

**RAVEN HOUSING TRUST LIMITED**

**RHT 01 SPECIFICATION**

**(TO BE READ IN CONJUNCTION WITH THE**

**JCT MEASURED TERM CONTRACT 2024 EDITION AND**

**RAVEN HOUSING TRUST AMENDMENTS)**

**for**

**SUPPLY AND INSTALLATION OF EXTERNAL DOORS, FLAT ENTRANCE FIRE DOOR SETS AND INTERNAL COMMUNAL DOORS**

**Project description**

A 5 Year supply and installation contract for replacement external doors, communal and fire door sets to properties as per schedules of addresses.

Comprising:

* 552 doors to occupied street properties to various locations Raven wide.
* 790 doors to occupied flats to various locations Raven wide. Including 494 flat front entrance fire doors.
* 280 Communal doors
* 100 Outbuilding doors

In addition to the doors outlined above, Raven has leasehold flat properties where the owner may wish to opt in to the replacement programme. We therefore will require a per unit price to supply and fit flat front entrance fire doors of the same specification which may be required on top of the core contract number. The number of additional doors required will be confirmed at the pre-contract meeting.

**Scope**

This specification applies to all external and internal doors and associated glazed screens, sidelights, fanlights and infil panels which are substantially made from plastic materials or timber, in single, sub - divided or multiple coupled frame construction.

**REPLACEMENT EXTERNAL DOORS - SURVEYING AND INSTALLATION**

**[TOP TIER]**

**REPLACEMENT EXERNAL DOORS - SURVEYING AND INSTALLATION**

**General**

It should be noted that in order to reduce possible errors/confusion due to conflicting repeat clauses etc. the Replacement External Door specification sections have been sub divided into tiers as per the table below:

|  |  |  |
| --- | --- | --- |
| **Top tier** | **Middle Tier** | **Lower Tier** |
| Replacement external doors – surveying and installation etc. | Replacement External, Communal and Flat Entrance Doors – General | Composite External Door sets and Screens |
| Fire Door Sets |
|  |
|  |
|  |

In this manner each completed product will be required to meet the specification of 3 No tier documents.

Example: if work to be undertaken is a Composite External Door, then the 3 tier documents to be used will be.

* Replacement external doors – surveying and installation etc.
  + Replacement External Communal and Flat Entrance Doors – General
    - Composite External Door sets and Screens

**Initial Survey**

001 A list of Properties will be given to the Service Provider with access details and the Service Provider is then responsible for arranging access, visiting the Properties, taking measurements and forwarding existing external door dimensions and the Service Provider’s proposed style of replacement door to the Client’s Representative for approval.

02 The drawings are to include ‘sketch elevations’ of each door showing the position of each proposed door type and to include details of glass type for each door.

003 The proposals are to be approved by the Client’s Representative before the Service Provider commences manufacture.

**Site Measurements**

004 The Service Provider is responsible for ascertaining the correct dimensions and sizes of every existing external door in each Property.

005 The dimensions noted on any schedule issued by the Client’s Representative are for guidance only and are approximate measurements. The Service Provider is responsible for taking all site sizes and measurements for each and every external door opening, and for manufacturing doors accordingly and to BS 8213-4. (Windows and doors - Code of practice for the survey and installation of windows and external door-sets) and as recommended in the GGF (Glass & Glazing Federation) “Good Practice Guide for the Installation of Replacement Windows and Doors”.

This procedure requires a minimum of **8 No measurements** both internally and externally to determine the difference between internal and external reveal sizes. Therefore, internal access to the Property must be gained before manufacturing the doors – this will also allow for full Customer consultation and agreement of intended Works. It is the Service Provider’s sole responsibility to obtain the Customers approval to receive the Works before manufacturing is commenced.

External doors are in the main fitted from the outside, although the nature of some reveals will permit replacement doors to be fitted from the inside.

The measurement and fitting of doors must in every case respect the existing cover/rebate to the outer frame of the doors by virtue of any “reverse brick detail” or “check reveal” that may pertain to existing Client Property.

006 Where a check reveal is present for weathering purposes, the door manufacturing sizes should be based on achieving a minimum frame overlap of 12 mm on the external leaf. A hole may be drilled thorough the existing frame jamb rebate to establish the check reveal size. A frame may also be built into the check reveal at the head by use of a rebated lintel, and again a minimum frame overlap of 12 mm should be provided where practicable. If an overlap of 12 mm cannot be achieved, this should be discussed with the Client’s Representative and an agreement reached regarding the size of the overlap for particular properties. As the Client owns a large stock of Properties, which vary in construction detailing, long term standard agreements to the amount of overlap will not be made with exception to the dimension stated here.

007 The Service Provider’s attention is drawn to the fact that similar external doors in similar Property types may vary in size.

The Service Provider is responsible for ascertaining the correct dimensions and sizes of every existing external door in each Property. Measurements for each door (and its location) must be clearly identified on any delivery schedule and each door shall have a clear labelling system to reflect this.

008 The use of make-up pieces (clip-on’s) will not normally be permitted except with the express **written** authority of the Client’s Representative. Written authority does not transfer to the entire Contract, if gained; it must be acquired for individual Property and/or phases.

009 Any existing external door opening which will present the Service Provider with a problem in compliance with the Specification, or in manufacture of a door to suit, must be brought to the attention of the Client’s Representative before the door is fabricated. The Client’s Representative will issue a written Instruction informing the Service Provider of what action is to be taken.

010 The Service Provider must obtain signed consent from the Customer before manufacture of any external door is undertaken. The Service Provider should be aware payment will only be made on completion of the door being installed into the Property.

**Guarantees**

011 In addition to the Client’s rights under the Contract, the Service Provider is to provide the minimum guarantee tabled below against manufacturing defects etc., on all new Composite, and timber external doors upon completion of the Works. The guarantee is to include for all profiles, joinery, and for the double-glazed units.

Manufacturers guarantees in all instances are to be for the years stated below with no exceptions attached (i.e. end user servicing expectations etc.), this will assure the Client that the manufacturer is confident of their own products durability.

|  |  |
| --- | --- |
| PVC-u profiles | 25 Years |
| Timber frames | 30 Years guarantee against fungal attack |
| Timber Door Manufacturing Defects | 10-year guarantee |
| Timber Door  (Factory Painted External Joinery) | 10 Year guarantee (as minimum) |
| Timber Door  (Factory-Stained External Joinery) | 6 Year guarantee (as minimum) |
| Hardware Components | 10 Years (minimum) |
| Double Glazed Units | 15Years (minimum) |

Doors are to be manufactured under guidelines BS EN ISO 14001 (Environmental Management) and BS EN ISO 9001 (Quality Management Systems) with manufacturing companies holding the relevant accreditation. Manufacturers should promote and maintain an Environmental Policy and be committed to it. They should be able to demonstrate that all operations proactively comply with all applicable environmental laws and regulations.

The manufacturer shall provide a good practice guide relating to aftercare and maintenance of their manufactured doors etc. and its component items. The Service Provider shall ensure that each Customer receives a copy of this.

**General Design of External Doors**

**Doors - Street Properties**

012 Each Property case may be different and therefore approval will be required for each Property. In all cases, the proposed design of external doors will need to comply with Building Regulations and in particular fire egress in terms of all habitable rooms and the requirements of Approved Document Part Q: Security – Dwellings.

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**Timber External Doors**

013 The Service Provider is responsible for ascertaining the correct dimensions and sizes of every existing external door in each Property.

**General External Door Installation**

014 All sidelights are to achieve an ‘A’ energy rating certificated by the British Fenestration Rating Council (BFRC).

All replacement doors and sidelights must achieve Building Control standard of Maximum U-Value = 1.8 W/m2K for units with >50% internal face glazed.

U-values of external doors and sidelights glass and frames must meet the Building Regulations and must be BFRC Certified and have an “A” Rated Energy Index. Centre Pane “U Value” of 1.2W/m²K (or better). Thermal Transmittance Whole Window “U Value” of 1.4 W/m²K (or better)

015 All External Doors must pass testing undertaken to PAS 24 and be Secure by Design certified. All certification documents are to be forwarded to the Client’s Representative and kept updated - this must include test certificate, report and list of tested ironmongery with product manufactures names, type etc. Evidence of compliance with PAS 24 (Specification for Enhanced security performance requirements for door-sets and windows in the UK) will be a condition of tender.

016 All new external doors and door frames are to match existing size openings in existing positions (i.e. brick reveals to be maintained externally where necessary on all occasions).

017 Before installing the new door frame, the existing structural opening should be checked to ensure its stability and existing lintels checked to ensure their condition soundness. Any large repairs should be reported to the Client’s Representative.

018 It is permissible to “chip back” a small area of plaster (typically 25mm) extending full height up the existing reveals and immediately adjacent to the door frame; this will both facilitate removal of existing door frame and installation of replacement door frame.

019 All openings should be cleaned of debris etc., and any minor making good is expected to be carried out as part of the external door replacement works.

020 All metal fixings should be at least as corrosion resistant as BS EN 1670 Grade 3. 13.5.

Door frames shall be secured in accordance with the recognised “fixing distances” for strap / lug fixings and through-frame fixings as recommended in BS 8213-4.

021 Sills must be properly supported and fixed to ensure there is no likelihood of water penetration.

022 All internal reveals should be made good and plaster or decorations made good to match existing.

023 External sealing should be by means of a cement/sand pointing around the new door frame to conceal larger gaps and then a low modulus white silicone sealant to BS EN 11600. Only silicone sealants recommended by the manufacturer/supplier should be used and not general-purpose mastics. All abutments of the door frames should have silicone sealant applied.

024 Prior to installation, the doors are to be supplied with adequate protection against damage caused by slippage, distortion etc. They must be stored under cover in a dry and secure position, stacked vertically, not horizontally.

025 The door frame dimensions must be checked with those of the opening before removal of the existing door frame.

026 A craft knife should be used to score around the perimeter of the existing frame in order to minimise damage to plaster/decoration.

027 External doors and frames to be removed and all existing mastic and debris cleaned away. The Service Provider is to ensure that the work is carried out in a neat and tidy manner, with all rubbish removed to a lockable skip at the end of each working day.

028 The damp proof course is to be checked by the Service Provider to ensure one is present and in good condition. Any defects present are to be brought to the attention of the Client’s Representative immediately.

029 The new door frames must be installed in accordance with the manufacturer’s requirements, taking into account the construction of the Property. Fixing methods should take into account thermal movement. The method of fixing will generally be either through frame fixing or lug fixing.

030 Door frames must be installed plumb and square without twisting, racking or distortion of any member in accordance with the manufacturer’s installation tolerances.

031 The door frame must be centred in the aperture and be positioned so that it does not bridge the damp proof course. The amount by which the new door frame is set back from the outer face of the wall is determined by the requirement to set the internal face as close to the existing internal finishes as possible and by the bridging of the damp proof course.

032 The door frames must be secured so that the corner fixings are a minimum of 150mm and a maximum of 250mm from the corner of the frame and the intermediate fixings at centres no greater than 600mm.

033 Should the manufacturer require more onerous fixing requirements then these must be adhered to. Care should be taken not to overtighten bolts and that packers/shims are not allowed to fall away. Care should also be taken to ensure that water tightness is maintained where lintels have to be drilled for fixing.

034 All screw fixing heads which pass through the profile are to be spot sealed with appropriately coloured or clear silicone sealer or a PVC-u cap.

035 Where electrical, television, telephone wires etc., enter a property either through a hole in the existing door frame, or adjacent to it, then such services must be routed around the door frame. A split plastic tube of suitable diameter and length for entry into the Property should be slipped over the cable so that connections do not have to be disturbed on the appliances, with the ends of the tube sealed with white silicone sealant on completion of the external door installation.

036 Where any internal plaster work is disturbed when the existing door frames are removed, the Service Provider must make good the plasterwork. PVC-u cover mouldings may be used to a maximum width of 30mm.

037 Internally the door frame must be well caulked and the gap between the reveal finish and the frame flush pointed with a one-part white emulsion acrylic painter’s caulk.

038 Each sidelight must be permanently marked or labelled in an unobtrusive position (not visible when the opening light is closed) showing details of the manufacturer, the job number of the sidelight and the date of manufacture.

039 The latest standard for glass units is BS EN 1279 –2 (also part 3 for gas filled types)

040 Special care and attention must be taken to protect and avoid any damage to external doors and frames. Any damaged external door or frame must be replaced with a new external door or frame, and it must be at the Client’s Representative’s sole discretion as to whether a repair to an external door or frame is acceptable.

**Safety Laminated Glass**

041 All glazing in doors in critical locations as defined by the Building Regulations (i.e. glazing below 1500mm height in doors with a zone of 300mm either side of the door) is to have both skins of glass units glazed with laminated low E glass - assumed to be 2 No. skins of 6.8mm laminated safety glass.

Internal and external panes in sidelights, double glazing units to be laminated glass as default. An exception may be made where a staircase ends or turns immediately inside the doorway – in this instance the internal pane may be toughened (i.e. to reduce impact pressure) – written notification must be given to the Client’s Representative. External pane must always be laminated to provide security and satisfy PAS 24.

042 All safety glass is to be permanently marked on both panes with British Standard kite marks, which are to be visible after installation.

043 Both sheets of glass making up the sealed double-glazed unit must be safety glass where required by the above descriptions.

044 Details of external doors in critical locations are to be stated in the Service Provider’s proposals for each new external door when proposed drawings are forwarded to the Client’s Representative for approval.

**Glazing - General**

045 External doors and sidelights must be manufactured so that glazing or re-glazing on site is possible without the need to remove the outer frame from the structure of the building.

046 All glass and insulated glazed units should be carefully examined for damage, especially at the edges, prior to installation. Defective items must not be used.

047 The two panes of glass in the double-glazed unit are to be held apart with warm edge technology, spacer bars to improve thermal efficiency and reduce the possibility of condensation forming around the perimeter of the sealed double-glazed unit.

048 The glazing of the doors or sidelights must be carried out immediately after the installation of the frames and casements.

049 On completion of external door installations, all glass to be cleaned internally and externally and left clean and free from blemishes.

050 Any glass with scratches cracks or defects to be replaced by the Service Provider at no charge.

051 All external doors and sidelights to be **INTERNALLY GLAZED** in argon filled sealed units in low Emissivity glass, using pre-formed gaskets inserted during the profile extrusion and secured by knock-in PVC-U glazing beads with mitred corners.

All doors/sidelights will be totally dry glazed with minimum 12mm wide x 3mm thick double-sided PVC foam closed cell high density security glazing tape on the inside frame rebates. Co-extruded EPDM corded glazing gaskets on the frame are acceptable as an alternative provided that bead security clips are used in conjunction with it.

052 Glass shall be at least the minimum thickness to meet wind load requirements of BS 6262 and BS 6375.

053 Glazing beads are to be able to withstand the design wind loading in accordance with BS 6375: Part 1 and the tests specified in BS EN 12211.

054 Fans are not permitted in sealed units.

055 Details of all glass types are to be stated in the Service Provider’s proposals for each new external door or sidelight when proposed drawings are forwarded.

**Certificate of Test Sidelight/doors**

056 All manufacturers of sidelight/doors etc. shall be required to have a “sample” submitted for testing at an accredited testing station. These samples must be inspected against the requirements set out above. All manufacturers are required to have “third party” registration provided by BBA, BSI or equivalent recognised accredited quality licensing authority for the manufacture sidelights/doors etc.

057 A copy of the respective Certificate of Compliance for Secure by Design and PAS 24 must be made available at the time of submitting for inspection, which confirmations that the manufacturer can produce the product to the required standards, along with all testing data. The Service Provider should be aware these certificates may form part of the document handover pack and if not supplied on completion and handover of the Work, will incur a financial penalty.

**Delivery to site of sidelights/doors etc.,**

058 In each option, primary consideration must be given to current health and safety at work legislation in respect of site practices.

Option 1 – Pre-glazed

Will be valid where the external door manufacturer is commissioned on a supply only basis; the installation, therefore, being undertaken by the Service Provider.

Option 2 – Un-glazed

Will be valid where the external door manufacturer is commissioned on a supply and fit arrangement. This will involve the supply of insulating glass units and pre-formed glazing gaskets to be applied on site in accordance with the manufacturer’s technical data sheet.

Critical considerations to be observed:

* All glazing must conform to the recommendations contained in the relevant parts BS 6262 – 5 and BS 8000 - 7. The setting and location block positions, frame to glass and bead to glass gaskets etc. with any glass or insulating glass units must be installed in accordance with the relevant manufacturer’s technical data sheet and as per the recommendations in BS 6262 - 5.
* All insulating glass units shall be examined for damage prior to installation; defective units shall not be used.
* Insulating units with “low emissivity coatings” shall be oriented in accordance with the manufacturer’s technical data sheet; and
* Where safety glazing forms part of a glazing unit, it remains a legal requirement to ensure that the marking remains visible after installation.

**Protection, Transportation, Storage & Pre installation check**

059 The Service Provider must ensure the manufacturer/supplier is responsible for ensuring that all sidelights/doors are suitably protected to avoid damage during transportation and storage.

060 Sidelights/doors/glazing units (if applicable) shall not be flat-packed but stood vertically during transportation.

061 Sidelights/doors/glazing units in storage to be “kept apart” preferably with soft packing to reduce risk of transport/handling damage.

062 The Service Provider must ensure that all sidelights/doors stored on site are housed within a secure weatherproof storage facility on-site until the time of fitting. Pre-finished joinery shall not be stored in direct sunlight.

063 Prior to commencement of installation, the Service Provider should undertake the following checks -

* Consult survey sheets and ensure these are correct and clear.
* All survey measurements are recorded.
* The doors/sidelights supplied; are of the correct fenestration and design and in accordance with the external door schedule approved by the Client’s Representative.
* The glass type and pattern are correct.
* External door and glass sizes are compatible.
* All trims, gaskets etc., are correct and fitted correctly; and
* Consult survey sheets to ensure external doors supplied are correctly marked and identified to those Properties being replaced.

**Site Approval on delivered**

064 Previous to the benchmark Properties being set, a sample Pre-Finished, Composite, or Timber external door/sidelight shall be delivered to site by the preferred manufacturer/supplier for inspection and acceptance by the Client’s Representative.

065 The manufacturer/supplier in providing the sample for acceptance must demonstrate full compliance with the specification requirements. Evidence of thermal efficiency standards being offered must be available to the Client’s Representative for verification.

066 The sample external door/sidelight (upon acceptance) will form the “benchmark external door/sidelight” for the remainder of the project.

067 The Client’s Representative shall reserve the right (at any stage) to have any external door/sidelight which is delivered to site, subsequently removed for further inspection/audit and/or independent testing to ensure that the specification requirements are being complied with.

**Remove and install on same Day**

068 Existing doors to be removed are most likely to be timber in nature, although a small percentage of properties may have original PVC-u external doors and frames. The Service Provider should make every effort to have all existing external doors and frames recycled and provide waste disposal reports to the Client’s Representative.

069 Replacement external doors and frames must be installed on the same day that the original external doors and frames are removed in order to maintain security and weather tightness of the structure. The existing door frames should be removed with care in order to avoid damage to the Property structure and its finishes and without permitting any subsidence of the structure during or after the operation.

When providing more than one replacement external door to a single Property the Works should be undertaken on one set day to reduce the amount of disturbance to the Customer.

070 Any defects that become apparent in the integrity of the structure upon removal of any door frame should be reported to the Client’s Representative immediately.

071 If there is a sub-sill or threshold, e.g. Concrete, slate, brick or tile, below the existing door frame it must be left in position unless otherwise specified.

**Protection of existing fixtures etc.**

072 Allow for protection of floor coverings, furniture and Customer’s belongings throughout the duration of the Works.

073 The Service Provider is responsible for moving any furniture, fixtures, Customer’s belongings and fittings that may be damaged during the installation of the external doors, prior to commencement of the replacement of any external door and repositioning such items upon completion of the installation to each Property.

074 The Service Provider will be responsible for both internal and external protection. After the removal of the existing door, frame and sidelight the Service Provider is to carefully cut back any internal or external flooring, finishings, cladding, wallpaper and decorations to allow for the installation of the new frames etc. The Service Provider is responsible for making good all structures, finishings and decorations up to 100mm from the face of the frame or sill.

075 The Service Provider must ensure that clean and sufficient dust sheets or protective coverings are used, when carrying out any Works. The Service Provider must ensure he has taken all adequate provisions to ensure that the soiling or damage to floor coverings and needless damage to decorations are avoided. The Service Provider must allow for any cleaning of floor coverings required as a consequence of the Works and this should be reflected in the tender Rates submitted.

076 It is recommended the Service Provider undertakes a Schedule of Condition and agrees this with the Customer prior to undertaking any Works. It is therefore considered prudent to take photographs of any damaged Customer’s belongings within the vicinity of the Work prior to commencement and, where appropriate, to obtain a signed disclaimer.

**Fixings**

077 Screws used for fixing non-reinforced PVC-u sections will be of carbon steel with a suitable corrosion protective coating and feature a double helical thread, spoon point with a countersunk head.

078 Fixings must incorporate a combination square/cross recess drive to provide a non-magnetic stick fit.

079 All screws, nuts, bolts and other fastenings must be of corrosion resistant material or be treated to give corrosion resistant properties. When subject to the acetic acid salt spray test specified in BS EN ISO 9227 for a period of 144 hours, the corrosion resistance of treated mild steel must be equal to or better than that of stainless-steel samples subjected to the same test conditions.

080 All ironmongery, fixtures and fittings must be of materials resistant to or protected against atmospheric corrosion. Metals in contact with each other must be compatible so as to prevent galvanic corrosion of dissimilar metals by electrolytic action.

081 The use of polyurethane foam is not acceptable as a sole method of fixing any door frame into a structural opening, nor is it acceptable to be used as bedding for the door frame.

Fixing to be as recommended by in BS 8213-4 below is a brief summary, actual fixing recommendation should be taken from BS 8213-4 and its example diagrams:

|  |
| --- |
| Secured on all sides (where practicable); |
| Corner fixings – 150 – 250mm from external corner; |
| Minimum of 2 fixings per reveal; |
| If head is fixed with polyurethane foam, then head fixings can be –  • Frame width up to 1200mm – no fixings  • >1200mm to <2400mm – one central fixing  • >2400mm to 3600mm – two equally spaced fixings |

082 The use of polyurethane foam is permissible in terms of “foam filling” and as a useful addition to mechanical fixings. When the external door is completed and finished there should be no visual evidence of polyurethane foam either internally or externally.

Installation “packers” should be used to set the door frame onto to allow sealant/mastic to be used as a full fill bedding material. The colour should match the door frame finish.

Foam filling is to be used in all external door installations to provide a closure to possible cold bridge of gaps between the wall and the frame. It is only to be used within the depth of the door frame profile i.e. it should not be used to fill gaps to reveals etc. which are to be plastered. Form filling is only in regard to the following situations –

|  |  |
| --- | --- |
| 1) To the head of a door frame, where the presence of pre-cast concrete or steel lintels make it impracticable or pose significant difficulties in achieving the recommended fixing distances | Up to 15mm maximum |
| 2) To the sides of door frame to make up expansion/contraction gap left either side as a result of manufactured size of door frame |

083 All components should be supplied by a manufacturer complying with BS EN ISO 9001 accredited quality systems. A certificate passing warranty to the Client is to be issued by the hardware manufacturer on completion of the project.

084 Written confirmation of compliance with all the above should be given to the Client’s Representative in advance of commencement on site and will be a condition of the tender.

**Fire barriers**

085 In all methods of construction it is important to ensure that the cavities between internal and external skins are protected at openings for external doors from the spread of fire. If these openings are not protected, in the event of a fire, smoke and fire can spread through the cavity, causing danger to occupants in other parts of the Property not immediately affected by the fire. This issue is of particular concern in timber and metal framed buildings. Attention is drawn to the Building Regulations in respect of the requirement for suitable fire barriers to be present in such buildings. Guidance is given in BS 9991, BS 9999, and the current Building Regulations Approved Document B.

086 The method of construction should be identified, and where the building is of timber or metal frame construction, the type of cavity barrier should be established. Where the barrier is a cavity sock or similar and is likely to become dislodged or damaged by the removal of the existing frames, this should be noted on the survey sheet, and instruction given to the installation team to ensure that the cavity barrier is either repaired or replaced to maintain the original level of fire protection for the Property.

NOTE: Timber and metal frame constructions usually have a moisture barrier included in the area around openings, to resist moisture ingress into the cavity that could affect the timber sheathing or metal studwork.” (Extract from BS 8213-4).

**Insulated Cavity Closers and Insulation to Jambs**

087 Insulation to window and door jambs must comprise:

50mm minimum front to back dimension, notional width 100mm, insulation to be securely built in between inner and outer skins at jambs with vertical damp-proof course.

Insulation to provide minimum 30 minutes fire resistance in terms of integrity and 15 minutes in terms of insulation when tested to BS 476 Part 20.

Thermal conductivity to be no greater than 0.038W/mK, insulation to be under compression within cavity and installed in accordance with the manufacturer’s technical data sheet and the Building Regulations.

Built in insulated cavity closers must comprise proprietary insulated cavity closer to check reveal, to bridge between inner and outer skins at window and door reveals, heads and sills.

Cavity closers to be covered by a current BBA certificate or equivalent quality assurance certificate acceptable to the Client’s Representative.

Rigid PVC-u casing enclosing insulation with double flange to internal and external leaf to provide a key for rendering and plastering.

Thermal conductivity of insulation to be no greater than 0.038W/mK.

Cavity closer to provide minimum 30 minutes fire resistance in terms of integrity and 15 minutes in terms of insulation when tested to BS 476 Part 20.

Installed in compliance with current BBA certificate or equivalent quality system acceptable to the Client’s Representative.

Accessories: Manufacturer supplied compatible Polypropylene or PVC-u wall ties built in in accordance with the Manufacturer’s technical data sheet.

Rigid PVC-u casing enclosing insulation with single flange to internal leaf to provide a key for plastering; or Rigid PVC-u casing enclosing insulation with double flange to internal and external leaf

Cavity closer to provide minimum 30 minutes fire resistance in terms of integrity and 15 minutes in terms of insulation when tested to BS 476 Part 20.

Installed in compliance with current BBA certificate or equivalent quality system acceptable to the Client’s Representative.

Accessories: Manufacturer supplied compatible Polypropylene or PVC-u wall ties built in in accordance with the Manufacturer’s technical data sheet.

**Making Good**

088 The final covering and treatment of surfaces and their intersections are fundamental to the overall replacement of external doors.

The primary objective of making good damaged areas adjacent to the external doors is to maintain the.

* Weather-tightness; and
* Thermal performance characteristics

As required in and around reveals.

089 This protocol described below applies to all external door replacements and shall be undertaken as the primarily aim to negating the need for any redecoration during/after external door installation.

There will be a number of situations (i.e. age of the Property; thickness of plaster reveals; and to some extent “build issues” associated with system-built dwellings) that it may not be possible to observe all or part of this protocol. Therefore, more damage may be required to the reveals and/or the door frame wall to undertake the required door frame replacement. This could result in the need for some redecoration. Where this is likely to occur, firstly the Service Provider is required to notify the Client’s Representative at Design stage. If however, this is not identified until on-site stage the Service Provider must note the Properties affected and alert the Client’s Representative before work commences.

Where full plaster reveals are to be undertaken – i.e. Internal and external making good; this may take place on subsequent days, but the whole operation from start to finish of each door frame must not exceed 3 No. consecutive working days.

090 Plaster-Patching - This process will require a small degree of plaster-patching. This will include the following areas -

* All the reveals immediately adjacent to door frame etc.
* Part of the reveals where strap / lug fixings have been employed.

Finishing Trims are to be Cellular extruded PVC-UE trims/beads and must conform to BS 7619 and as the below table.

|  |  |  |
| --- | --- | --- |
|  | **Internal Reveal**  **(3 sides)** | **External Bead**  **(3 sides)** |
| Single bull-nosed PVC-UE trim typically 5–7mm maximum thickness |  |  |
| **Trim width must not exceed 100mm** | | |
| Quadrant / Bead typically 12x12mm or 18x18mm maximum  **OR**  Single bull-nosed PVC-UE trim typically 5 – 7mm maximum thickness |  |  |
| **Trim width must be in range 20 – 25mm maximum** | | |

091 Trims are not to be used to simply provide or enhance the weather tightness of the door frame or any perimeter joints. Finishing trims shall be used to neaten the interface between frames and opening, they are only to be used in conjunction with the “plaster-patching” / making good situations as stated above. All joints must be left ‘neat and tidy’ with an acceptable tolerance of +/- 2/3mm on all joints/trim abutments and sealed with sealant of matching colour.

092 Internal finishing trims shall be compatible with the Material of the door frame and must be colour-matched

093 External finishing beads/trims shall satisfy the above criteria and be of an exterior quality Material used in accordance with the manufacturer’s technical data sheet. External beading is not required where the external reveal has been re-plastered to match existing.

For the avoidance of doubt, door frames should be measured and fitted as described above and beads/trims should only be fitted to the opposite side of the determined cover/overlap. Only in exceptional cases where reveals are determined as flush will internal and external beads/trims be acceptable.

**Fixing of Trims/Beads**

094 All internal trims shall be secured in every case to a firm backing (junction of frame and reveal) with a low modulus silicon sealant (as below) and sealed all round.

All external beams/trims shall be secured in every case to a firm backing (junction of the frame and plaster reveal) with the low modulus silicon sealant (as below) and sealed all round.

**Sealants**

095 Sealants must comply with BS EN 11600 and be low modulus grade

096 Perimeter joints externally and internally around the “as installed” door frame shall be sealed with a low modulus silicone sealant and “smoothed” to provide a good seal.

The sealant shall be appropriate to –

* The frame surface and colour.
* Any substrate material.
* The specific joint size and configuration; and
* Potential joint movement and weather exposure.

**Implications - Customer’s Blinds etc.,**

097 The inclusion of a finishing trim to existing reveals and sill may in certain circumstances create an issue around the re-fitting of Customer’s blinds etc. The Service Provider shall pay due regard to the existing sidelight dressing(s) and where finishing trims are required that a “slim line” version (5mm or less) is used.

**Repairing damaged prefinished coatings on site**

098 Localised repairs to coatings shall be affected by brush application on site using the same coating Material and build-up as the factory application with no discernible difference upon completion. All repairs shall be carried out in accordance with the joinery manufacturer’s technical data sheet, by a competent person and to the satisfaction of the manufacturer and Client’s Representative to ensure continuance of the warranty.

**Cleaning of External Doors**

099 The protective tapes shall be removed from the as installed external doors, frames and sidelights immediately or as soon as practicable after installation and the door (frame and glazing) cleaned with a suitable cleaning agent.

**Final Completion Checks**

100 Upon final completion of each and every external door installation, the Service Provider is to confirm and check the following: -

* All glazing beads are adequately fitted and in good order.
* All hardware functions and locks operate correctly and are not stiff to use.
* All frames and glass are free from cracks, breaks and scratches etc. All frames and glass are cleaned, and all internals of frames are swept clean.
* All openings are square and operate correctly.
* There is no movement to the door.
* All hinges etc. are clean and operate correctly.
* All making good internally and externally are completed; and
* All trims are clean and sealed.

101 Once all the above items are completed, the Service Provider is to demonstrate the operation of the external door to the Customer and provide the Customer with their own operating instructions for the external doors. In addition, the Service Provider is to provide a Customer Satisfaction Card (to be supplied by the Client’s Representative) which the Customer is requested to complete and return by free postage to the Client. In due course the Service Provider will be required to provide any means necessary to allow the Customer to sign Satisfaction Card electronically for uploading to the Client’s Asset Management software.

**Photographic Evidence - Removal/Installation of Sidelights/Doors**

102 The Service Provider is required to take digital photographs of each completed sidelight/door installation.

The photograph should clearly show the completed internal reveals and identified by address and room (i.e. this may be done by placing an address and room labelled clipboard against the external door at the time of taking the photograph – ensure clipboard does not block image of door).

103 The photographs should be retained electronically by the Service Provider and if requested provided on an individual basis to the Client i.e. in the event of any Customers making a claim against the Client.

104 The Service Provider should note that the Client’s Representative will from time to time ask for evidence of these photographs and how and where they are stored. The Service Provider is required to retain these images for at least 6 years after the Date of Completion (in accordance with the Client’s Retention of Documents Policy and legal timeframe for a Customer to make a claim).

**Client’s current manufacturers/suppliers/products**

105 Composite External entrance door-sets are to be as Raven’s current **Unity Doors** products from the **Regency Door Range** as detailed below.

**Unity Doors:**

Unit 1, Newent Business Park, Newent, Gloucestershire, GL18 1DZ

+44 (0) 1531 822 585

enquiries@unitydoors.com

|  |  |  |  |
| --- | --- | --- | --- |
| **Raven Housing Trust -- Composite Door Specification** | | | |
|  | | | |
| **Frame** | **Material** | Impact modified PVC-U | Standard |
| **Size** | 70mm (front to back) - multi-chambered | Standard |
| **External Cill** | A Range of PVC-U Cills from 150mm to 180mm (as Project requires) | Standard |
| **Threshold Colour - Standard** | Part M Compliant Low Aluminium | Standard |
| White PVC-U inside and outside | Standard |
| **Reinforcement** | Reinforced in accordance with the system requirements to meet BS6375 Part 1 | Standard |
| **Leaf**  **Standards / Performance** | **System**  **Material** | Regency Door Range | Standard |
| SMC Thermoset Composite with "Colourfusion" Technology | Standard |
| **Thickness** | 44mm (front to back) | Standard |
| **Core** | High Density Closed Cell Polystyrene | Standard |
| **Edgeguard** | Installed on the Lock Hinge Style | Standard |
| **Designs** | Resident Choice, as per selection form | Standard |
| **Colour - Option** | Resident Choice for Front Doors: Red, Blue, Green, White and Black - All Doors will be White Inside | Standard |
| **Quality** | BS EN ISO 9001 Quality Management System | Standard |
| **Environment** | BS EN ISO 14001 Environmental Management System | Standard |
| **Health & Safety** | BS EN ISO 45001 Occupational Health and Safety Management | Standard |
| **CE Marking** | Declaration of Performance (DoP) issued | Standard |
| **Security** | PAS24:2016 Enhanced Security | Standard |
| **Product** | BS 7412 Specification for windows and doorset made from unplasticised polyvinyl chloride (PVC-U) extruded hollow profiles | Standard |
| BS 6375 Part 1 - Weather Resistance | Standard |
| BS EN 12608 PVC-U Profiles | Standard |
| BS EN 1279 Insulating Glass Units | Standard |
| BS 12150 Safety Glass | Standard |
| EN 12150-2 Glass in Buildings | Standard |
| **Energy Performance** | Whole Door U Value 1.1 to 1.7 U Value (Depending on Style/Configuration) | Standard |
| **Glazing** | **Bead System** | Internal "Flushglaze" cassette free patented system | Standard |
| **Sealed Unit** | 24mm Sealed Units (4-14-6.8) | Standard |
| Toughened Safety glass to Inner Pane | Standard |
| 14mm Spacer Bars | Standard |
| A pane of 6.8mm Laminated Glass to P1A standard, in the outer pane | Standard |
| **Front Doors** | Cotswold Pattern Obscured Glazing | Standard |
| **Rear Doors** | Clear or Cotswold Pattern Obscured Glazing (Resident Choice) | Standard |
| **Hardware** | **Handles** | Lever/Lever with Split Spindles to Front door, in a GAA Finish | Standard |
| **Locking System** | ERA 4 Point Multipoint system (2 hook, latch and bolt) | Standard |
| **Keeps** | Adjustable Keep Set | Standard |
| **Hinges** | 3 Number Hinges | Standard |
| **Cylinder** | Kitemarked Anti Bump, Anti Snap with Cylinder Guard and Key/Thumb turn | Standard |
| **Letter Plate - Front Doors** | TS008 Double draught sealed with Internal white power coated cowl | Standard |
| **Numerals - Front Doors** | 75mm Aluminium, Colour to match Handles | Standard |
| **Door Viewer - Front Doors** | 140 Degree viewed, set within the Knocker, Colour to match Handles | Standard |
| **Door Knocker - Front Doors** | URN Door Knocker, colour to match Handles | Standard |
| **Safety Chain - Front Doors** | Hook Type Safety Chain Colour to match Handles | Standard |
|  | **Survey** | In accordance with BS 8213 Parts 1 & 4 / GGF Guidelines / System Manual | Standard |
|  | **Installation** | In accordance with BS 8213 Part 4 / GGF Guidelines / System Manual | Standard |
|  | **Access** | As Project requires, costed in line with Installation and H & S requirements | Additional, when required |
| **Supply**  **Chain** |  | System designer | Unity Doors |
| Fabrication | Unity Doors |
| Installer | TBA |

**REPLACEMENT EXTERNAL, COMMUNAL AND FLAT ENTRANCE DOORS - GENERAL**

**[MIDDLE TIER]**

**REPLACEMENT EXTERNAL AND FLAT ENTRANCE DOORS - GENERAL**

**Secured by Design:**

001 This section is to be read in conjunction with the general specification for ‘Replacement External Doors – Surveying and Installation’ section, which provides details of surveying, sampling, installation, finishing etc. - generally as BS 8213-4 (Windows and Doors – Code of Practice for the survey and installation of windows and external door-sets).

All new external doors must meet the requirements of "Secured by Design" (SBD) certification. External Doors; PAS 24 Doors of Enhanced Security

002 All new external doors complete with frames and factory installed double glazing must be high performance proprietary door sets supplied by a certified SBD manufacturer. Fire doors must have additional testing certification in accordance with BS 476-22 or BS EN 1634 and BS 8214.

003 These may be PVC-u, timber or timber/steel faced, composite door sets complete with a Secured by Design approved locking mechanism.

004 PVC-u external doors, timber composite or steel faced composite doors are suitable for areas where high security or severe exposure rating requires greater durability and a multi-point locking mechanism.

005 Sample doors complete with proposed locking mechanisms are to be supplied for the approval of the Client’s Representative.

**Door Sets**

006 The Door sets must meet the performance standards set out in this Specification. The Service Provider must provide to the Client’s Representative a copy of the Secure by Design certificate and PAS 24 test certificate along with the list of door components/ironmongery as supplied by a UKAS test house prior to commencement of the Contract.

The door-sets supplied must be to the same specification as those tested.

Each door-set shall have the name of the manufacturer and date of manufacture clearly stated on one rebate by means of a discrete permanent label to aid future traceability if required.

007 The fitting tolerance must be plus or minus 5mm, it is the Service Provider’s responsibility to take all site dimensions for pricing purposes and for fitting purposes.

008 Door sets which are deemed to be outside the fitting tolerances must be remade at no further expenses to the Client.

009 Where existing door sets are removed, the new assembly must be installed and left in full working order before the end of the same day.

010 The manufacturer of the door sets must be stated on the Service Provider’s tender and a guarantee must be supplied indicating the life of the components.

011 Door Frames are to be fitted with weather seals of low-density cellular core encased in low friction liner which are capable of taking up reasonable seasonal movement in all temperatures and returning to original profile. The weather seals shall be inserted into a plough within the door frame rebate while being **fitted in one piece with lower ends extending to bottom of trapper bar**.

Door Frames to be either:

* white reinforced PVC-u to BS 7412 and BS EN 12608; or
* hardwood complying with BS EN 942 (density range 650-725 kg/m cu) with factory applied coating to match door.

**Level Access Thresholds**

012 All external door sets (main and secondary entrances including doors leading onto a patio) must have level access thresholds (max 15mm high threshold).

Weather bar should be capable of renewal in-situ i.e. without the need to remove the door frame. The weather bar unit shall have a performance rating to comply with BS 6375.

**Door Performance Requirements**

013 All the external doors must meet the following minimum performance criteria for weather resistance as defined in BS 6375-1 -Classification for Weather tightness.

Air Permeability Test Pressure

Class 300 Pa

Test Method BS EN 1026

Water Tightness Test Pressure

Class 200 Pa

Test Method BS EN 1027

Wind Resistance Test Pressure

2000 Pa

Test Method BS EN 12211

014 All doors must be completely draught free when closed. The doors are to meet the **Severe Exposure Rating** category

**Side Lights to Living Room External Doors**

015 If the glazed opening door is in a living room, the sole means of natural daylight and ventilation must not be from that door.

016 Additional opening side light windows with trickle ventilators and security restriction, must be provided in order to allow ventilation to the room without opening the door all year round.

**Double Glazing**

017 All double glazing to any external doors and their associated side lights (or, within 400mm of the door lock) must be have at least one pane of laminated glass to comply with Secured by Design.

018 Door and side light glazing must be 24 mm hermetically sealed double-glazing units manufactured with laminated glass.

* Front door to be in small panels and be obscured.
* Front door must incorporate facilities to view callers
* Glazing to rear doors to be clear

**Door Frames**

019 Door Frames to door handle relationship to allow for a min of 50mm from the frame edge to the lever handle. Lock back-set to accommodate this dimension.

020 All frames must have a factory fitted removable weather-strip to frames and weather-strip to the bottom edge of doors.

021 Door frame set back must be 65 mm minimum reveal to external face of wall.

022 New lintels to external doors/ sidelights must be insulated galvanised steel to BS EN 845-2 manufactured by an approved manufacturer and have an Agrément Certificate. End bearings must be a minimum of 150 mm.

023 All external door frames are to have mastic pointing provided all around. Such mastic pointing must be specified to be applied strictly in accordance with the manufacturer’s technical data sheet and good practice. The Client has a preference for two-part polysulphide mastics in areas that are vulnerable to vandalism.

**Door Ironmongery**

024 Ironmongery must be provided in full compliance with “Secured by Design”.Handles and locks must be easy grip type suitable for use by disabled persons.

025 **The requirements of Secured by Design (SBD) and the approved and tested locking mechanism of the selected SBD Door Licence Holder may override this section.**

026 All external doors must be hung on 3 no stainless-steel grade SS202 or coated zinc alloy patent hinges (having stainless steel) pins butt hinges.

Non-adjustable hinges to be fitted to flush doors.

Rebated door set hinges to incorporate lateral adjustment.

Fire door hinges must be CE Marked and tested to BS 476-22 or BS 1634-1. Hinges shall have high corrosion resistance, greater than BS EN 1670 grade 4.

A minimum of 2 no hinge bolts must be fitted to all external access doors providing hinge side enhanced security to PAS 24.

027 Doors to have multi-point lever handle security locking mechanism meeting BS 3261 and tested to PAS 24 and to comply with (and stamped) Secured by Design. Front doors to be provided with a security chain.

028 multi-point locking espagnolette system to be provided

029 Cylinder and Keys: All cylinders to be nickel plated on brass finish. Cylinders should have a large thumb turn to suit the elderly. All cylinders to be double profile and a minimum five pin tumblers, 1000 differs, anti-bump flush. Minimum of 3 keys supplied with each cylinder.

030 Doors generally fitted with level handles operational both sides of door.

031 Pull Handles and Push Plates: To be provided only where elements of communal accommodation occur.

032 Pull handles must be 230mm x 19mm dia. bolt through fixed and nylon or plastic coated finish. Push plates to be 300 x75 x 1.5mm drilled and countersunk fixed, finishes to match the Pull Handles.

033 Letter Plates: Front doors to Properties are to have a telescopic letter plate with external flap (finish to match door ironmongery) and an inward sprung flap, on the inside of the door.

034 Letter Plates must be draught and fireproofed internally and have a finger hood to prevent access to door locks (minimum distance from door locks 400 mm).

035 Intumescent Liners and Smoke Stopping must be provided to fire doors.

036 Internal flat entrance door off communal corridors must have a fire and acoustic rated letter plate with integral intumescent liners and a smoke stopped internal letter flap. Fire tested to satisfy the requirements of BS 476:22. Acoustic tested to satisfy the requirements of BS EN ISO 10140:1 to 5 to 29db/Rw.

037 Door numerals must be provided to the front entrance door of each Property.

038 Doorstops: All doors are to be provided with floor, wall or skirting mounted rubber stops on a nylon or plastic-coated shoe where appropriate to prevent damage to walls or plaster.

039 Door Closers**:** Where required, all self-closing fire doors should have size 2 - 6 adjustable strength and back check function overhead closers.

040 Concealed door closers and hush latches may be used in individual Properties and flats if approved by Building Control.

041 Closers to flats in Sheltered Housing Schemes must be the ‘swing-free’ type operated by the activation of the fire alarm.

042 Cabling and transformers must be provided to all wheelchair Property external entrance doors for the future installation of ‘power operated ‘door closers.

043 All overhead closers must carry a 10-year guarantee to BS EN 1154.

044 Door Viewer:Front doors to Flats should have a 180-degree chrome plated door viewer fitted at:

* 1500mm above finished floor level for accessible dwellings
* 1050mm above finished floor level

045 Door Bolts: Bolts to double doors, French windows and the like, should be of brass material satin chrome or satin nickel plated. Flush blots should be fixed in the leading edge of the second opening leaf of a pair of doors with a flat plate at the head and an easy clean socket in the floor.

Kick Plates: To be provided only where elements of communal accommodation occur.

Provide 450mm high coloured plastic kick plates to match the ironmongery on the push side of internal doors in communal and circulation areas and to all flat entrance doors on the corridor side. Flat entrance door kick plate to achieve fire resistance of door set.

Wall Protection: For internal communal areas only

Provide flame retardant corner protection to all external wall angles to a height of 1000mm using proprietary PVC-u corner protectors

**Composite Doors - Generally**

046 It is intended to renew main front and rear doors and frames on all single-family properties with composite doors.

**Doors - Generally**

047 Generally all front doors to be styled with upper panels double glazed with laminated safety glass sealed units.

Generally, all rear doors to be panel door style with upper panel double glazed with laminated safety glass sealed units.

048 Customers to be given the option of cat flaps to be installed to lower panels of rear doors only.

Under no circumstances are cat flaps (including fire rated intumescent units) to be installed

in a fire door, as this would invalidate the fire door certificate.

049 Doors within Conservation Areas will be renewed with a pre-finished timber door

**Composite Front Doors to Houses not within Conservation Areas**

050 Style and choice of front doors is to be agreed with Customer and Client’s Representative on each individual project. The Service Provider is to provide each Customer with a sheet listing and showing the style of doors available and five colours available, and the Customer is to choose and sign the list as to which door they wish and copy of the signed sheets to be forward to Client’s Representative. Door colour should be either be translucent coatings or from a manufacturer’s heritage range. Due to on-site issues with expansion etc., dark coloured doors should be avoided.

051 All existing doorbells are to be re-fixed

052 Where fanlights are above the doors, the fanlights and frames are to be included as part of the renewal.

053 All glazing doors to be double glazed laminated safety glass sealed obscure units unless otherwise Instructed.

054 All doors to have brass numbers on the outside and brass draught-proof letter boxes.

055 All doors to have brass multipoint lever handles.

056 All doors and locks to meet Secure by Design British Standard and tested to PAS 24 Standard.

**Timber Front Doors to Conservation Areas**

All statutory consents and permissions required to complete the Work to be obtained and/or checks to be made to ensure these are in place before ordering Materials and commencing Works.

All new timber front doors where requested are to be purpose made pre-primed minimum 44mm thick softwood doors, with hardwood painted frame.

It is anticipated that most doors will be 4 panel with 2 No. upper panels to be double glazed laminated safety glass sealed obscure units, and 2 No. lower panels to be mouldings to match existing.

Brass numbers and brass draught-proof letter boxes are to be as Clause 054 above.

All doors to have brass mortice night latch and separate 5 lever deadlocks with finger turn snib internally.

Where fanlights are above the doors, the fanlights and frames are to be included as part of the renewal.

I**nstallation**

057 The Service Provider is responsible for surveys and installation of the doors at the same time as the windows installations.

058 The Service Provider will be responsible for ensuring the correct installation of each door-set.

059 The door-set shall be placed on a concrete threshold and beaded on a low Modulus Silicone, minimum depth of bed 2mm, maximum depth of bed 4mm. All door-sets shall be installed using heavy duty galvanised perforated metal straps at 150mm from corners and maximum 600mm centres between these fixings.

060 Door-sets may also be fixed using through frame fixings provided that the existing reveals are sound.

Fixings shall be properly countersunk, plugged and head of plug coated to match frame. Split frames (i.e. PVC-u frames) as a result of bad fitting workmanship shall not be accepted and may result in the door-set being entirely replaced at no extra cost to the Client.

061 **Note: Under no circumstances shall expanding foam be accepted as a method of fixing.**

**Timber Architraves and Sills**

062 To every new timber door and door frame, carefully remove all existing internal architraves and replace to match existing in pre-primed ogee or similar timber, with mitred joints to architraves. All timbers to be finished in gloss paint.

063 All gaps to walls or gaps to joints are to be sealed prior to decorations.

**Painting of Timber Sundries**

064 To all new timber sill boards, pre-prime, architraves and sill boards before fixing, and then once installed, rub down, fill as necessary and paint 2 No. coats white undercoat and 1 No. gloss white paint, rubbing down between all coats.

065 Include to repaint existing external concrete sills and thresholds externally to the doors and touch up any painted stonework or render around the door frame to match existing, as disturbed during the renewal Works.

**Client’s current manufacturers/suppliers/products**

066 Composite External entrance door-sets are to be as Raven’s current **Unity Doors** products from the **Regency Door Range** as detailed below.

**Unity Doors:**

Unit 1, Newent Business Park, Newent, Gloucestershire, GL18 1DZ

+44 (0) 1531 822 585

enquiries@unitydoors.com

|  |  |  |  |
| --- | --- | --- | --- |
| **Raven Housing Trust -- Composite Door Specification** | | | |
|  | | | |
| **Frame** | **Material** | Impact modified PVC-U | Standard |
| **Size** | 70mm (front to back) - multi-chambered | Standard |
| **External Cill** | A Range of PVC-U Cills from 150mm to 180mm (as Project requires) | Standard |
| **Threshold Colour - Standard** | Part M Compliant Low Aluminium | Standard |
| White PVC-U inside and outside | Standard |
| **Reinforcement** | Reinforced in accordance with the system requirements to meet BS6375 Part 1 | Standard |
| **Leaf**  **Standards / Performance** | **System**  **Material** | Regency Door Range | Standard |
| SMC Thermoset Composite with "Colourfusion" Technology | Standard |
| **Thickness** | 44mm (front to back) | Standard |
| **Core** | High Density Closed Cell Polystyrene | Standard |
| **Edgeguard** | Installed on the Lock Hinge Style | Standard |
| **Designs** | Resident Choice, as per selection form | Standard |
| **Colour - Option** | Resident Choice for Front Doors: Red, Blue, Green, White and Black - All Doors will be White Inside | Standard |
| **Quality** | BS EN ISO 9001 Quality Management System | Standard |
| **Environment** | BS EN ISO 14001 Environmental Management System | Standard |
| **Health & Safety** | BS EN ISO 45001 Occupational Health and Safety Management | Standard |
| **CE Marking** | Declaration of Performance (DoP) issued | Standard |
| **Security** | PAS24:2016 Enhanced Security | Standard |
| **Product** | BS 7412 Specification for windows and doorset made from unplasticised polyvinyl chloride (PVC-U) extruded hollow profiles | Standard |
| BS 6375 Part 1 - Weather Resistance | Standard |
| BS EN 12608 PVC-U Profiles | Standard |
| BS EN 1279 Insulating Glass Units | Standard |
| BS 12150 Safety Glass | Standard |
| EN 12150-2 Glass in Buildings | Standard |
| **Energy Performance** | Whole Door U Value 1.1 to 1.7 U Value (Depending on Style/Configuration) | Standard |
| **Glazing** | **Bead System** | Internal "Flushglaze" cassette free patented system | Standard |
| **Sealed Unit** | 24mm Sealed Units (4-14-6.8) | Standard |
| Toughened Safety glass to Inner Pane | Standard |
| 14mm Spacer Bars | Standard |
| A pane of 6.8mm Laminated Glass to P1A standard, in the outer pane | Standard |
| **Front Doors** | Cotswold Pattern Obscured Glazing | Standard |
| **Rear Doors** | Clear or Cotswold Pattern Obscured Glazing (Resident Choice) | Standard |
| **Hardware** | **Handles** | Lever/Lever with Split Spindles to Front door, in a GAA Finish | Standard |
| **Locking System** | ERA 4 Point Multipoint system (2 hook, latch and bolt) | Standard |
| **Keeps** | Adjustable Keep Set | Standard |
| **Hinges** | 3 Number Hinges | Standard |
| **Cylinder** | Kitemarked Anti Bump, Anti Snap with Cylinder Guard and Key/Thumb turn | Standard |
| **Letter Plate - Front Doors** | TS008 Double draught sealed with Internal white power coated cowl | Standard |
| **Numerals - Front Doors** | 75mm Aluminium, Colour to match Handles | Standard |
| **Door Viewer - Front Doors** | 140 Degree viewed, set within the Knocker, Colour to match Handles | Standard |
| **Door Knocker - Front Doors** | URN Door Knocker, colour to match Handles | Standard |
| **Safety Chain - Front Doors** | Hook Type Safety Chain Colour to match Handles | Standard |
|  | **Survey** | In accordance with BS 8213 Parts 1 & 4 / GGF Guidelines / System Manual | Standard |
|  | **Installation** | In accordance with BS 8213 Part 4 / GGF Guidelines / System Manual | Standard |
|  | **Access** | As Project requires, costed in line with Installation and H & S requirements | Additional, when required |
| **Supply**  **Chain** |  | System designer | Unity Doors |
| Fabrication | Unity Doors |
| Installer | TBA |

**COMPOSITE EXTERNAL DOOR-SETS AND SCREENS**

**[LOWER TIER]**

**COMPOSITE ENTRANCE DOOR-SETS AND SCREENS**

**General**

001 This section is to be read in conjunction with the general specification for ‘Replacement External Doors – Surveying and Installation’ and ‘Replacement External Doors – General’.

002 This Specification is intended to describe the performance criteria to be obtained for the manufacture, supply and installation of inward opening Composite doors and frames and associated PVC-u windows. Service Provider’s must ensure that their proposed system completely satisfies all the relevant standards detailed.

003 This Specification is applicable to ALL Properties and the Service Provider’s price must cover the location of all Properties and doors being renewed. Generally, Properties will be occupied during the course of the Works.

004 This Specification describes works in detail however not all items of work will be applicable to each Property, nor is work referred to exhaustive. All doors, frames, fanlights and sidelights must pass testing to PAS 24 and must be “Secured by Design” certified. All certification documents are to be forwarded to the Client’s Representative and kept updated – this must include the test certificate, report and list of tested ironmongery with product manufacturer’s names, types etc. Evidence of compliance with PAS 24 (Specification for Enhanced security requirements for door-sets and windows in the UK) will be a condition of acceptance of completion.

All doors must achieve Building Control standard of Maximum U-Value = 1.8W/m2K.

005 Only products defined herein shall be used; alternative products will not be acceptable unless agreed with Client’s Representative.

Stiles and rails to be engineered timber edge bonded with 1.5mm or high strength engineered double plastic composite. Skins to be transfer moulded and U.V. stable, thickness of skin is determined by the door manufacture and as a result of PAS 24 testing. Bonding agent is to be moisture cure polyurethane adhesive with core of 39mm CFC free rigid foam insulation.

Door glazing to be double glazed laminated glass fitted in separate glazing cassette mechanically fixed to sub-frame and internally beaded.

006The Service Provider is to arrange access with the Customer to carry out a pre-manufacture site survey as recommended by the British Plastics Federation Code of Practice for the Survey of PVC-u Window sets, current edition. This survey will include the provision of a pro-forma questionnaire offering the available options from which the Customers can choose.

The visit will include:

* consulting with the Customer about choices,
* taking measurements sufficient to prepare scale drawings
* scheduling Customer fittings and their condition
* any other site condition that may affect installation

Customers are to be given a choice of 5 front door types as per Door Styles Section.

007 Customers choice options as table below.

|  |  |  |
| --- | --- | --- |
| **Element** | **Location** | **Options** |
| Colour | Front/Rear Door | White (RAL 9003)  Black (RAL 9005) |
| Blue (RAL 5004) |
| Red (RAL 3002) |
| Green (RAL 6009) |
| Glazing | Front | Obscure - Cotswold |
| Rear | Clear only |
| Ironmongery | Front/Rear | Gold/brass |
| Surface Finish | Front/Rear | Wood grain effect |

008 All screen/door styles must be in accordance with modern casement design where possible, allowing for exceptions where fire egress casements are necessary. Unusual aesthetic arrangements are to be referred to the Client’s Representative for decision.

009 All component parts are to be British Standard "Kite marked", or BBA approved or equivalent, verification of which to be supplied on request by the Client’s Representative.

010 PAS 24 certification from the Manufacturer and Service Provider must be provided to the Client’s Representative before manufacture.

011 The sidelight/screen types are to be as existing in respect of configuration and opening lights. However, sidelight/screens in conservation areas, areas of outstanding natural beauty or historic buildings must be discussed with the Client’s Representative for likely planning approval issues.

012 Design drawings are to be prepared by the Service Provider prior to manufacture. A copy is to be supplied to the Client’s Representative before manufacture commences.

013 The Service Provider will be required to carry out a pilot installation prior to full commencement of the Work, to ascertain the correct provision and detailing of the installation.

**Programme and Security**

014 In the case of numerous installations a programme for the Works is to be prepared by the Service Provider and agreed by the Client’s Representative, before Work commences.

015 Provide 14 days’ notice and agree the timing of the Works with each Customer. When undertaking Works, they need to be carried out as quickly as possible, in order to reinstate all facilities as soon as is possible. Full security, wind and weather tightness must be provided at the end of each working day in each occupied Property to suit the Customer’s/Client’s needs.

016 The installation of a door and frame, fanlights and sidelights must be carried out in one continuous operation within the working day. The security, wind and weather tightness of the Property must not be compromised at any time.

017 All making good of the structure and fabric must be carried out within one working day following the installation of the door etc., Any making good will not be left outstanding over weekends without the permission of the Customers and the Client’s Representative.

018 The Client’s Representative is also to be notified of the proposed commencement and completion dates, and proposed date for completion inspection once all the Works are completely finished including any snagging by the Service Provider.

019 The Service Provider is to agree a maximum number of Properties to be worked on at any one time before the Works programme begins (to suit number of Properties/Contract Period available).

020 A Property must be 100% complete prior to commencing on further Properties above the agreed maximum and each completed Property must be signed off by the Customer and the Client’s Representative.

**Protection**

021 Allow for protection of floor coverings, furniture and Customers belongings throughout the duration of the Works. Include for moving furniture, Customers belongings and everything necessary in order to carry out the Works and minimise disturbance to the Customers as far as possible. On completion of the Works place all previously moved furniture and belongings in locations agreed with the Customers. Dust sheets must be used at all times during the Works to prevent any damage.

022 The Service Provider will be responsible to any damage to carpets or Customers belongings therefore it is recommended the Service Provider undertakes a schedule of condition and agree this with the Customer prior to undertaking any Works. It is therefore considered prudent, to take photographs of any damaged Customer’s belongings within the vicinity of the Work prior to commencement, and where appropriate to obtain a signed disclaimer.

**Stripping Out**

023 Carefully remove existing doors, frames, sills, fanlights, sidelights and all associated fixings and prepare existing openings to receive the new installation. Dispose of all unwanted material and recycle were possible.

024 Take care to carefully remove remaining Customer fixtures and store to one side for reinstalling and refix on completion.

025Carefully remove coatings, panelling, tiles or sheeting of any kind from adjacent walls and ceilings generally back to the plastered surfaces. Make good, repair or replaster to receive new fittings, tiles and decoration.

026 After the removal of the existing door, frame, sill, fanlight and sidelight the Service Provider is to carefully cut back any internal or external flooring, finishing’s, cladding, wallpaper and decorations to allow for the installation of the new frames etc. The Service Provider is responsible for making good all structures, finishing’s and decorations up to 100mm from the face of the frame or sill.

**Replacement Doors - General**

027 The Service Provider must ensure that all door-sets and their installation fully satisfy the relevant standards detailed.

028 Manufacture, fabrication and installation should be suitable in all respects for: Low Rise Domestic Structures

029 **Important Note:** Dimensions, if shown, are for guidance only and the Service Provider is responsible for taking all necessary site dimensions to ensure that door-sets are manufactured to fit accurately and properly.

030 No frame extensions or make up pieces are to be used to compensate for incorrectly measured openings.

031 Fire doors are to have been tested (at a UKAS accredited test facility) to BS 476-22 or BS EN 1634 and BS 8214. Fire doors are to have achieved fire resistance integrity in excess of 30 minutes and a door-set classification of FD30S. On completion of installation, the Client’s Representative is to be furnished with 2 copies of all documents within clause 032 of the Fire Door–Sets section. Fire door to be individually referenced, marked and tagged by the fire door manufacture, whereby they are keeping records of all fire doors supplied and present monthly updates to the Client’s Representative with the monthly reports.

**Construction of Door and Frame**

032 Door leafs shall be constructed with minimum 4mm high gloss through coloured external Skins, manufactured from gel coat to BS 3532, coloured to BS 5252, and one layer of 300gm chopped strand matt and 2 layers of 450gm chopped strand matt to BS EN 14118, fully saturated with high heat distortion isophthalic / DCPD polyester resin conforming to BS 3532 type C. Skins shall fully encapsulate a jointed timber frame manufactured from prepared material kiln dried to BS 4978, and resin laminated CFC free polyurethane foam core. The above may be overruled/enhanced by testing to PAS24 (and fire testing. as above. in the case of fire doors).

033 Door frames shall be of moulded manufacture generally to the same specification as the door leaf and have a non-staining EPDM compression seal gasket and secondary angled blade neoprene stop seal.

034 Door sills, where required for non-wheelchair required access, shall be of moulded manufacture generally to the same specification as the door leaf. They shall be 50mm in height, 150mm in width and designed to accept an approved threshold.

**Threshold to Front Doors**

035 All external door sets (Main and Secondary Entrances including Doors leading onto a patio) must have level access thresholds (max 15mm high threshold) and a minimum clear opening width of 800mm between the blade and the stop, irrespective of the type of accommodation in order to meet the requirements of Lifetime Homes.

Weather bar should be capable of renewal in-situ – i.e. without the need to remove the door frame. The weather bar unit shall have a performance rating to comply with BS 6375.

**Glazing**

036 All glazing apertures are to be internally beaded with the double-glazed units securely fixed using mechanical means.

037 All doors, fan lights and/or side lights shall be glazed with dual sealed double-glazing units with at least one pane of laminated glass to comply with Secured by Design. Safety glass shall comply with BS EN 12600 and BS 6262

**Ironmongery**

038 Ironmongery must be provided in full compliance with "Secured by Design",Handles and locks must be easy grip type suitable for use by disabled persons.

039 Door viewers must be provided to all front doors at heights of 1500 and 1050 mm from finished floor level.

040 All external doors must be hung on 1½ pairs of heavy-duty butt hinges.

Fire door to be hung on 2 pairs of hinges and must be CE Marked and be compliant with BS EN 1935:2002 and tested to BS 476:22 or BS 1634.

Hinges shall have high corrosion resistance, greater than BS EN 1670 grade 4.

041 Multi-point locks tested to PAS 24 and to comply with (and stamped) Secured by Design. Front doors to be provided with a security chain.

042 All hardware, where attached to the door-set, shall be fixed with stainless steel screws fully penetrating the timber sub frame. For all installations use screws not rivets and employ maximum retention. Do not over tighten fixings.

043 Allow for fitting of D type handle to internal face of door where identified. Position to be agreed with manufacturer.

**Installation of Door-sets**

044 The door-sets are to be fixed strictly in accordance with the manufacturer’s technical data sheet. Care shall be taken to ensure the doors are handled and stored correctly. Frames are to be packed and wedged into the correct position to ensure a square and flat fit before fixing to the reveals.

045 The door-set is to be fixed with a minimum of eight M10 x 140mm proprietary frame fixings, direct through frame and finished with colour coded plastic not easy removed cover caps.

046 Door frame should be sealed to reveal with low modulus silicone sealant, colour matched to the door frame and neatly executed. A suitable bull nosed cover trim should be used to improve the aesthetic appearance of the joint.

047 All protective coverings on door-sets shall be removed on installation. Removal and cleaning of the frames and doors is the responsibility of the Service Provider.

**Sidelights and Fanlights**

**Profile Manufacture**

048 All sidelights, fanlights, door frames etc., profiles are to be obtained from the same approved system manufacturer.

049 All manufacturers must confirm as being registered as either having BS 7412 or BBA (or equivalent) independently. Evidence to be supplied. All manufacturers will be required to have membership of either, the GGF or BPF, evidence to be supplied.

050 The sidelights, fanlights, door frames etc., will be manufactured in accordance with current manuals for Composite sidelights and door frames. The profile will be manufactured to BS EN 12608. Cadmium based stabilisers, and re -work material used in manufacture will not be accepted. The profile will be vent profile manufactured with a euro- groove. All profiles are to be chamfered.

**Construction**

051 All sidelights, fanlights, door frames etc., shall be of all welded construction. All corner joints, transoms and mullions are to be mitred, and fusion welded. All excess materials are to be neatly trimmed and feature grooved. Mechanically jointed transoms may be considered where there are specific design constraints, but only after approval from the Client’s Representative. All feature grooves should be straight and of consistent depth throughout their length.

052 Each sidelight, fanlight, door frame etc., shall be permanently marked in an unobtrusive position (not visible when the opening light is closed) with BS 7412, the weather tightness exposure category and the name or trademark of the manufacturer.

053 Reinforcement is to be continuous to a minimum of 85% of the length of the frame, and within 5mm of the weld. Screw fixed to the profile at 250 mm max c/c, with a minimum of three fixings. All reinforcement to be to the profile manufacturer’s current recommended parameters in either aluminium or galvanised steel.

054 All sidelights, fanlights, door frames etc., will be constructed with the profile manufacturer’s current guidelines for pressure equalisation. Face drainage is to be provided; however, drainage slots should be a minimum 30mm long and 5mm wide. Internal drainage slots should be offset by a minimum of 50mm from external slots.

055 The sidelights, fanlights, door frames etc., are to be internally beaded as recommended in the current profile manufacturer’s manual and be capable of accepting 24mm hermetically sealed “low emissivity” glass units.

**Installation**

056 The correct installation of sidelights and door frames is critical to achieve maximum performance.

Installation shall at all times meet the requirements of BPF/GGF code of practice for the survey and installation of white high impact modified windows (Ref: COP3, parts A&B). The requirement for through frame fixing, cleat fixing and the need for frame extensions will be discussed at appropriate times. The Service Provider should draw these details to the Client’s Representative’s attention.

057 All sidelights etc., are to be glazed from the inside of the building. Glazing systems shall be designed so that the glass cannot be removed from the outside by the use of a thin blade or other simple tool or tools.

058 All fasteners used for the installation of door frames, sidelights etc and doors, must meet the following specification: -

* Fastener is to be a nylon through frame type with twist proof vanes to ensure mechanical stability and prevent anchor rotation.
  + - * To ensure stress free attachment to the masonry structure and to prevent twisting, racking or distortion of the frame, the anchor body will expand radially along its full-length during installation. Fasteners relying on a cone and expanding sleeve are not acceptable due to the increased risk of frame distortion.
      * The fastener when installed will be fully concealed within the frame to ensure that the fastener remains tamper proof and secure.
      * Maximum distances between fasteners will not be more than 600mm and the minimum distance of fasteners from frame corners, transom or mullion joints will be 150mm; and

059 The Service Provider is to ensure the final securing of fixings are screw tightened (not hammered) to avoid possible splitting of the frame. Any splitting of frames will result in the entire door set having to be removed, re-framed and replaced at the no extra expense to the Client.

**Glazing**

060 Glazing should be to Building Regulations Approved Document N and to BS 6262, and BS 8000-7. In addition, manufacturer’s recommendations for positioning of glazing blocks and packers must be adhered to.

061 Glass to all screens and windows will be hermetically sealed double-glazed low emissivity units to BS 952-1 and BS 952-2, units to be fitted in accordance with manufacturer’s technical data sheet. Glass to be marked with appropriate labelling which will only be removed after handover is completed.

062 Double glazed units are to be manufactured to the following specification 4mm Float Glass - 20mm Argon Gas fill - 4mm low emissivity glass overall thickness 28mm. Glass thickness and type shall be selected using the recommendations given in BS 6262 to withstand the calculated design wind pressure relative to the size of pane.

063 All glazing to screens and adjacent windows must have at least one pane of laminated safety glass to BS EN 12600 and marked accordingly. Safety glass shall be fitted where required in accordance with Building Regulations Approved Document N.

064 If any panels have any fixtures/fitting etc. attached, they are to contain a ply reinforcement.

065 Obscureglass to be Cotswold pattern or an obscure pattern of level 5 as a minimum.

**Hardware Specification for Fanlights and Sidelights**

066 Openings in the fanlights/sidelights should in the first instance be avoided, as it presents a higher risk of unauthorised door entry. However, it may be deemed necessary to provide the room/inner space with an adequate amount of ventilation (see Building Regulations). In these instances, all ironmongery must be as window specification detailed elsewhere. In addition, restrictors must be concealed and tamper-proof from outside the property.

067 The fanlight/sidelight hardware package must meet the requirements of PAS 24 “Enhanced security performance requirements for door-sets and windows in the UK. External door-sets and windows intended to offer a level of security suitable for dwellings and other buildings exposed to comparable risk”

**Insulated Panels**

068 On full floor to head height frames, lower panels will be coloured insulated panels to match door panelling. Therefore, the panel’s overall thickness and Materials to be used will be determined by the doors PAS 24 certification. All panels will achieve a min thermal resistance equal to or better than the glazed area above.

069 All panels to be manufactured to meet all relevant Building Regulations and safety standards with regard to thermal performance, acoustic transmission, and fire protection.

**Covers, Trims and Mouldings**

070 Unless otherwise Instructed all internal heads, jambs, and sills will be finished with a (colour as windows) single bull-nosed PVC-u trim typically 5–7mm maximum thickness of not greater width than 100mm. Scribed, mitred, securely screwed and capped and the edge glued to the frame with a PVC-u cyanoacrylate adhesive to give a neat finish and sealed on all edges using an emulsion acrylic sealant.

071 All PVC-U extrusions, mouldings, trims and profiles to windows will be manufactured and installed so that no colour variation exists to the detriment of the aesthetic value of the windows, doors etc. In accordance with colour fastness test methods included in BS EN 12608.

072 Trims are not to be used to simply provide or enhance the weather tightness of the window or any perimeter joints. Finishing trims shall be used to neaten the interface between frames and opening, they are only to be used in conjunction with the “plaster-patching” / making good situations. As it is likely that cold bridging may occur, filling at reveals, heads and sills must be plastered prior to fitting of all trims.

073 The inclusion of a finishing trim to existing reveals and sill may in certain circumstances create an issue around the re-fitting of Customer’s blinds etc. The window installer shall pay due regard to the existing window dressing(s) and where finishing trims are required that a “slim line” version (5mm or less) is used.

**Sealants and Perimeter Pointing**

074 All external sealants are to be of low modulus silicone and conform to BS 11600 and used to seal gaps between window/door assembly and brickwork/plasterwork. Colour matched to windows and neatly executed.

075 Internal sealant to be a one-part flexible emulsion acrylic sealant. This sealant may be used to fill cracks or gaps around walls and ceilings, and around all finished PVC-u architraves and trims.

**Ventilation**

076 All openings to be fitted with room ventilation as per window specification detailed elsewhere.

077 If required the Service Provider is to supply and fit a ventilator, which will conform to Gas regulations BS 5440-2, for air supply to gas appliances. This applies to any room containing or used to vent these types of appliances. Type position and quantity of ventilators to be agreed and verified with the Client’s Representative prior to work commencing.

078 An appropriate “**DO NOT OBSTRUCT”** label approved by the Client’s Representative indicating boiler rating, must be fitted to all gas ventilators by the manufacturer.

**Completion**

079 On completion of all Works thoroughly clean all adjacent surfaces affected by the Works.

080 All builders rubbish both internally and externally must be removed during and on completion of the Works.

**Client’s current manufacturers/suppliers/products**

081 Composite External entrance door-sets are to be as Raven’s current **Unity Doors** products from the **Regency Door Range** as detailed below.

**Unity Doors:**

Unit 1, Newent Business Park, Newent, Gloucestershire, GL18 1DZ

+44 (0) 1531 822 585

enquiries@unitydoors.com

|  |  |  |  |
| --- | --- | --- | --- |
| **Raven Housing Trust -- Composite Door Specification** | | | |
|  | | | |
| **Frame** | **Material** | Impact modified PVC-U | Standard |
| **Size** | 70mm (front to back) - multi-chambered | Standard |
| **External Cill** | A Range of PVC-U Cills from 150mm to 180mm (as Project requires) | Standard |
| **Threshold Colour - Standard** | Part M Compliant Low Aluminium | Standard |
| White PVC-U inside and outside | Standard |
| **Reinforcement** | Reinforced in accordance with the system requirements to meet BS6375 Part 1 | Standard |
| **Leaf**  **Standards / Performance** | **System**  **Material** | Regency Door Range | Standard |
| SMC Thermoset Composite with "Colourfusion" Technology | Standard |
| **Thickness** | 44mm (front to back) | Standard |
| **Core** | High Density Closed Cell Polystyrene | Standard |
| **Edgeguard** | Installed on the Lock Hinge Style | Standard |
| **Designs** | Resident Choice, as per selection form | Standard |
| **Colour - Option** | Resident Choice for Front Doors: Red, Blue, Green, White and Black - All Doors will be White Inside | Standard |
| **Quality** | BS EN ISO 9001 Quality Management System | Standard |
| **Environment** | BS EN ISO 14001 Environmental Management System | Standard |
| **Health & Safety** | BS EN ISO 45001 Occupational Health and Safety Management | Standard |
| **CE Marking** | Declaration of Performance (DoP) issued | Standard |
| **Security** | PAS24:2016 Enhanced Security | Standard |
| **Product** | BS 7412 Specification for windows and doorset made from unplasticised polyvinyl chloride (PVC-U) extruded hollow profiles | Standard |
| BS 6375 Part 1 - Weather Resistance | Standard |
| BS EN 12608 PVC-U Profiles | Standard |
| BS EN 1279 Insulating Glass Units | Standard |
| BS 12150 Safety Glass | Standard |
| EN 12150-2 Glass in Buildings | Standard |
| **Energy Performance** | Whole Door U Value 1.1 to 1.7 U Value (Depending on Style/Configuration) | Standard |
| **Glazing** | **Bead System** | Internal "Flushglaze" cassette free patented system | Standard |
| **Sealed Unit** | 24mm Sealed Units (4-14-6.8) | Standard |
| Toughened Safety glass to Inner Pane | Standard |
| 14mm Spacer Bars | Standard |
| A pane of 6.8mm Laminated Glass to P1A standard, in the outer pane | Standard |
| **Front Doors** | Cotswold Pattern Obscured Glazing | Standard |
| **Rear Doors** | Clear or Cotswold Pattern Obscured Glazing (Resident Choice) | Standard |
| **Hardware** | **Handles** | Lever/Lever with Split Spindles to Front door, in a GAA Finish | Standard |
| **Locking System** | ERA 4 Point Multipoint system (2 hook, latch and bolt) | Standard |
| **Keeps** | Adjustable Keep Set | Standard |
| **Hinges** | 3 Number Hinges | Standard |
| **Cylinder** | Kitemarked Anti Bump, Anti Snap with Cylinder Guard and Key/Thumb turn | Standard |
| **Letter Plate - Front Doors** | TS008 Double draught sealed with Internal white power coated cowl | Standard |
| **Numerals - Front Doors** | 75mm Aluminium, Colour to match Handles | Standard |
| **Door Viewer - Front Doors** | 140 Degree viewed, set within the Knocker, Colour to match Handles | Standard |
| **Door Knocker - Front Doors** | URN Door Knocker, colour to match Handles | Standard |
| **Safety Chain - Front Doors** | Hook Type Safety Chain Colour to match Handles | Standard |
|  | **Survey** | In accordance with BS 8213 Parts 1 & 4 / GGF Guidelines / System Manual | Standard |
|  | **Installation** | In accordance with BS 8213 Part 4 / GGF Guidelines / System Manual | Standard |
|  | **Access** | As Project requires, costed in line with Installation and H & S requirements | Additional, when required |
| **Supply**  **Chain** |  | System designer | Unity Doors |
| Fabrication | Unity Doors |
| Installer | TBA |

**FIRE DOOR-SETS**

**[LOWER TIER]**

**FIRE DOOR-SETS**

**GENERAL REQUIREMENTS ON FIRE DOOR-SETS**

|  |  |  |
| --- | --- | --- |
| **Scheme Type** | **Door Replacement** | **Colours/Choices** |
|  |  |  |
| Internal Flat Entrance door-sets | Timber Veneer flush faced FD30s door-set in accordance with Fire Safety Regulations 2017 and BS 476 Part 22 | Colours to be chosen by Client’s Representative and Customers. \*Locking system – Client’s Representative will Instruct whether to retain the existing \*locking system or to replace with a new locking system |
| Internal Communal door-sets | Timber Veneer FD30s/FD60s door-set in accordance with Fire Safety Regulations 2017 and BS 476 Part 22 | Colours to be chosen by Client’s Representative and Customers. \*Locking system – Client’s Representative will Instruct whether to retain the existing \*locking system or to replace with a new locking system |
| Internal Cupboard door-sets | Timber Veneer FD30s/FD60s door-set in accordance with Fire Safety Regulations 2017 and BS 476 Part 22 | Colours to be chosen by Client’s Representative and Customers.  **All new doors MUST match all other existing or proposed new doors throughout the scheme.**  Client’s Representative will Instruct whether to retain the existing \*locking system or to replace with a new locking system |
| External Flat Entrance door-sets | Composite FD30s door-set in accordance with Fire Safety Regulations 2017 and BS 476 Part 22 | Colours to be chosen by Client’s Representative and Customers. \*Locking system – Client’s Representative will Instruct whether to retain the existing \*locking system or to replace with a new locking system |
| Combination of Internal & External Flat door-sets | Composite FD30s door-set in accordance with Fire Safety Regulations 2017 and BS 476 Part 22 | Colours to be chosen by Client’s Representative and Customers. \*Locking system – Client’s Representative will Instruct whether to retain the existing \*locking system or to replace with a new locking system |

**Internal Timber Flat Entrance Fire Door Specification FD30S**

**Flat Entrance Door Sets - Specific Requirements**

Performance Specification Specific to New Fire Rated Flat Entrance Door Sets. Door-sets are to meet the following requirements:

Building Regulations Approved Document Part B, E, K, L, M. For New Build schemes or schemes where a material change of use have been undertaken, the requirements of Approved Document Q must be adhered to.

British Standard BS 8214:2016.

British Standard BS 476 :1987, parts 22 & 31 or EN1634-1 and EN 1634-3 2008.

Bi-directional testing required. Doorsets must have undergone testing at a UKAS/ European notified body accredited test laboratory.

Secured by Design PAS 24:2022.

British Standard BS 8621:2017.

British Standard BS9266.

British Standard BS9991:2015.

Requirements of The Regulatory Reform (Fire Safety) Order 2005.

Fire rated to BS476 part 22 1987 or EN1634-1: 2008 as a complete doorset tested with side frames (glazed or solid) and top frames (glazed or solid) for 30 minutes. Assessments in Lieu of Tests will be excluded. Door manufacture to advise if they have had double sided testing.

An extended Field of Application will need to be provided to allow for variances in sizes. Extended Field of Application to be in the door provider’s name.

Tested to EN1634-3: 2004 or BS476 Part 31.1 for smoke. Test must include positive and negative chamber pressures including 10 / 25 and 50pa results. Primary test only.

Tested and certified to PAS24:2016 (complete doorset assembly) Dual certification required written by a UKAS / European notified body accredited test laboratory.

Tested to EN ISO 10140-2 2010 for acoustics. Primary test only.

Tested to EN ISO 10077-1 and 2:2005 for thermal resistance. To have a U-Value of 1.8wm/k3 or less to meet the requirements of Approved Document L.

All glazing in top frame and/or side frames to contain glazing to EN356 – P1A minimum DGU. The overall DGU must also contain fire rated glazing, with partial fire insulation, and the glazed unit is to provide a U value of 1.8 or less. The complete top frame / side frame must be fire tested to BS476 part 22 1987 or EN1634-1 as part of a complete assembly. Assessments in lieu of tests will not be accepted.

Doors to be provided by a Secured by Design licence holder.

All door-sets supplied shall have been tested as a complete installed assembly and with a thumb turn even if direct access to the street or place of safety.

The door and closer must demonstrate compliance with BS8300, the Equalities Act 2010 as well as fire safety regulations (Part B) whilst considering Part M of the building regulations. The doorset must be able to be tailored to maximise the opening width under part M.

Doorsets must be part of a UKAS 3rd party certified fire and security scheme for manufacture.

Doorsets for resident’s properties – a colour choice of 4 options to be given, all with white frames. Available in Red = Ral 3003, Blue = Ral 5011, White = Ral 9016, Green = Ral 6009, Black = Ral 9005.

A certificate of manufacture must be provided for each door.

Assessments In Lieu of Tests will not be considered.

Extended Field of Application Report to be provided to allow for variations in size.

DOORSETS COMPRISING POLYURETHANE/PHENOLIC FOAM (OR SIMILAR) PRODUCTS WILL BE EXCLUDED.

Doorsets must be pre-hung. They can be separated for transportation but cutting on site allowed.

Glazing designs to be offered by door manufacturer based on their Primary test evidence.

Made of sustainable solid timber. Doors to have FSC or equivalent chain of custody.

Must be installed by 3rd Party Accredited installers.

001 Timber veneer FD30s door-set, set within timber or aluminium frames in accordance with Fire Safety Regulations 2017 and BS 476-22 to provide fire resistance ratings of 30 minutes (or better) when tested in accordance with BS476-22 or BS EN 1634-1.

All Materials to have achieved Certifire certification to 30 minutes fire resistance, or to have been tested in accordance with the appropriate section of BS 476 and all door components must comply with Approved Document B of the Building Regulations. All to be installed in strict accordance with manufacturer’s technical data sheet with certificate obtained by the Service Provider at practical completion.

002 Please note: If the existing doors are glazed, the Service Provider must conduct a survey with the Customers to see whether they wish to retain the glazing or have replacement solid doors. Where possible, the Client would like to prevent glass from being installed due to security risks, fire safety and thermal efficiencies.

003 All doors must include the following elements (if not included with the door-set):

|  |
| --- |
| Combine 15 x 4mm intumescent /brush smoke seals to both side edges and top edge of door leaf Successfully tested for fire and smoke performance in accordance with both [BS 476 Pt 20/22](http://www.lorientuk.com/fire-containment/bs-476-pt-2022-1987) and also [BS EN 1634-1](http://www.lorientuk.com/fire-containment/bs-en-1634-1-2000). |
| Overhead door closing mechanism affixed to the internal side of the door in accordance with BS EN 1154. |
| 75mm/3” Eurospec Fire rated door numerals in satin anodised aluminium finish. |
| Average size 285mm x 55mm fire and smoke resistant letter plate with Telescopic intumescent liner and Nylon brush seals fitted to prevent vision through the letterplate and provide draught proofing, complete with a security cowl is available to prevent vision through the letterplate when open, and to inhibit manipulation of locks and bolts. In accordance with BS 9999 and Approved Document B of the Building Regulations. |
| Complete viewing angle 60 degrees fire rated door viewer with a prism system that allows viewing from up to 2m away. Fire protection is provided by intumescent strip and suitable for 35mm - 62mm thickness doors. One per door, two to be provided for wheelchair users. |
| 1½ pairs Eurospec Grade 13 ball bearing fire rated hinges manufactured from 304 grade stainless steel, CE marked, designed and tested for 44mm doors. |
| Locking assembly and door handle ironmongery – Thumb turn on the internal face. |
| Fire Safety Signage to comply with BS 5499-2 Fire safety signs, notices and graphic symbols and the Health and Safety (Safety Signs and Signals) Regulations 1996 and where applicable conform to EN ISO 7010. |

**Communal Internal Door-sets**

004 Timber veneer FD30s/FD60s door-set with clear fire resisting glazing panels set within timber or aluminium frames in accordance with Fire Safety Regulations 2017 and BS 476-22 to provide fire resistance ratings of 30 minutes (or better) and 60 minutes (or better) when tested in accordance with BS476-22 or BS EN 1634-1.

All Materials to have achieved Certifire certification to 30/60 minutes fire resistance, or to have been tested in accordance with the appropriate section of BS 476. All door components must comply with Approved Document B of the Building Regulations. All to be installed in strict accordance with manufacturers technical data sheet with certificate obtained by Service Provider at practical completion.

005 All doors must include the following elements (if not included with the door-set):

|  |
| --- |
| Combine 15 x 4mm intumescent /brush smoke seals to both side edges and top edge of each door leaf Successfully tested for fire and smoke performance in accordance with both [BS 476 Part 20/22](http://www.lorientuk.com/fire-containment/bs-476-pt-2022-1987) and also [BSEN 1634-1](http://www.lorientuk.com/fire-containment/bs-en-1634-1-2000). |
| Overhead door closing mechanism affixed to the internal side of the door in accordance with BS EN 1154. |
| 1½ pair Eurospec Grade 13 ball bearing fire rated hinges manufactured from 304 grade stainless steel, CE marked, designed and tested for 44mm doors to each door leaf. |
| Fire Safety Signage to comply with BS 5499-2 Fire safety signs, notices and graphic symbols and the Health and Safety (Safety Signs and Signals) Regulations 1996 and where applicable conform to EN ISO 7010. |
| Eurospec plain or Push/Pull engraved Fire door rated finger plates to each door leaf. |
| Eurospec D pull Handle - A versatile range of pull handles in various bar diameters and lengths to each door leaf. |
| Eurospec kicking plate to both faces of each door leaf. |
| Electromagnetic fire door retainers (hold open devices) can be used to hold a self-closing fire door in the open position with an electrically powered magnet. These devices are usually linked into a building’s fire alarm system or are controlled from locally positioned smoke detectors.  Or  Acoustic fire door retainers fitted at the bottom of fire doors and can lock a fire door in the open position by pushing a plunger down. The acoustic fire door retainers then ‘listen’ for the sound of smoke alarms. Door release mechanism should conform to BS EN 1155 – Electronically powered hold-open devices. |

**Internal Cupboard Door-sets** (Electric cupboards, meter cupboards, boiler cupboards, storage rooms, cleaning cupboards & Lift rooms etc.).

006 Timber veneer FD30s/FD60s door-set set within timber or aluminium frames in accordance with Fire Safety Regulations 2017 and BS 476-22 to provide fire resistance ratings of 30 minutes (or better) and 60 minutes (or better) when tested in accordance with BS476-22 or BS EN 1634-1.

All Materials to have achieved Certifire certification to 30/60 minutes fire resistance, or to have been tested in accordance with the appropriate section of BS 476. All door components must comply with Approved Document B of the Building Regulations. All to be installed in strict accordance with manufacturers technical data sheet with certificate obtained by Service Provider at practical completion.

007 All doors must include the following elements (if not included with the door-set):

|  |
| --- |
| Combined 15 x 4mm intumescent /brush smoke seals to both side edges and top edge of door leaf Successfully tested for fire and smoke performance in accordance with both [BS 476 Part 20/22](http://www.lorientuk.com/fire-containment/bs-476-pt-2022-1987) and also [BS EN 1634-1](http://www.lorientuk.com/fire-containment/bs-en-1634-1-2000). |
| Cam action overhead door closing mechanism affixed to the internal side of the door in accordance with BS EN 1154. |
| 1½ pair Eurospec Grade 13 ball bearing fire rated hinges manufactured from 304 grade stainless steel, CE marked, designed and tested for 44mm doors. |
| Locking assembly and door handle ironmongery – Thumb turn on the internal face. |
| Fire Safety Signage to comply with BS 5499-2 Fire safety signs, notices and graphic symbols and the Health and Safety (Safety Signs and Signals) Regulations 1996 and where applicable conform to EN ISO 7010. |

**External Flat Entrance door-sets**

008 Complete FD30S **Composite** fire door-set set within timber or aluminium frames and flush finished with a fire-resistant glass reinforced plastic textured finish. Fire Resistant insulated core which has a leaf thickness of 44mm in accordance with Fire Safety Regulations 2017 and BS 476-22, to provide fire resistance ratings of 30 minutes (or better) when tested in accordance with BS476-22 or BS EN 1634-1.

All Materials to have achieved Certifire certification to 30/60 minutes fire resistance, or to have been tested in accordance with the appropriate section of BS 476 and all door components must comply with Approved Document B of the Building Regulations. All to be installed in strict accordance with manufacturer’s written instructions with certificate obtained by Service Provider at practical completion.

009 Please note: If the existing doors are glazed, the Service Provider must conduct a survey with the Customers to see whether they wish to retain the glazing or have replacement solid doors. Where possible, the Client would like to prevent glass from being installed due to security risks, fire safety and thermal efficiencies.

010 All doors must include the following elements (if not included with the door-set):

|  |
| --- |
| Combine 15 x 4mm intumescent /brush smoke seals to both side edges and top edge of door leaf Successfully tested for fire and smoke performance in accordance with both [BS 476 Part 20/22](http://www.lorientuk.com/fire-containment/bs-476-pt-2022-1987) and also [BSEN 1634-1](http://www.lorientuk.com/fire-containment/bs-en-1634-1-2000). |
| Cam action overhead door closing mechanism affixed to side of the door in accordance with BS EN 1154. |
| 75mm/3” Eurospec Fire rated door numerals in satin anodised aluminium finish. |
| Average size 285mm x 55mm fire and smoke resistant letter plate with Telescopic intumescent liner and Nylon brush seals fitted to prevent vision through the letterplate and provide draught proofing, complete with a security cowl is available to prevent vision through the letterplate when open, and to inhibit manipulation of locks and bolts. In accordance with BS 9999 and Approved Document B of the Building Regulations. |
| Complete viewing angle 60 degrees fire rated door viewer with a prism system that allows viewing from up to 2m away. Fire protection is provided by intumescent strip and suitable for 35mm - 62mm thickness doors. One per door, two to be provided for wheelchair users. |
| 2 pair stainless steel hinges, CE marked, designed and tested for 44mm doors. |
| Multi-point automatic multi-point locking assembly and lever/lever configuration door handles to suit Euro profile lock cylinder with 3 keys – Thumb turn on the internal face. |
| Fire Safety Signage to comply with BS 5499-2 Fire safety signs, notices and graphic symbols and the Health and Safety (Safety Signs and Signals) Regulations 1996 and where applicable conform to EN ISO 7010. |
| Anodised aluminium "low mobility" threshold. |
| Anodised aluminium weather bar. |

**Internal and External Flat Entrance Door-sets**

011 Complete FD30S **Composite** fire door-set, set within timber or aluminium frames and flush finished with a fire resistant glass reinforced plastic textured finish and Fire Resistant insulated core which has a leaf thickness of 44mm in accordance with Fire Safety Regulations 2017 and BS 476-22 to provide fire resistance ratings of 30 minutes (or better) and 60 minutes (or better) when tested in accordance with BS476-22 or BS EN 1634-1.

All Materials to have achieved Certifire certification to 30/60 minutes fire resistance, or to have been tested in accordance with the appropriate section of BS 476. All door components must comply with Approved Document B of the Building Regulations. All to be installed in strict accordance with manufacturers technical data sheet with certificate obtained by Service Provider at practical completion.

012 Please note: If the existing doors are glazed, the Service Provider must conduct a survey with the Customers to see whether they wish to retain the glazing or have replacement solid doors. Where possible, the Client would like to prevent glass from being installed due to security risks, fire safety and thermal efficiencies.

013 All doors must include the following elements:

|  |
| --- |
| Combine 15 x 4mm intumescent /brush smoke seals to both side edges and top edge of door leaf Successfully tested for fire and smoke performance in accordance with both [BS 476 Part 20/22](http://www.lorientuk.com/fire-containment/bs-476-pt-2022-1987) and also [BSEN 1634-1](http://www.lorientuk.com/fire-containment/bs-en-1634-1-2000). |
| Cam action overhead door closing mechanism affixed to external side of the door in accordance with BS EN 1154. |
| 75mm/3” Eurospec Fire rated door numerals in satin anodised aluminium finish. |
| Average size 285mm x 55mm fire and smoke resistant letter plate with Telescopic intumescent liner and Nylon brush seals fitted to prevent vision through the letterplate and provide draught proofing, complete with a security cowl is available to prevent vision through the letterplate when open, and to inhibit manipulation of locks and bolts. In accordance with BS 9999 and Approved Document B of the Building Regulations. |
| Complete viewing angle 60 degrees fire rated door viewer with a prism system that allows viewing from up to 2m away. Fire protection is provided by intumescent strip and suitable for 35mm - 62mm thickness doors. One per door, two viewers are to be provided for wheelchair users. |
| 2 pair stainless steel hinges, CE marked, designed and tested for 44mm doors. |
| Multi-point automatic multi-point locking assembly and lever/lever configuration door handles to suit Euro profile lock cylinder with 3 keys – Thumb turn on the internal face. |
| Fire Safety Signage to comply with BS 5499-2 Fire safety signs, notices and graphic symbols and the Health and Safety (Safety Signs and Signals) Regulations 1996 and where applicable conform to EN ISO 7010. |
| Anodised aluminium "low mobility" threshold. |
| Anodised aluminium weather bar. |

**Door closers to fire doors**

Fire-resisting doors (other than those to locked cupboards and service ducts) are usually

required to be self-closing, in accordance with the Building Regulations.

Door closing devices fitted to fire-resisting doors must be able to:

* to comply with BS EN 1154 and be CE marked.
* close the door leaf reliably from any angle to which it has been opened.
* overcome the resistance of a latch or any seals when fitted.
* easily operated by the resident(s). A variable resistance closing device with slider rail.

(cam action with guide rail) may be required for frailer residents.

Due to their low closing moments, door closers size 1 and 2 are not considered suitable for

use on fire/smoke door assemblies. Door closers with adjustable closing force shall be

capable of adjustment to at least power size 3.

The device must be fitted strictly in accordance with the manufacturer’s instructions.

* The door closer shall not include a hold open device unless it is an electrically powered device in accordance with EN 1155.

Rising butt hinges or spring hinges (including the Perko R1 & R2) are NOT to be used on fire doors.

014 Fire Door manufacturers and suppliers must provide, as a minimum, evidence of testing relating to the following:

Accreditation to and compliance with:

* UKAS Accredited Fire Testing Laboratory Detailed Report, typically known as a Global Fire Resistance Assessment
* BS 476: Part 22 (Fire Test)
* BS EN 1634 – 1 (Fire Test)

Compliance (as far as reasonably practicable) with Statutory Requirements:

* Building Regulations
* Fire Safety and associated Technical Booklet Guidance
* BS 9991:2011 Fire Safety in the Design, Management and Use of Residential Buildings – Code of Practice

015 Composite fire door-set manufacturers/suppliers, must at all times demonstrate compliance with the standard specification requirements in terms of certification (and validity of same), product compliance etc.

016 The manufacturer/supplier of fire door-sets will be required to submit the following evidence directly to the Client’s Representative. This will be held solely by the Client as evidence of accredited fire performance, technical specification and particular features –

* A Global Fire Resistance Performance Assessment Report for the respective composite fire door-set arrangement from a UKAS accredited fire testing laboratory with definitive confirmation that the composite fire door-set when tested to destruction achieves well in excess of the required 30 minutes.
* This to account for a series of glazing options including the addition of glazed top-lights or sidelights within prescribed dimensions. All other components such as hinges, multi-point locking devices, etc., must be fire-rated and hence part of this assessment. The manufacturer/supplier may elect to have a number of the same component, but from different suppliers tested and the outcome reflected in this report.
* A composite fire door-set Installation and Procedure Manual specific to the product. This document is for the sole use of the Service Provider/Installer who warrants through a Certificate of Conformity that the Fire Door-set exhibits no compromise whatsoever.
* Training is undertaken directly by the manufacturer/supplier of the composite fire door-set on their product and installation manual to the Service Provider in the installation of these door-sets.
* A Manufacturer/Supplier Certificate of Conformity to be issued with delivery of each manufactured fire door-set listing the unique job reference and all of the secondary components (fire-rated letter-plate, eye viewer etc.,)
* A Manufacturer/Supplier Fire Door-set Monthly Report that records the composite fire door-sets as manufactured. This to be issued to the Client’s Representative in a tabular/PDF format on a monthly basis.

**Marking of Fire Door-Sets**

017 All fire door-sets supplied to the Client should be clearly and permanently marked with their declared fire resistance at the manufacture stage. This will be in the form of a circular metallic tag. It must bear the manufacturer’s name and contact details.

The door-set must, in addition, carry a unique job reference number on the upper RH edge of the door leaf, which, in turn, must relate to the specific Fire Door Certificate issued with the door-set.

Fire-resisting glass where installed as part of the fire door-sets must be identified with an appropriate designation mark. The mark on the glass must be permanent, legible and completely visible after glazing installation. Similarly, this should include as a minimum, the glass manufacturer’s name and the product name.

018 **The Specifying of Fire Door-Sets**

Fire Door-sets are to be available in FD30s configuration. The specification for a fire door-set must include a full description of the elements together with the required fire resistance. Typically, this should reflect critical issues such as –

* the overall size of the door-set
* the proposed mode of operation
* size and number of any glazed apertures
* details of any hardware
* frame details and material being used
* the presence of any top or side-light glazed panels
* requirement in terms of performance seals

019 **Door Leaves and Frames**

All fire door-sets must be purchased as complete door-sets. This ensures that all of the correct components are fitted and that full assembly instructions are available through the manufacturer.

Door Leaves are to be constructed from composite materials and be “single swing”. The “as installed” door-sets must reflect those features contained in the manufacturers **Global Fire Resistance Assessment Report**.

Door frames can be provided (subject to above assessment reports) in hardwood, aluminium or PVC-u. The frame of the door-set should provide support for the door leaf in a “cold state”, but also provide adequate support in a fully developed fire. The minimum dimensions for the frame cross- section will be stated in the manufacturer’s fire door-set assessment report.

The timber, metal (aluminium) and PVC-u door frames in terms of their density, dimensions and material should not be less than those tested and recorded within the manufacturers **Global Fire Resistance Assessment Report**

020 **Intumescent Fire and Smoke Seals**

The intumescent fire and smoke seals used in the fire door-sets must be of the same formulation, dimensions and configuration as that stated in the manufacturers **Global Fire Resistance Assessment Report.**

These seals must achieve their optimum performance when fitted in the frame of the single leaf, single swing Fire Door-sets. These are normally positioned by the manufacturer at the midpoint of the door leaf thickness.

Fire door-sets are required under Building Regulations to restrict the flow of ambient temperature smoke – all Fire Door-sets, therefore, supplied to the Client must be identified by the suffix “s” – for example, FD30s and fitted with smoke seals.

Painting of smoke seals or combined intumescent and smoke seals is not permissible as this may inhibit the door-set from latching correctly.

021 **Glazing Apertures**

Fire door-sets as supplied to the Client may have glazed apertures. The door-sets must be designed to receive glazed apertures and fitted into the fire door-set aperture under the strict control of the manufacturer. Under no circumstances must apertures be cut on site.

The position, number and area of glazed apertures must be the same as that tested as part of the manufacturers **Global Fire Resistance Assessment Report.**

Only completely tested glazing systems must be used and the manufacturer must identify the glass product type, thickness, glazing seals and beads and any fixings. These must be fully supported by the relevant test evidence.

022 **Fire Door-Set Hardware**

Intumescent materials that have been used to achieve a particular performance in the fire test conditions, with the relevant hardware and the door leaf must be reflected in the completed Fire Door-set to maintain the stated fire performance.

It is essential that any element of hardware incorporated as part of the composite fire door-sets provides the required intumescent protection. It is recommended in most cases that the hardware is bedded in an intumescent mastic or intumescent pads to restrict heat transfer to the door edge by means of the metal hardware products.

All hardware/door-set furniture must be fitted in a manner that ensures the fire-resisting properties of the door-set are not compromised.

Intumescent and fire-rated letter plates and fire-rated eye viewers are a particular requirement of fire door-sets. These must be fitted with an intumescent liner and only fitted where they have achieved the appropriate fire resistance period when tested in-situ with the composite fire door-set.

023 **Finish/Decoration to Fire Door-Sets**

Fire door-sets are generally not required to provide a specific spread of flame classification.

All fire door leaves supplied as part of the composite fire door-set are pre- coloured skins that do not require any form of decoration. Similarly, those fire door-sets utilising the aluminium framing system require no form of decoration as these are “powder coated”.

Where there is a hardwood frame as part of a composite fire door-set, particular care must be taken where there may be future re-decoration. The use of heat or chemical strippers must be avoided at all costs as these are liable to damage intumescent fire and smoke seals incorporated within the frame.

024 **Sample Fire Door-Sets for Approval**

Sample fire door-sets must be delivered to site by the Service Provider/manufacturer/supplier for inspection and acceptance by the Client’s Representative.

The Service Provider/manufacturer/supplier in providing the sample for acceptance must demonstrate full compliance with the Specification requirements. Evidence of full compliance with the standard specification requirements and a copy of the relevant test data/**Global Fire Resistance Assessment Report** must be held in advance by Client.

025 **Protection, Transportation, Storage and Pre-Installation Check of Fire Door-Sets**

The Service Provider/manufacturer/supplier of the fire door-sets shall be responsible for ensuring they are suitably protected to avoid damage during transportation and subsequent storage.

Fire door-sets shall not be flat-packed but stood vertically during transportation.

Fire door-sets in storage to be “kept apart” with preferably soft packing.

The Service Provider/manufacturer/supplier of fire door-sets may choose to disengage the over-head door closer for transportation purposes. This is a critical component and part of the fire door-set and must be re-engaged by the Service Provider prior to any installation.

The Service Provider must ensure that all fire door-sets stored on site are housed within a weatherproof on-site storage facility and protected at all times from moisture and temperature extremes. This should preferably be a well-ventilated facility.

Prior to commencement of installation, the Service Provider must undertake the following checks:

* Consult the manufacturer/supplier survey sheets and ensure these are correct and clear
* All definitive survey measurements are recorded
* The fire door-sets as supplied are of the correct fenestration and design
* All hardware components are intact and engaged (where required)

026 All Fire Door-sets are generally measured in accordance with **BS 8213:2007** and as recommended on the **GGF (Glass & Glazing Federation) Code of Practice (March 2006)**. Fire Door-sets will in the main be fitted from the inside, although the nature of some reveals will permit these to be fitted from the outside. The measurement and fitting of fire door-sets must in every case respect the existing cover/rebate to the outer frame of the fire door-sets by virtue of the “reverse brick detail” or “check reveal”.

027 **Compatibility of Fire Door-set Framing with Surrounding Structure**

The type of the surrounding structure and / or the wall or partition into which the fire door-set is being installed will have been determined by the fire resistance testing and within the **Global Fire Resistance Assessment** Report. Reference must be made to the manufacturer / supplier for each common area and verified by test evidence.

028 **Installation of Fire Door-sets**

* Installation Generally
  + All fire door-sets to be installed must pay due regard to the following –
    - Fire door-set manufacturer/supplier Installation technical data sheets
    - Installation of fire door-sets
    - Compatibility of door-set arrangement (and in particular, the door frame) with the surrounding structure
    - Sealing between the door-set and the surrounding structure
    - Clearance gaps
    - Under-door (threshold gaps)

Where the fire door-sets are installed by a Service Provider, the following protocol must operate:

* The Service Provider must identify “skilled Installers” to the Client’s Representative who will be employed in their installation.
* The Service Provider must organise with the fire door-set manufacturer/supplier, specific training on all aspects of the door-set and importantly the installation technical data sheet.
* The manufacturer/supplier of the fire door-sets must maintain a record of all training given and must be made available for inspection by the Client’s Representative, as and when required.
* The manufacturer/supplier of the fire door-sets will issue “all persons attending” with a bespoke certificate as proof that training in their respective product has taken place.

**The Service Provider’s installers must install the fire door-sets in strict accordance with the installation technical data sheets and ensure that there is adequate sealing with the surrounding structure and that damage is limited (or avoided) with any flame-retardant coatings.**

Under no circumstances must the fire door-set arrangement (as supplied) be compromised in the fitting/installation process. This includes making on-site adjustments to key fire-rated components such as “building hardware” with intumescent fire protection.

In all cases the fire door-set manufacturer/supplier is at liberty to undertake random checks to ensure that their fire door-set arrangement has not been compromised in any way. Where a manufacturer/supplier is of the opinion that any of their fire door-sets have been compromised, this must be referred immediately to the Client’s Representative for action.

**Installation Criteria:**

* Fire door-sets must be installed plumb and square within the structural aperture, without twist, racking or distortion of any member and in accordance with the manufacturer/supplier recommended and permissible tolerances so as to operate correctly after installation.
* It is critical that the manufacturer/suppliers correct, and preferred method of installation is fully complied with to ensure that the door-set, when fixed into the wall, will achieve the required fire rating designated for the respective door opening.
* In order to maintain the fire resistance of the compartment walling when fitted with a fire door-set arrangement, the junction between the two elements must be adequately sealed.
* The sealing of these junctions must be in strict accordance with the manufacturer / supplier Installation technical data sheets.
* The composite fire door leaf must be hung to give an equal gap across the heads and down both jambs. To ensure good fire performance and under fire test conditions; this may be in the order of 2 – 4mm.
* The combined intumescent fire and smoke seals (as required and fitted) must allow the door-set to operate without causing significant “frictional issues”, and the gap must remain within the “as tested” tolerances.
* The under door/threshold gaps should be pre-determined by the fire door-set manufacturer/supplier and be in accordance with their Installation technical data sheet for the particular fire door-set.
* When fitted, the fixed or threshold arrangements or the drop- down seal variant should give an “even contact” with the floor, but not create/exhibit significant “frictional issues” that could interfere with the closing action/latching of the fire door-set

**Fire door installation schemes:**

* There is a legal requirement for manufacturers of fire doors to demonstrate the ability of their products to resist the passage and spread of fire. However, if they are not properly installed, their fire resistance capabilities can be seriously compromised. From April 2017

third party installation certification should be sought for all fire door installations

to our properties.

Recognised third party certification door installation schemes have been designed to provide reassurance to specifiers, contractors and end users that the product they have chosen has been installed correctly and that it will perform as intended. For example:

* Trada Q Mark Fire Door Installer Scheme - A voluntary third-party fire door installer

and maintainer certification scheme operated by BMTRADA.

* FIRAS - A voluntary third-party certification for installation contractors of both passive

and active fire protection systems, operated by Warrington Certification, and

accredited by UKAS to EN45011.

* IFC Certification Ltd – IFCC - A voluntary third-party certification scheme operated by

IFC Certification, part of the IFC Group.

029 **Methods of Fixing for Fire Door-sets**

* **Fixing Fire Door-sets Generally**
  + Fixings for fire door-sets must be strictly in accordance with the manufacturer/supplier Installation technical data sheets.
  + Fixing methods and distances together with their respective methodology must also be strictly complied in terms of the manufacturer/supplier Installation technical data sheets.
* **Use of Fire Rated Expanding Foam**
  + The use of Fire Rated Expanding foam is not acceptable as a sole method of fixing any fire door-set into a structural opening.
  + Where the installation of the fire door-set with the adjacent wall substrate may require an element of fire-rated expanding foam, this must be referred initially to the manufacturer/supplier for verification/approval. Where the manufacturer/supplier Installation technical data sheet permit this or refer to its use, this must be applied strictly in accordance with that stated.

030 **Finishing Off and Making Good**

The final covering and treatment of adjacent surfaces, substrates, and their intersections are key in the overall fire door-set installation process.

The primary objectives of making good any damaged areas adjacent to the fire door-sets is to:

* Maintain the fire resistance of a fire-resisting or compartment wall
* Ensure the junction between the two elements are adequately and appropriately sealed
* Maintain the required Surface Spread of Flame Classification (Class 0) linked to the Flame-Retardant Coatings
* Plaster-Patching
  + A small degree of plaster-patching will be required from the installation process. This will in all probability relate to reveals immediately adjacent to fire door-set.
* Finishing Trims
  + In a small number of cases, the gap between the door frame and the wall frame may be masked by an architrave both internally and externally. In the main, it is expected that the door frame will be fixed directly to the substrate.
  + Where the former occurs, this should be referred initially to the fire door-set manufacturer/supplier for verification that this type of surrounding structure was determined by the fire resistance test. Additional protection can be facilitated as below.
* Frame to Wall Junction & Adjacent Flame-Retardant Paint Coatings
  + Where the surface of the adjacent walling is identified as being plastered over to back of the frame, then there is no real problem with the exception of disturbance to any applied wall applied paint applications – in many cases, these paint applications will be multiple coatings and potentially in a flame-retardant paint.
  + Where there is disturbance of such surface linings, the Service Provider must refer to his paint suppliers for advice and sampling (if required). It is recognised that wall linings disturbed and in a fully developed fire can compromise the common area.
  + Where architraves / adjacent panels are present, these should be removed to check that no voids exist between the frame and the adjoining structure.
  + If the above scenario is found, the fire door-set manufacturer/supplier should be consulted as stated. As a form of additional protection, the void(s) should be filled with plaster, intumescent material or tightly packed rock-wool. The method of packing will depend on the size of the void – guidance on filling voids satisfactorily is stated in Section 9.4 of BS 8214 Tables 2 and 3
  + Where fire Door-sets are installed and any damage of the adjacent wall surfaces sustained, then a visual inspection should take place and identification made of the “applied paint” – it is expected, for example, within common areas that any of the following paint applications may exist:
    - Flame Retardant Paint
    - Emulsion
    - Solvent-based Gloss
    - Solvent-based Eggshell
    - Textured Coatings
  + If there is any element of doubt as to the above application, then referral should made to his paint manufacturer for technical advice. This is particularly critical if the topmost paint layering is of a flame-retardant paint.
  + There are fire hazards associated with multi-layer paint coatings
  + The common area paint linings and forming part of compartment walling must ultimately achieve a Class 0 Surface Spread of Flame classification. That is readily achievable normally through an “upgrade process” and specification involving flame retardant paints from the Service Provider’s paint manufacturer.

031 **Fire Door-set Inspection Checklist**

A **FIRE DOOR-SET INSPECTION CHECKLIST** requires to be completed where any fire door-set is installed as part of this Contract.

Each Fire Door-set **must** be individually, independently inspected by a UKAS accredited fire door installation inspector in relation to all issues listed. This information will be critical in maintaining a “level of fire resistance” within the communal areas.

The Inspection Checklist is to give the Client an assurance that the door-set has been independently observed and inspected as installed and that any deficiencies based on the checklist issues have been noted and recorded. The inspector is required to record and advise the Service Provider of any such deficiencies.

The inspection, recording and completion of this Checklist is the responsibility and cost of the Service Provider. Photographs may be used where necessary as evidence of any significant deficiencies.

It is the Service Provider’s responsibility to ensure that any deficiencies identified are remedied without delay.

The Service Provider upon completion of any remedial works must sign and issue the Service Provider’s Certificate of Conformity for each Fire Door-set.

032 **Protocol - Certification of Fire Door-Sets**

**Certification Generally**

Fire Door-sets as supplied to the Client must be “certified” as fit for purpose and capable of achieving the fire resistance and integrity as stated.

The Service Provider and the fire door set manufacturers/supplier must demonstrate compliance with this Specification**.**

**Manufacturer/Supplier Certification and Compliance**

* **Any Manufacturer/Supplier of Fire Door-sets are required to undertake the following:**
  + Tag every Fire Door-set with a round metallic tag affixed to the door leaf with security screws; this must state “FD30s” and the respective Manufacturer’s name and contact number.
  + The upper RHS of the Fire Door leaf must bear the unique manufacture job reference assigned to the respective Flat/Maisonette address or communal location – this must relate directly to the MANUFACTURER/SUPPLIER CERTICATE OF CONFORMITY and also be logged to the MONTHLY FIRE DOOR-SET REPORT
  + The MANUFACTURER/SUPPLIER CERTIFICATE OF CONFORMITY must be made available with every Fire Door-set and record the following details:
    - Project/Scheme name & corresponding Project No.
    - Door-set Manufacturer/Supplier details
    - Manufacturer/Supplier job reference
    - Contractor supply details
    - Completed Certificate of Conformity Statement
    - Product Supplied Address
    - Product Details
  + The relevant Certificate of Conformity template is included below:
  + A MANUFACTURER/SUPPLIER MONTHLY FIRE DOOR-SET REPORT format and content to be approved by the Client’s Representative must be submitted to the Client’s Representative on a monthly basis fully completed as confirmation of all fire door- set locations as supplied in the preceding month. This report must cross-reference with all of the Certificates of Conformity issued.

**Installer Certification and Compliance**

**The Service Provider required to undertake the following:**

* Undertake all remedial works/deficiencies as identified on the Fire Door-set inspector checklist, format and content to be agreed with the Client’s Representative.
* Warrant that the Fire Door-set as installed has been supplied from a fire door-set manufacturer who holds a current and valid Global Fire Resistance Assessment Report; in addition, the Service Provider is to warrant that the fire door-set Installation (and any identified deficiencies have been undertaken in strict compliance with the manufacturer/supplier installation technical data sheets and with the Client’s Specification and that no compromise of any fire safety component exists.

The relevant INSTALLER CERTIFICATE OF CONFORMITY template is to be provided by the Client to the Service Provider.

**Client’s current manufacturers/suppliers/products**

Complete FD30S Composite fire door-sets are to be as Raven’s current products detailed below:

A close-up of several doors

Description automatically generated

A green door with a light on it

Description automatically generated

**DOOR STYLES**

**DOOR STYLES:**



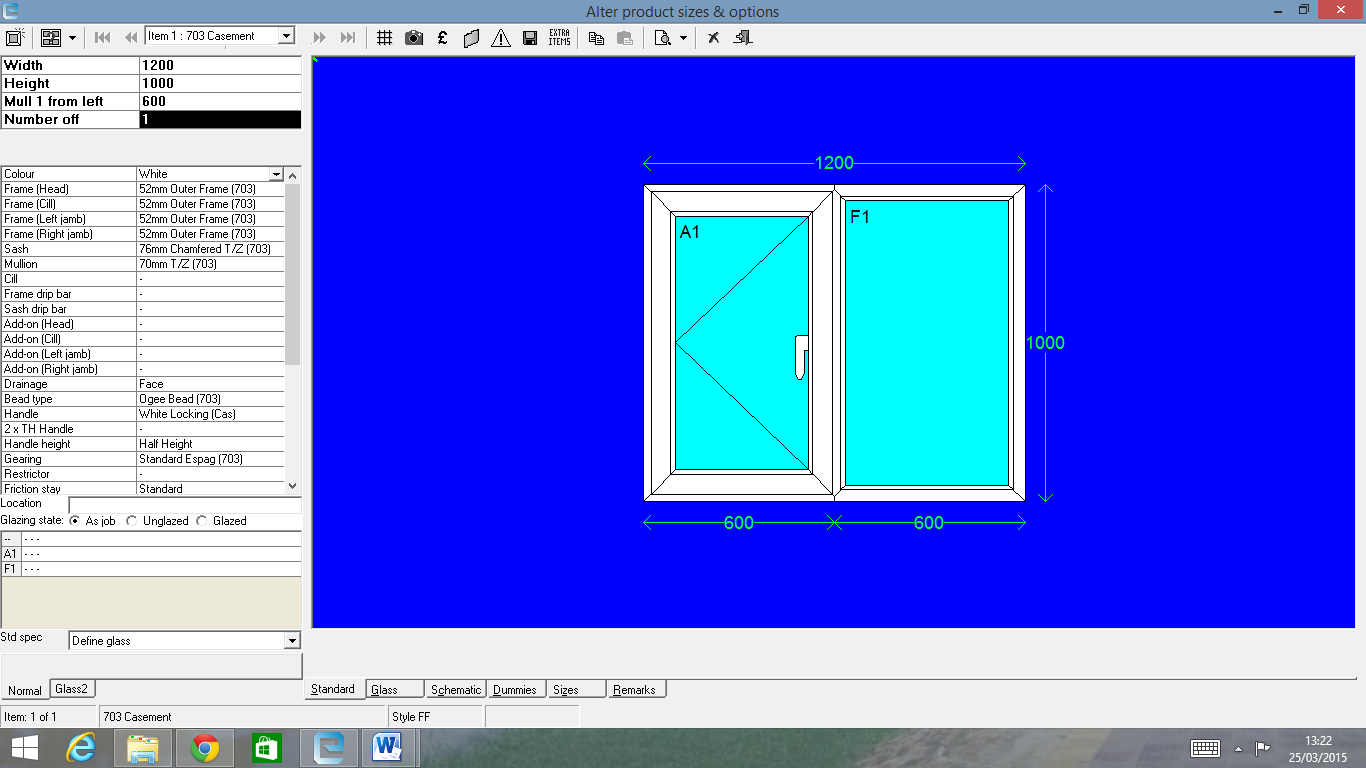
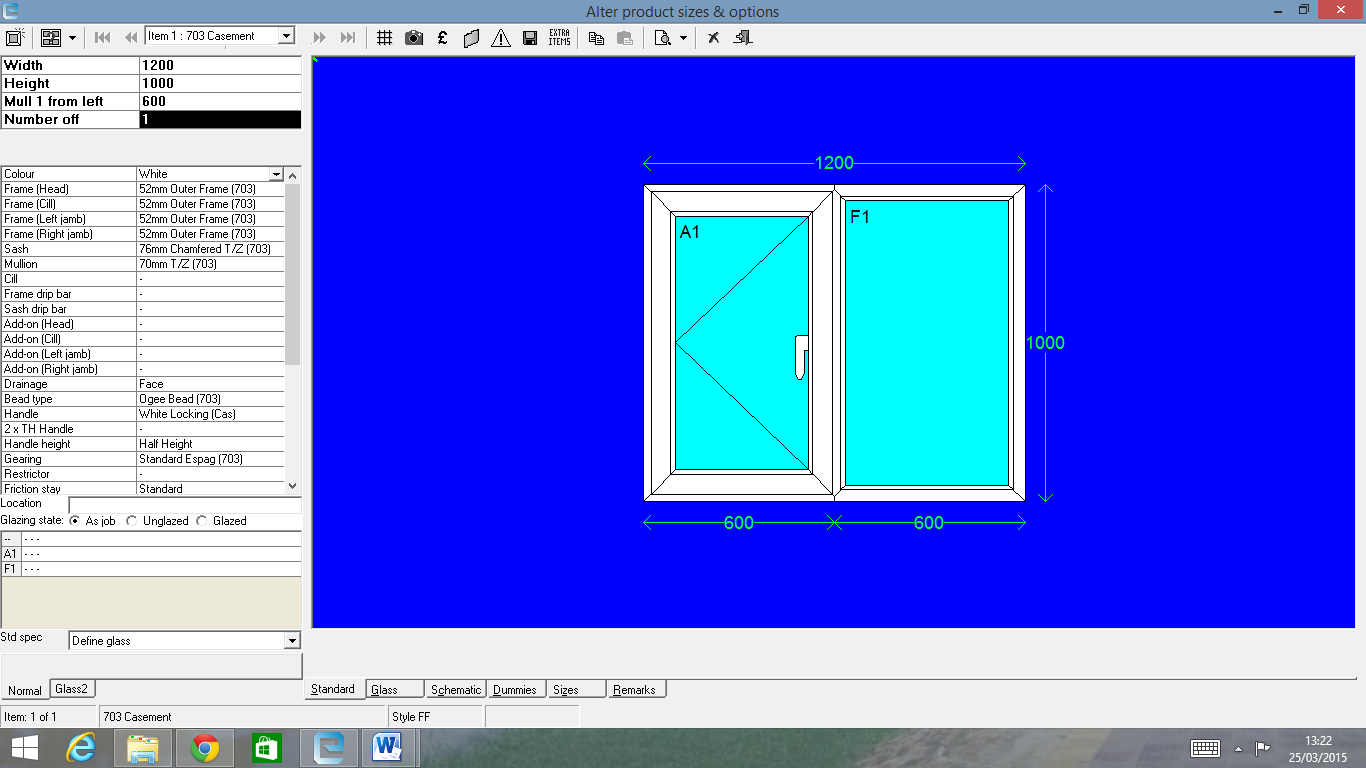
FRONT TYPE 4

REAR TYPE A

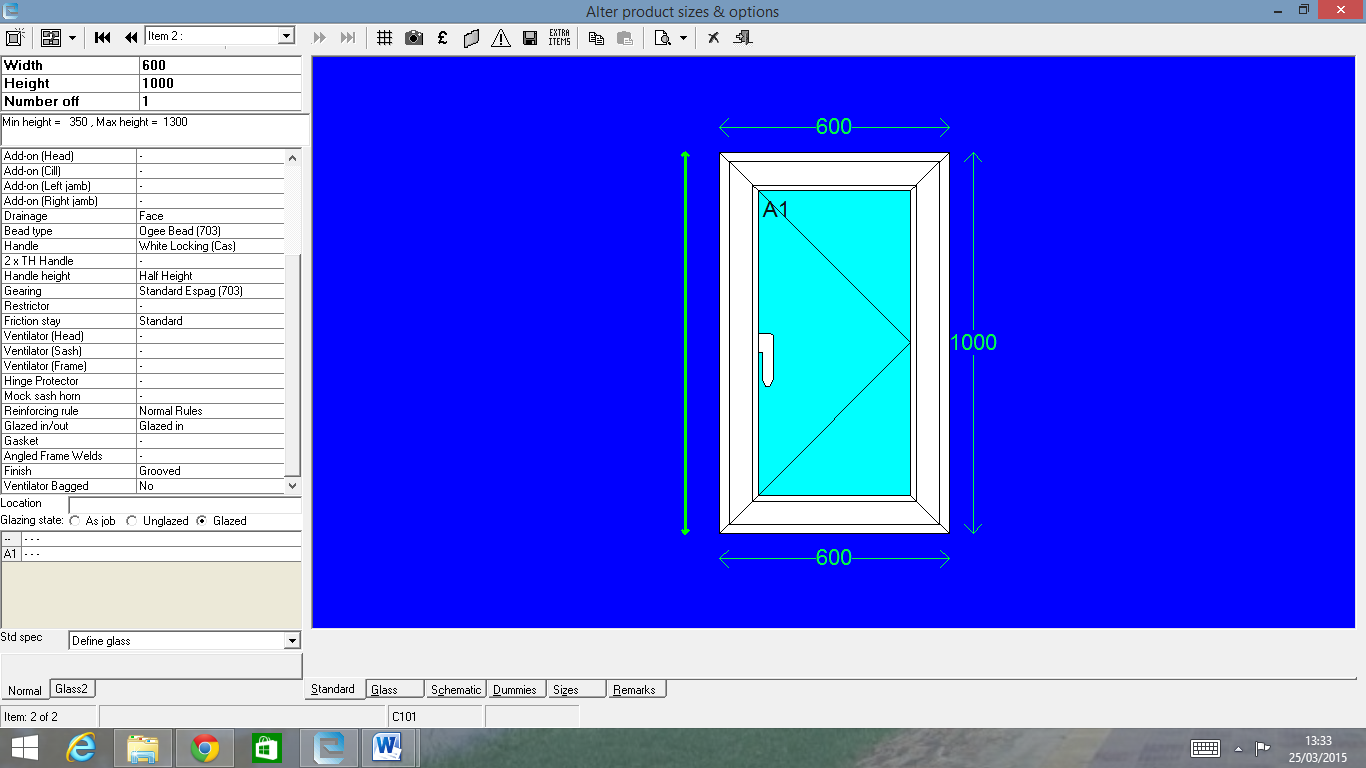
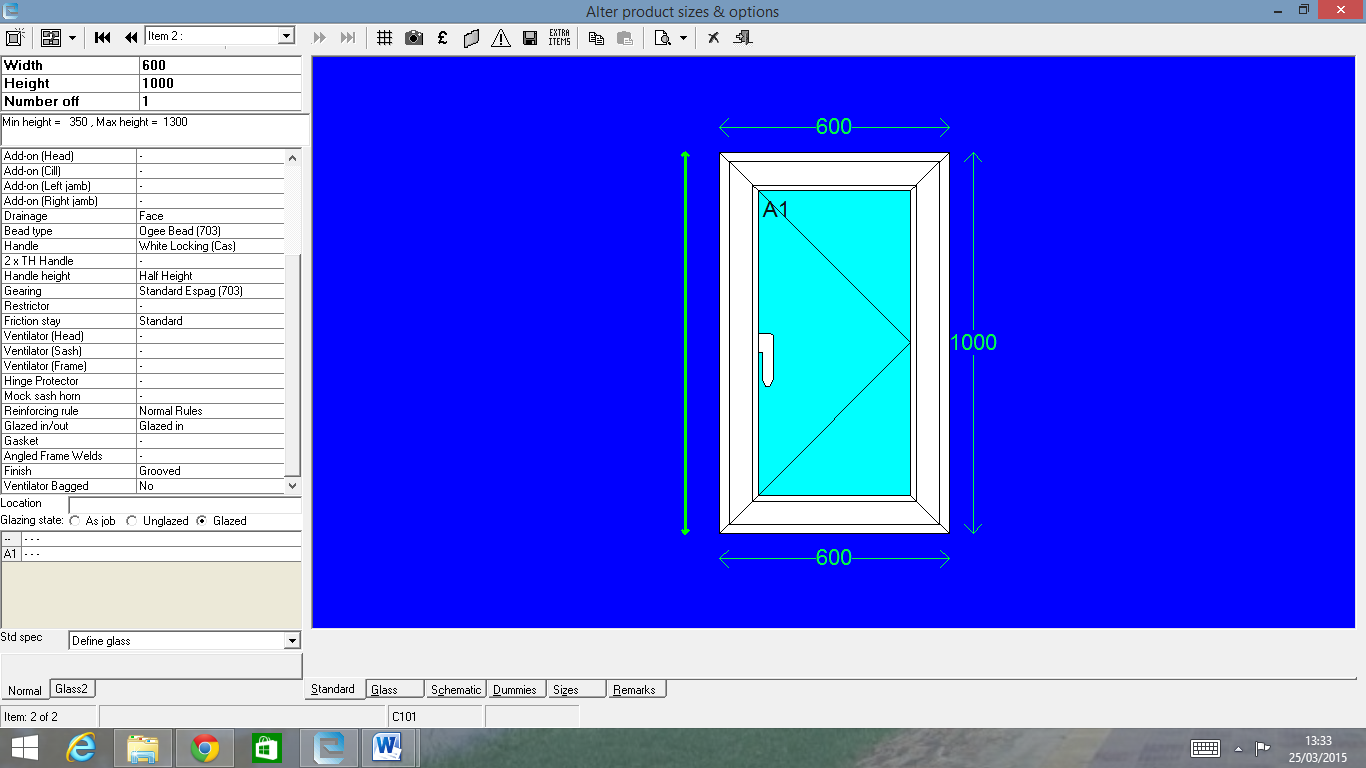
FRONT TYPE 3

FRONT TYPE 2

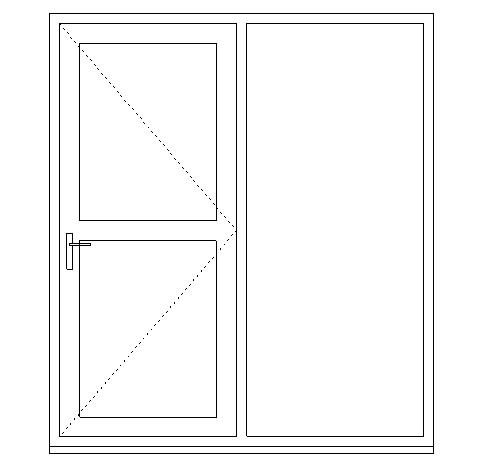
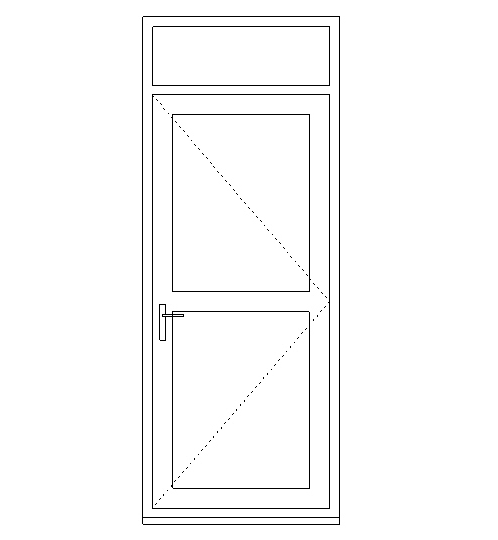
FRONT TYPE 1



PATIO DOOR



FRENCH DOORS



DOOR WITH GLAZED SIDELIGHT



DOOR WITH FANLIGHT

TYPE W1 TYPE W2



DOOR WITH COMBINATION WINDOW 600mm x 900mm

DOOR WITH COMBINATION WINDOW 1200mm x 900mm



COMMUNAL DOOR

**Front door choice:**

**Front door choice:**