

**Project No.** 150457

**Client:** Council of the Isles of Scilly

**Tender Issue** 10/11/2017

**STRIDE TREGLOWN**  
ARCHITECTURE

## Carn Gwavel School

**10 November 2017**

**This document includes:**

Code	Section	Revision	Dated
L20	Doors/ Shutters/ Hatches		

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## **L20 Doors/ Shutters/ Hatches**

To be read with Preliminaries/ General conditions.

## **GENERAL**

### 110A EVIDENCE OF PERFORMANCE

- The frames are to comply with all relevant British Standard Specifications, Codes of Practice, and Statutory Requirements (including all revisions and amendments), as well as the guides and recommendations laid down by the relevant trade organisation relating to their performance, constituent materials, methods of assembly and use. Any exceptions to the above are to be advised in writing by the specifier.

All frames and other sections to be extruded to BS EN 755-9: 2016, Specification 6060 T6 or 6063 T6.

All materials and ancillary products are to be used and fitted entirely in accordance with the instructions of the relevant manufacturer.

The Door Fabricator/Installer (Specialist Contractor) is expected to make a pre tender visit to site/inspection of all relevant drawing and documents in order to ascertain all relevant conditions, structural details and site layout. No additional claim will be entertained for items that would be apparent during the pre-tender site visit and/or inspection of documents. The Specialist Contractor must allow in his tender for the replacement of all items specified and/or required.

The Specialist Contractor shall allow in his price for a survey visit to site in order to take the dimensions and adjacent structural details of every window and door that is to be replaced.

The units supplied are to be manufactured to suit prepared openings.

Notwithstanding any information within this Specification, all framing and infills shall be capable of withstanding the design wind loadings calculated in accordance with BS6399 Pt2: 1997 or BS EN 1991-1-1 and imposed loads as defined in BS6399 Pt1: 1996 or BS EN 1991-1-4, and the Specialist Contractor shall carry out calculations to demonstrate this.

The Specialist Contractor is responsible for ensuring that all new doors are square and central in the opening, and that a perimeter gap shall be provided to allow adequate thermal expansion and contraction of the framing, consistent with the site location and limitations of the perimeter sealant used. Any packing sections or materials required to compensate for misaligned apertures shall be agreed by the Contract Administrator prior to manufacture.

The Specialist Contractor shall provide drawings to the Main Contractor depicting all profiles, glazing, weather seals, gasket fixings and sealants to be used and the relationship of the above to the adjacent structural details for each door type.

Allow for anomalies and variations in the size of the openings, and for out-of-square openings. This is to include for the manufacture of specials as necessary.

The Specialist Contractor is to provide drawings showing the relationship of framing to structure, including all profiles, sealants, fixings, trims and weather seals.

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**111 EVIDENCE OF PERFORMANCE**

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements such as acoustic performance, fire performance, durability etc.

**115 FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES**

- 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 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.

**150 SITE DIMENSIONS**

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items:  
Structural openings for internal doors or external doors and roof or ceiling hatches .

**170 CONTROL SAMPLES**

- Procedure:
  - Finalize component details.
  - Fabricate one of each of the following designated items as part of the quantity required for the project.
  - Obtain approval of appearance and quality before proceeding with manufacture of the remaining quantity.
- Designated items:  
typical variations of the following specified products.

## PRODUCTS

### 410A LAMINATED INTERNAL DOORSETS GENERALLY

- Manufacturer: Hanson and Beards Ltd or equal approved
- Hanson and Beards Ltd. Spring Hall Works, Spring Hall Grove, Halifax HX2 0BU. Tel: (01422) 306830. Email: info@hansonandbeards.co.uk..
  - Product reference: Anodoor range doorsets, in accordance with specifiers issued drawings and schedules..
- Fire resistance rating: Tested to BS 476 Part 22: 1987. In accordance with manufacturers certified tested dimensions and published technical manual.  
Non fire rated, FD30/S & FD60/S.
- Acoustic Rating: Tested to 30 dB Rw & 35 dB Rw in accordance with BS EN ISO 140-3:1995 with results expressed as a single weighted index in accordance with BS EN ISO 717-1:1997.  
Doorsets fitted with acoustic seals etc to meet the specified requirements.
- Mechanical Strength: Mechanical Test evidence to Severe Duty in accordance with DD171: 1987
- Timber Chain of Custody: FSC (Forestry Stewardship Council) mixed sources.
- Door leaf:
  - Core:
    - a) Anodoor standard core, 44 mm thick door, weighing 27 kg m2 with graduated density particle board.
    - b) Anodoor standard core, 54 mm thick door, weighing 34 kg m2, with graduated density particle board.
  - Facings: Laminate finish (Colour TBC) .
  - Lippings: American Ash hardwood 10 mm thick, with a 5 mm chamfered lipping to all 4 no edges, with factory applied clear lacquer..
  - Meeting Stiles: Square vertical.
  - Threshold: Acoustic rated leaves to have factory fitted drop down threshold acoustic seals.
- Door Frame: (to suit partition thickness as indicated on Internal Door Schedule)
  - Non fire rated and FD30 door frames to be approved softwood with a minimum density 450kg/m3 and fitted with approved / tested intumescent strips / smoke seals.
  - FD60 door frames to be approved hardwood with a minimum density of 640kg/m3 and fitted with approved / tested intumescent strips / smoke seals.
  - Type: INT-LS, (up to FD60) rectangular single action frame, minimum dimensions 70mm x 32mm (30mm for MDF) having separate timber stop 32mm x 12mm.
  - Finish: Factory primed paint for on-site finish (by others).
- Architraves:
  - Ref: AR-TO-03, 69mm wide x18mm thick with 1no pencil round edge.
  - Timber species: MDF, factory primed paint finish.  
Preservative treatment: Required in wet areas.
- Glazing details: Vision panels required as indicated on Internal Door Schedule
  - a) Non fire rated with 6.4mm laminated safety glass. (1.9 m2 max)
  - b) FD30 Integrity only, 7 mm clear Pyroguard (1.14 m2 max)
  - c) FD60 integrity only, 11 mm clear Pyroguard. (0.87 m2 max).
- Ironmongery: Minimum 3 No lift off hinges to be provided by the supplier.  
Other requirements to be confirmed in Ironmongery Schedule  
NB: Safehinge Alumax Finger guards to be site fitted by others to some doors as indicated on Internal Door Schedule..
- Perimeter seals: See manufacturers recommendations / information.

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- Other requirements: Moisture content on delivery: All door cores to be 6% with hardwood lippings to be 10% (+/- 2%).
- Fixing: See manufacturers recommendations / information.

**480A DOORSETS ALUMINIUM GLAZED DOOR**

• **MANUFACTURER AND REFERENCE**

Sapa Building Systems Limited, Severn Drive, Tewkesbury. Gloucestershire. GL20 8SF.  
Tel 01684 853500. STII Thermally Broken Commercial Door & Screen System and 202 Non Thermally Broken Commercial Door & Screen System

Notwithstanding any information within this Specification, all framing and infills shall be capable of withstanding the design wind loadings calculated in accordance with BS6399 Pt2: 1997 or BS EN 1991-1-1 and imposed loads as defined in BS6399 Pt1: 1996 or BS EN 1991-1-4, and the Specialist Contractor shall carry out calculations to demonstrate this.

The STII thermal barrier section is achieved using two separate aluminium extrusions and two glass reinforced polyamide extrusions mechanically jointed to form a single compound profile. The sections forming the doors are to incorporate a thermal break, achieved using a high strength, glass reinforced polyamide barrier to PA6.6 GF25.

Ancillary profiles may incorporate a polyurethane resin thermal break.

Door leaves to be of mechanical cleated construction and to be pivot hung, incorporating integral rotating anti finger trap hinge stiles.

The sections forming the STII doors are to incorporate a thermal break, achieved using a high strength, glass reinforced polyamide barrier.

Outer frames to be fitted with closer plates or frame depth adaptor profile where coupled to adjacent window frames.

Low threshold to be fitted compliant with Part M of the Building Regulations.

Width of all doors to suit the requirements of Part M of the Building Regulations.

All fabrication to be strictly in accordance with the system company's Fabrication and Specification Manuals and all current Technical Bulletins.

Doors shall have horizontal midrail through centres of leaves at a height from FFL to be agreed with Contracts Administrator.

485 DOORSETS ALUMINIUM GLAZED DOORS

- Manufacturer: Sapa Building Systems Limited, Severn Drive, Tewkesbury. Gloucestershire. GL20 8SF. Tel 01684 853500. STII Thermally Broken Commercial Door & Screen System and 202 Non Thermally Broken Commercial Door & Screen System.
  - Product reference: STII Door (ED01) STII Doors (ED02 & ED03) 202 Door (IDG01).
- Door leaf: Varies - see door type drawings.
  - Finish as delivered: Aluminium leaf to be polyester powder-coated to BS EN 12206-1:2004 Colour: Sapa house white RAL9910G colour finish for the internal 202 door and Sapa RAL7016M for the external STII doors to be confirmed by the Contracts Administrator.  
Marine standard coating to a minimum of 60 microns to be supplied, details of any special guarantees to be advised. Specifying a minimum coating thickness of 60 microns does not necessarily provide protection in a marine environment.  
Any finishing to be undertaken by Sapa Building Systems Limited prior to delivery to fabricator .
- Frame and architraves: Aluminium.
  - Finish as delivered: Aluminium sections to be polyester powder-coated to BS EN 12206-1:2004 Colour: Sapa house white RAL9910G colour finish for the internal 202 door and Sapa RAL7016M for the external STII doors to be confirmed by the Contracts Administrator.  
Marine standard coating to a minimum of 60 microns to be supplied, details of any special guarantees to be advised. Specifying a minimum coating thickness of 60 microns does not necessarily provide protection in a marine environment.  
Any finishing to be undertaken by Sapa Building Systems Limited prior to delivery to fabricator...
- Glazing details: Glazing to be hermetically sealed double-glazed 28mm & 24mm units, comprising inner pane of 6mm toughened glass and an outer pane of 6mm toughened with an argon filled cavity and warm edge spacer bar. The sealed units are to have a centre pane U value no greater than 1.1W/m<sup>2</sup>k.  
Solar control glass if required, with location and 'g' value to be confirmed by Contracts Administrator.  
All glass within 800mm from FFL shall be toughened or laminated. (Below 1500mm if within a door or 300mm of a door)  
All glass and glazing shall conform to:

EN 12600:2002	Specification for Impact Performance;
BS6262:	Parts 1-7:2005 Code of Practice for Glazing Buildings;
BS952-1:1995	Glass for Glazing;Classification
BS EN 1279	Glass in Buildings. Insulating Glass Units.
Part 1:2004	Generalities, dimensional tolerances and rules for the system
description	
Part 2:2002	Long term test method and requirements for moisture penetration
Part 3:2002	Long term test method and requirements for gas leakage rate and for gas concentration tolerances
Part 4:2002	Methods of test for the physical attributes of edge seals
Part 5:2005+A2:2010	Evaluation of conformity
Part 6:2002	Factory production control and periodic tests

  
Manifestation design and location to be confirmed by the Contract Administrator  
Recommendations of the Glass and Glazing Federation should be adhered to. .
- Ironmongery: STII Doors (ED02 & ED03)  
Closer:  
Sapa 202-188 EA compliant concealed door closer with 90 degree hold open. Opening

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force to be adjustable between EN1 to EN4 to ensure force no greater than 30 newtons for first 30 degrees of opening and 22.5 newtons from 31 to 60 degrees.

Locking:

Adams Rite 960 concealed rod panic exit device (or equal and approved) with dogging for daytime traffic use. To comply with BS EN 1125:2008. External key access to be confirmed by Contracts Administrator.

Handles:

External handle type and finish to be confirmed by Contracts Administrator.

STII Door (ED01)

Closer:

Electrically operated swing door operating mechanism (Dorma ED100 or equal and approved) linked to entry control system supplied and installed by others.

Locking:

Single point hook bolt dead lock operated by cylinder thumb turn internally and cylinder key externally for additional night time security.

Handles:

External handle type and finish to be confirmed by Contracts Administrator.

202 Door (IDG01)

Closer:

Sapa 202-188 EA compliant concealed door closer with 90 degree hold open. Opening force to be adjustable between EN1 to EN4 to ensure force no greater than 30 newtons for first 30 degrees of opening and 22.5 newtons from 31 to 60 degrees.

Locking:

Adams Rite 4750 deadlatch with external key, Europrofile cylinder and key actuated bolt hold-back feature. To include 7100 Series electric strike connected to entry control system supplied and installed by others. Voltage, current and fail safe/secure to be confirmed prior to installation.

Handles:

External handle type and finish to be confirmed by Contracts Administrator. The Specialist Contractor is to obtain the written confirmation of the Contract Administrator as to the type and position of all ironmongery before commencing manufacture. .

- Perimeter seals: EPDM weatherseal .
- Other requirements: Flush Threshold Required .
- Fixing: To suit curtain walling .

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**545A HINGED SLIDING FOLDING PARTITION**

- **Manufacturer:** Accordial Wall Systems Ltd.
  - **Web:** www.accordial.co.uk.
  - **Email:** walls@accordial.co.uk.
  - **Tel:** +44 (0)1923 246600.
  - **Address:** Accordial House, 35 Watford Metro Centre, Tolpits Lane, Watford, Herts. WD18 9XN.
  - **Product reference:** WallSpan
- **Partition assembly:** As drawing.  
**Track:**
  - **Layout:** Endfold, single unit.
  - **Type:** Ceiling running track (no floor rail required).
  - **Finish:** Aluminium, RAL 9010.
- **Panel:**
  - **Type:** Standard panel.
  - **Finish:** HP laminate.
  - **Vertical edge finish:** Aluminium, satin anodized.
  - **Acoustic insulation:** Rw 42 dB.
  - **Fire rating:** Class 3.
- **Accessories:** Flush lever handle with latch and thumb turn lock.

**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.

**730 PRIMING/ SEALING**

- **Wood surfaces inaccessible after installation:** Primed or sealed as specified before fixing components.

**740 CORROSION PROTECTION**

- **Surfaces to be protected:** where recommended by door manufacturers .
- **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.

**750A FIXING DOORSETS**

- As section Z20 using appropriate fixings.  
Door framing to be securely fixed direct to the building structure, no further than 150mm from each corner and at centres not exceeding 450mm, as laid down in procedures issued by the systems company.

Frames are to be positioned to cover the cavity within the reveals, and level with the existing external window line wherever possible, ensuring that they are plumb, level and without bow.

The removal of existing doors must be programmed to ensure that units are only removed if they are to be replaced within the same working day. Immediately on removal, the existing windows and doors, together with any debris associated with the removal of existing units, are to be cleared away to an approved tip or storage location. At the end of each working day, the Specialist Contractor shall be responsible for the removal of any debris from the existing units and new materials from site, and shall thoroughly clean the working area in accordance with the requirements of the Schedule of Works.

The Specialist Contractor is to ensure that all metal framing materials and all glass is recycled once removed from site.

The Specialist Contractor is to make all due allowance to ensure that no damage is caused to the property internally or externally. The Specialist Contractor's attention is drawn specifically to the need to protect soft landscaping and external and internal fabric and finishes. Any damage caused as a result of the replacement of windows and doors will be the Specialist Contractor's liability.

The Specialist Contractor shall allow for all necessary making good of all work disturbed.

Any gap between the internal frame face and the existing plaster line is to be filled with expanding foam void filler, knifed off flush with the plaster. The foam and a minimum of 15mm of plaster are to be covered with PVCu trims from a product range which carries BBA certification or Kitemarking to BS7619: 2010. Trims to be fixed with acrylic caulking.

Integral timber cills and sub frames with any existing doors are to be removed completely with glazing and ventilation intact.

Should any glazing be broken on removal, all glass must be immediately cleaned up, both internally and externally.

The Specialist Contractor is to allow for necessary measures to protect the occupants, fittings and finishes within the rooms for the duration of the works.

Allow for making good work to window/door openings, both internally and externally, including masonry, plaster, cladding and decorative finishes to reveals. No additional allowance will be made for costs associated with making good which would be visible on a site inspection.

Allow unclipping all existing telephone cables, aerial cables and the like from existing windows and door frames, and re-clip to surround in a suitable location using new cable clips of appropriate size and colour. Any cables passing through a frame/structure joint shall be routed through a plastic sleeve, the inner end of which is to be higher than the

outer to prevent water penetration along or through the sleeve.

Upon completion of the installation of each door, all glazing, handles and all other surfaces are to be cleaned with a mild detergent. All components are to be checked for security of fixings, adequacy of clearances, adjustment of hinges, locks etc. as may be necessary to leave the door units in good working order.

**760 BUILDING IN**

- General: Not permitted unless indicated on drawings.

**780 DAMP PROOF COURSES IN PREPARED OPENINGS**

- Location: Correctly positioned in relation to door frames. Do not displace during fixing operations.

**784 FIXING OF COMPOSITE FRAMES**

- As section Z22 using galvanized mild steel cramps or as otherwise recommended by manufacturer.
  - When not predrilled or specified otherwise, position fixing not more than 150 mm from each end of jamb, adjacent to each hanging point of openings lights, and at maximum 600 mm centres and in accordance with Idealcombi fixing instructions.
  - Fasteners appropriate to surrounding structure.

**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.

**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**

- 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.

**820 SEALANT JOINTS**

- Sealant:
  - Manufacturer: as recommended by door manufacturer in order to meet both fire and acoustic requirements .  
Product reference: as recommended by door manufacturer in order to meet both fire and acoustic requirements .
  - Colour: to compliment door colour .
  - Application: As section Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile.

**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.

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**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  $\geq$  60 minutes integrity performance: Coated with intumescent paint or paste before installation.

**851 LOCATION OF HINGES**

- Hinges as 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.