and functioning correctly at completion.

840 FIXING IRONMONGERY TO FIRE RESISTING DOOR ASSEMBLIES
- General: All items fixed in accordance with door leaf manufacturer's recommendations ensuring that integrity of the assembly, as established by testing, is not compromised.
- Holes for through fixings and components: Accurately cut.
  - Clearances: Not more than 8 mm unless protected by intumescent paste or similar.
  - Lock/ Latch cases for fire doors requiring > 60 minutes integrity performance: Coated with intumescent paint or paste before installation.

850 LOCATION OF HINGES
- Primary hinges: Where not specified otherwise, positioned with centre lines 250 mm from top and bottom of door leaf.
- Third hinge: Where specified, positioned centrally unless recommended otherwise by the manufacturer.
- Hinges for fire resisting doors: Positioned in accordance with door leaf manufacturer's recommendations.

860 INSTALLATION OF EMERGENCY EXIT DEVICES

- Standard: Unless specified otherwise, install panic bolts/ latches in accordance with BS EN 1125.

DESIGN / PERFORMANCE REQUIREMENTS TO EXTERNAL DOORS

925 THERMAL MOVEMENT – SERVICE TEMPERATURE RANGES
- Requirement: To CWCT 'Standard for systemised building envelopes' clause 2.7.2 amended and/ or with the addition of the following: All movement to be noiseless.

930 AIR PERMEABILITY
- Permeability class to BS EN 12152: A4 and see clause 05.

935 WATER PENETRATION
- Water-tightness class to BS EN 12154: R7 and see clause 05.
- Additional requirements:
  - Opening windows and doors to be included in tests for water-tightness unless formally agreed otherwise by the Architect.
  - No leakage onto internal surfaces at any time during the test and for not less than 30 minutes following the test.

950 THERMAL PROPERTIES
- Method of calculating the thermal transmittance (U-value): Weighted U-value.
- Average U-value: See clause 05 and not worse than to comply with Building Regulations requirements.
- Interfaces: See clause 06 and co-ordinate to achieve required average U-value.
- Method for assessing thermal transmittance (U-value) of assemblies: By calculation.

952 SOLAR AND LIGHT CONTROL
- Total solar energy transmission: See clause 05.

955 THERMAL STRESS IN GLAZING
- Glass panes/ units: Must have adequate resistance to thermal stress generated by orientation, shading, solar control and construction.

958 AVOIDANCE OF CONDENSATION
- Requirement: Notional psychometric conditions under which condensation must not form on building interior surfaces of framing members or any part of infill panels/ facings are:
  - Notional outdoor psychrometric conditions as BS 6229, table A1.
  - Notional indoor psychrometric conditions:
    - Temperature: 20 – 24 deg. C.
    - Relative humidity: 55% at 22 deg. C
    - Vapour pressure: 1.28 kPa
  - Calculated amount (maximum): 0.35 kg/m².
  - Calculated annual net retention: Nil.

959 DESIGN TEMPERATURE
- Reference to BRE Digest 228, 1979, and CWCT part 2 section 2.7.2 indicates that insulated spandrel panels will be subjected to surface temperature extremes in the range:
  - Heavy weight light Coloured Panels: -20 DEG C to +50 DEG C Heavy weight dark Coloured Panels: -20 DEG C to +65 DEG C
  - Light weight light Coloured Panels: -25 DEG C to +60 DEG C Light weight dark Coloured Panels: -25 DEG C to +80 DEG C

  The above temperatures are the result of solar and clear night radiation. Deformation and deflections at these temperatures are allowable provided they have no adverse effect on the systems performance.
- All elements of the Proprietary Glazing System's external envelope i.e. glass units shall be designed for an operational temperature range of

- –25 DEG C to +90 DEG C resultant from solar radiation for coloured or solar controlled glass.
- –25 DEG C to +40 DEG C resultant from solar radiation for clear glass. Refer to CWCT part 2 section 2.7.2

975 DOORS AND OTHER ACCESS FACILITIES
- Performance criteria: To CWCT clause 4.3.1 and Part 3.
- Access facilities designated for use by disabled persons: All doors.
- Strength and durability: To CWCT 'Standard for systemised building envelopes' clause 4.3.3.
- Security:
  - Applicable doors: All external doors.
  - Security rating: To be confirmed.

980 DURABILITY
- See also clause 04.
- Relevant agents or degradation mechanisms: Polluted atmosphere.
- Design life of the windows / doors systems: See clause 04.
- Secondary components: Submit details together with required maintenance regime, replacement periods and methods of replacement.

985 ELECTRICAL CONTINUITY AND EARTH BONDING
- Standards: BS 6651 and BS 7671.
- Submit proposals for any work that will be visible in completed installations and obtain approval of appearance from the Architect.

990 SAFETY
- Finished surfaces to accessible internal and external areas must not:
  - Have irregularities capable of inflicting personal injury.
  - Release irritant or staining substances.

End of Section L20