

## 4581M MATTSON FIRE WINDOWS & DOORS & ACOUSTIC DOORS

*Masterspec sections must be customised to suit the project being specified, by removing irrelevant information and adding project-specific information and selections.*

### 1. GENERAL

This section relates to the manufacture, supply and installation of **Mattson** Joinery:

- timber fire windows
- timber fire doors and frames
- timber fire doorsets
- acoustic doors and frames
- acoustic doorsets

*Modify or extend the above description to suit the project being specified.*

*This section includes side-hung doorsets. Doorsets are usually selected from a range of standard designs offered by various door manufacturers. Glazing is assumed to form part of the window/door supply and installation. Modify when glass is supplied and installed under GLAZING.*

*This section includes hinges, hanging and running gear, but furniture (including locks and latches, handles, kick plates, etc) are normally supplied separately. See HARDWARE. Fixing of hardware and door furniture is included in this section.*

### Related work

#### 1.1 RELATED SECTIONS

Refer to GLAZING for glazing

Refer to SCHOTT ARCHITECTURAL GLAZING for glazing

*Include cross references to other sections where these contain related work.*

### Documents

#### 1.2 DOCUMENTS REFERRED TO

Documents referred to in this section are:

Building Act 2004	Section 100: Requirement for compliance schedule
NZBC	Compliance schedule handbook
NZBC C/AS1	Fire safety Appendix C: Test methods C8.1 Fire resisting closures and smoke control doors
NZBC G6/VM1	Airborne and impact sound 1.0 Airborne sound insulation field tests 2.0 Impact sound insulation field tests
AS/NZS 1530.4	Methods for fire tests on building materials, components and structures - Fire-resistance test of elements of construction
AS/NZS 1905.1	Components for the protection of openings in fire-resistant walls - Fire-resistant doorsets
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber framed buildings
NZS 4211	Specification for performance of windows
NZS 4223.3	Glazing in buildings - Human impact safety requirements
NZS 4232.2	Performance criteria for fire resisting enclosures - Fire resisting glazing systems
ISO 140	Acoustics - Measurement of sound insulation in buildings and of building elements Part 4: Field measurements of airborne sound insulation between rooms
ISO 140	Acoustics - Measurement of sound insulation in buildings and of building elements Part 7: Field measurement of impact sound insulation of floors
BRANZ	FAR3096 Fire resistance of 30<60 minute doorsets to alternative fire resistance test standards
BRANZ	FAR3116 Fire resistance of B Mattson doorsets to ISO 3008 and EN 1634.1

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

Delete from the DOCUMENTS clause any document not cited. List any additional cited documents.

#### RELATED DOCUMENTS

Refer to the following related documents when preparing this section:

NZBC F2/AS1	Hazardous building materials, 1.0 Glazing
AS/NZS 1170.1	Structural design actions - Permanent, imposed and other actions
NZS 3610	Specification for profiles of mouldings and joinery
NZS 3619	Specification for timber windows
AS/NZS 1170.2	Structural design actions - Wind loads
BRANZ BU 337	Protecting window glass from surface damage
BRANZ BU 356	Adhesives for use with wood and wood-based products
BRANZ BU 361	Weathergrooves
BRANZ BU 362	Finishes on architectural hardware
BRANZ BU 369	Fitting tolerances
BRANZ BU 493	Timber treatment
BRANZ BU 451	Specifying timber
BRANZ BU 453	Fastener selection
BRANZ BU 467	Principles of flashing design
BRANZ BU 471	Insulating glass units

#### 1.3 MANUFACTURER'S DOCUMENTS

Copies of **Mattson** Joinery pamphlets and CAD drawings relating to work in this section are available from:

Web: [www.mattsonjoinery.com](http://www.mattsonjoinery.com)  
Email: [david@mattsonjoinery.co.nz](mailto:david@mattsonjoinery.co.nz)  
Telephone: 09 620 4147  
Facsimile: 09 620 4387

*It is important to ensure that all personnel on site have access to accurate, up to date technical information on the many products, materials and equipment used on a project. In most cases individual products are not used in isolation, but form part of a building process. Also a particular manufacturer's and/or supplier's requirements for handling, storage, preparation, installation, finishing and protection of their product can vary from what might be considered the norm. Access to technical information can help overcome this potential problem.*

#### 1.4 ABBREVIATIONS

The following abbreviations are used throughout this part of the specification:

FRR	Fire-resistance rating
IIC	Impact Insulation Class
Sm	Smoke stopping capability level
STC	Sound Transmission Class

*Refer general section INTERPRETATION & DEFINITIONS for abbreviations used throughout the specification.*

*Refer to NZBC C/AS1 Definitions for definition of FRR. FRR Fire Resistant Rating is the term used to describe the minimum fire resistance required of primary and secondary elements.*

*It comprises three numbers giving the time in minutes for which each of the criteria stability, integrity and insulation are satisfied.*

**Stability** - refers to the ability to maintain structural adequacy as determined by NZS 4232.2 and AS/NZS 1530.4.

**Integrity** - refers to the glazing's ability to resist the passage of flames and hot gases as specified in NZS 4232.2 and AS/NZS 1530.4.

**Insulation** - refers to the ability to maintain a temperature on the glass surface exposed to the fire below the limits as specified in NZS 4232.2 and AS/NZS 1530.4.

*Specifications for FRR should be expressed in the following order, i.e. -/60/60; this refers to no structural adequacy requirement, a 60 minute integrity rating and a 60 minute insulation rating for a fire resistant glazing.*

#### Requirements

#### 1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **Mattson** Joinery system, or associated components and products.

- 1.6 **QUALIFICATIONS**  
Work to be carried out by tradesmen experienced, competent and familiar with the **Mattson** Joinery system materials and techniques specified.
- 1.7 **COMPLIANCE SCHEDULE**  
Provide compliance schedule as required by Section 100 of the Building Act 2004 that includes the inspection maintenance and reporting procedures of passive protection features. Refer to NZBC Compliance schedule handbook.
- Performance - windows, exterior doors and frames**
- 1.8 **STANDARD OF PERFORMANCE**  
The windows, doors, their installation and all fixings to comply with NZS 4211 as follows:  
Design wind pressure: ~ Pa  
Air leakage level: ~
- 1.9 **PERFORMANCE**  
The structural and weather-tight performance of the completed window installation, the glazing and infill panels is the responsibility of the window manufacturer.
- 1.10 **FIRE REQUIREMENTS**  
To NZBC C/AS1 and tested to AS/NZS 4232.2.
- 1.11 **WIND**  
Construct windows, exterior doors and frames to withstand design wind pressures to NZS 3604 and NZS 4211.
- 1.12 **WEATHERTIGHTNESS**  
Construct and glaze windows, exterior doors and frames to remain weathertight.
- Performance - fire - doorsets**  
*Use site performance testing only where this is specifically required*
- 1.13 **FIRE REQUIREMENTS**  
To NZBC C/AS1, Appendix C: Test methods: 8.1: Fire resisting closures and smoke control doors. Provide doorsets of the scheduled fire resistance rating, tested to AS/NZS 1905.1.
- 1.14 **VARIATIONS FROM STANDARD**  
Submit before manufacture a written opinion from a registered testing laboratory, that any variation from a production model satisfies the criteria laid down in AS/NZS 1905.1.
- 1.15 **FIRE DOORSETS**  
Fill in the "Fire Door Certificate" and schedule as described in appendix E to AS/NZS 1905.1 for all fire resisting doorsets and return to the manufacturer within 60 days of dispatch of doorset. Manufacturer to list doorsets in their "Register of Doorsets."
- 1.16 **EVIDENCE OF COMPLIANCE**  
To AS/NZS 1905.1; clause 6.4 Evidence of compliance - New Zealand.
- Performance - acoustic - doorsets**  
*Use site performance testing only where this is specifically required*
- 1.17 **ACOUSTIC REQUIREMENTS**  
To NZBC G6 Airborne and impact sound and ISO 140 Part 4. Provide doorsets of the IIC and STC rating required.
- 1.18 **SOUND CONTROL SITE TEST**  
Site test each sound rated element in accordance with NZBC G6/VM1 to ensure that the specified sound transmission loss has been achieved; using a nominated acoustic consultant. Carry out sound tests wall by wall to ISO 140 Part 4 to certify compliance. Rectify any element that does not meet the specified STC/IIC figure.

*Use this clause where as built certification is required for a system that has not been testing elsewhere.*

## 2. PRODUCTS

### Materials - general

#### 2.1 INTERIOR TIMBER

To NZS 3602. Moisture content 8 to 14%.

*Delete door liners when these are provided as part of a doorset.*

#### 2.2 TIMBER FIRE WINDOWS

To AS/NZS 1905.1, frames to profile as detailed and dimensioned on the drawings. Refer to SELECTIONS for type.

#### 2.3 TIMBER FIRE AND SMOKESTOP DOORSETS

To comply with AS/NZS 1905.1. Timber frames to profile as detailed and dimensioned. Make provision for the scheduled fire-rated hardware to be supplied and fitted. Make arrangements on delivery to the site, for the installer's certificate to be returned to the manufacturer. Refer to SELECTIONS for type.

*As these doorsets are approved by testing, only the leaf dimensions (height and width), the frame profile and dimensions, and a "yes" or "no" for smokestop are required. Unless part of the frame profile, specify the architraves elsewhere. Wall type to be noted, e.g. steel, timber, masonry, concrete. To make suitable provision, the manufacturer needs a copy of the schedule of complying fire-resistant hardware. Modify to suit timber frame.*

*Where smokestop doors are needed for compliance but no rating is required, they are usually manufactured to a 15 minute rating. Again because they are a performance product, tests have already established the smokestop compliance.*

#### 2.4 TIMBER ACOUSTIC DOORSETS

To NZBC G6 Airborne and impact sound and ISO 140 Part 4. Frames to profile as detailed and dimensioned. Refer to SELECTIONS for type.

*Add a further clause, or modify for any double door installations. Duplicate when there is more than one type of door (i.e. a range of different finishes).*

#### 2.5 GLAZING

To NZS 4232.2 and NZS 1530.4 in the specified window, door and/or doorset system assembly. Refer to SELECTIONS for type.

### Components

#### 2.6 WINDOW AND DOOR FURNITURE

Refer to **Mattador**<sup>TM</sup> approved fire rated hardware list (FRHL) for a selection of approved closers, latches and miscellaneous hardware and/or to SELECTIONS for type.

*The installation of non approved hardware will void the rating of the door system. Any penetration and holes through doors after the doors are issued with tags, will void the fire rating warranty of the door system.*

#### 2.7 SCREWS

Zinc plate, zinc chromate, nickel plate or stainless steel. Length sufficient to penetrate into the background support up to the shank. Screws for fixing hinges, hardware or furniture to match the item being attached.

*Steel screws are not commonly available galvanised but are usually electroplated in a variety of finishes such as zinc and Florentine bronze which are not durable externally.*

#### 2.8 NAILS

Length sufficient to penetrate into the background support at least half the nail length, except if into radiata pine then three-fifths their length.

#### 2.9 DOOR HINGES

Size and gauge to carry door size and weight. Refer to SELECTIONS for type, size and material.

*Exterior hinges are generally either galvanised steel with fixed brass pin, or stainless steel. Interior hinges are generally loose pin, zinc-plated steel, stainless steel, or less common now Florentine*

*bronze (FB). Bright steel should not be used. Numerous specialty hinges are also available, particularly for exterior glazed (French windows) and heavy-weight doors.*

*Note that hinges and hardware for fire resistant doorsets form part of the certification and must therefore be specially selected to suit. Consult with the door manufacturer before specifying.*

### **3. EXECUTION**

#### **Conditions**

#### **3.1 GENERALLY**

Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

#### **3.2 DO NOT DELIVER**

Do not deliver any elements which cannot be unloaded immediately into suitable storage conditions or installed immediately.

#### **3.3 HANDLE**

Handle, unload and store elements without distortion and avoiding pre-finished surfaces rubbing together, and contact with mud, moisture and other damaging materials.

#### **3.4 PROTECT**

Protect all elements against damage to arrises and glazing beads. Store frames and doors flat on pallet, or upright at an angle no greater than 15 degrees from perpendicular and away from moisture or direct sunlight.

#### **3.5 CHECK ALL OPENINGS**

Check all openings prior to manufacture for size and standard of execution before installing door frames.

#### **Assembly**

#### **3.6 FABRICATION GENERALLY**

Manufacture and fabricate frames and doors as detailed. Install hinges and running gear as scheduled. Provide temporary bracing and protection. Temporarily secure all opening elements for transportation.

*Modify or extend this clause to suit project requirements.*

#### **3.7 FABRICATE TIMBER FIRE WINDOWS**

Fabricate windows in the factory, with provision for window furniture.

#### **3.8 FABRICATE TIMBER FIRE AND SMOKESTOP DOORSETS**

Fabricate doorsets in the factory with doors hung and provision for furniture made as required.

*Modify this clause when doors are not supplied hung in frames.*

#### **3.9 FABRICATE TIMBER ACOUSTIC DOORSETS**

Fabricate acoustic doorsets in the factory, with provision for door furniture.

*Modify this clause when doors are not supplied hung in frames.*

#### **3.10 HINGES**

Fit hinges to doors to support the door size and weight

3 hinges                      Doors up to 2.2 metres

4 hinges                      Doors 2.2 - 2.6 metres

5 hinges                      Doors 2.6 - 5.0 metres

#### **3.11 FACTORY FINISHING**

Brace square and provide protection to assemblies during delivery to site. Where factory glazed, indicate the presence of transparent glasses with whiting, tape or signs compatible with the glass type.

- 3.12 ON SITE FINISHING  
Before installation:  
- Prime both faces and all edges of doors not primed with an alkyd wood primer.  
- Re-prime any subsequently cut edge.  
- Refer to PAINTING for finishing.
- Application - generally**
- 3.13 FIXING FRAMES  
Fix and assemble frames rigidly in place, plumb, level and true to line and face without distortion.  
*Add details of precise fixing methods where applicable.*
- 3.14 DISTORTION  
Do not distort frames when wedging or other packing, or when tightening fixings. If necessary adjust packing and fixings to eliminate binding. Do not cut, plane or sand frames to remedy distortion.
- 3.15 FIXINGS  
Fix frames so that nail heads are covered by applied stops and beads. Punch all nail heads below timber surfaces which will be visible in completed work. Ensure that at least one frame fixing is adjacent to each hanging point.
- 3.16 TOLERANCES  
Install the finished prehung door to a dimensional accuracy of  $\pm 2$  mm.
- 3.17 DOORSILLS  
Install to AS/NZS 1905.1; clause 5.2 Doorsills, 5.2.1 General and 5.2.2 New Zealand.

**Application - doorsets**

*Select from or modify the following general installation clauses to suit project requirements.*

- 3.18 INSTALLATION GENERALLY  
Flat jambs: Finish to match the width of the lined wall.  
Grooved jambs: Protrude approximately 12 mm each side.  
Wedge frames into opening and nail through into the studs. Locate all wedges and fixing at hinge positions and opposite, with one fixing in the vicinity of the lock. Fixings concealed behind planted stops.
- Hang doors on hinges as specified and to operate freely. Fit all hardware and door furniture.  
*This is a general clause to cover the installation of frames and doors either separately, or as pre-hung doorsets, into timber framing. Modify or extend to suit particular circumstances. Also modify this clause where extended (i.e. rebated to take linings) door frames/liners, or solid rebated frames are specified.*
- 3.19 INSTALL FIRE AND SMOKESTOP DOORSETS  
Fix in accordance with AS/NZS 1905.1.
- Timber stud walls - timber frames  
Wedge into opening and nail through into the studs. All wedges and fixing to be at hinge positions and opposite, with one fixing in the vicinity of the lock.
- Concrete masonry walls - timber frames  
Fix in place with 10 mm expanding masonry anchors with countersunk heads. At hinge side fix direct to opening and pack on the other side to wedge in place. Fix at hinges and opposite, with one fixing in the vicinity of the lock. Separate concrete/masonry and timber by a damp proof membrane.
- Steel stud walls - timber frames  
Drill the timber frame and fix to steel studs with countersunk self-drilling corrosion proof screws. At hinge side fix direct to opening and pack on the other side to wedge in place.

Fix at hinges and opposite, with one fixing in the vicinity of the lock. Separate steel and timber by a damp proof membrane.

### 3.20 INSTALL ACOUSTIC DOORSETS

#### Timber stud walls - timber frames

Wedge into opening and nail through into the studs. All wedges and fixing to be at hinge positions and opposite, with one fixing in the vicinity of the lock.

#### Concrete masonry walls - timber frames

Fix in place with 10 mm expanding masonry anchors with countersunk heads. At hinge side fix direct to opening and pack on the other side to wedge in place. Fix at hinges and opposite, with one fixing in the vicinity of the lock. Separate concrete/masonry and timber by a damp proof membrane.

#### Steel stud walls - timber frames

Drill the timber frame and fix to steel studs with countersunk self-drilling corrosion proof screws. At hinge side fix direct to opening and pack on the other side to wedge in place. Fix at hinges and opposite, with one fixing in the vicinity of the lock. Separate steel and timber by a damp proof membrane.

### 3.21 BOTTOM CLEARANCE

Provide for specified floor coverings plus 5 mm clearance at any point of swing. When floor covering is not specified, allow 25 mm total.

For fire and smokestop doorsets, this clearance above finished floor coverings must not exceed 10 mm.

*Check these dimensions against fire rating/smoke stop requirements for maximum clearances.*

### 3.22 REMOVE DOORS

Remove doors from the frames prior to, or on installation, and immediately seal on all 6 sides. Finish as required, store safely and near completion refit to avoid any damage.

### 3.23 GLAZING

Install selected glazing to NZS 4232.2 and NZS 1530.4 into the specified doorset system assembly.

### 3.24 MANIFESTATIONS

To comply with NZS 4223.3, section 303.1. Manifestation (making glass visible).

*Modify this clause to describe project requirements for safety or appearance.*

*Note that both NZS 4223.3 and NZBC F2 clause F2.3.2 set minimum standards for delineating glass "capable of being mistaken for an unimpeded path of travel." While this issue is best resolved in the basic design of the installation, in some cases applied signs, decals, sandblasting or attached rails are necessary. Consider and specify accordingly.*

### 3.25 INSTALL FURNITURE

Install to AS/NZS 1905.1; clause 5.6 Hardware; 5.61 Attachment. Install **Mattador**<sup>TM</sup> approved fire rated hardware latches, locks and door furniture as scheduled.

*Expand this clause to fully describe project requirements. The installation of non approved hardware will void the rating of the door system.*

## **Finishing**

### 3.26 CHECK

Check and adjust operation of all doors.

### 3.27 FINISHING, PERMANENT IDENTIFICATION MARKING AND CLEANING OF GLAZING

All final finishing, permanent identification marking and cleaning of glazing is carried out by the door manufacturer after manufacture and installation of the specified glazing systems. Permanent identification marking to NZS 4232 2; clause 206.8 Glazing.

- 3.28 **MARKING OF FIRE DOORSETS**  
The marking of fire-resistant doorsets to be according to AS/NZS 1905.1; clause 6.1 Marking of fire-resistant doorsets, 6.1.2 Completed installation, (b) New Zealand and 6.1.3 Metal tags and 6.1.4 Information requirements.
- 3.29 **FIRE DOORSET SIGNS**  
To AS/NZS 1905.1; clause 6.5 Fire-resistant doorset signs - New Zealand.
- 3.30 **SAFETY**  
Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Masking tape must not be used for this purpose.  
*Modify this clause to suit. Whiting is used to protect internal finishes exposed to the sun. Along with glazing signs and tape, it also acts as a safety device by clearly indicating during the balance of the construction phase that glass has been installed.*  
  
*This clause does not refer to the NZS 4223 requirement for "manifestations" required for post-construction building use where a glass door or panel could be mistaken for an unimpeded path of travel.*

### **Completion**

- 3.31 **PROTECTION**  
Protect all finishes against damage from adjacent and following work.
- 3.32 **REPLACE**  
Replace damaged, cracked or marked elements.
- 3.33 **LEAVE**  
Leave work to the standard required for following procedures.
- 3.34 **REMOVE**  
Remove safety indicators and protective coverings, and wipe down all doorsets thoroughly to leave them perfectly clean. Remove all debris, unused materials and elements from the site.  
*A trade clean is all that is carried out by the window and door installer. A more thorough clean is covered in the GENERAL section.*

## **4. SELECTIONS**

*Only use these SELECTIONS where doors and windows are not scheduled on the drawings.*

- 4.1 **WIND ZONE**  
Building wind zone: ~ (as determined from table 5.1 of NZS 3604)  
*The supply of this information is very important for the design of the window frame, window/door members and the proper selection of glass. It must be provided in all instances. Building wind zones include:*
- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| - L (Low wind speed of 32 m/s)        | 0.65 kPa ULS (Ultimate limit state) |
| - M (Medium wind speed of 37 m/s)     | 0.85 kPa ULS                        |
| - H (High wind speed of 44 m/s)       | 1.20 kPa ULS                        |
| - VH (Very high wind speed of 50 m/s) | 1.55 kPa ULS                        |

*Above 50 m/s specific design information must be provided.*

## 4.2 **TIMBER FIRE AND SMOKESTOP WINDOWS**

Location: ~  
 Manufacturer: **B. Mattson Ltd**  
 Type: ~  
 FRR: -/-/-  
 Sm: -/-/-  
 Frames/sashes: As detailed on drawings  
 Timber: ~  
 Finish: Unpainted/veneers unlacquered.  
 Smoke seals: Fitted to all vertical and horizontal jambs  
 Weather seals: ~  
 FRR: -/30/-, -/30/30, -/60/60



Sm: -/~/-~  
 Where smokestop windows are needed for compliance but no rating is required, they are usually manufactured to a 15 minute rating. Again because they are a performance product, tests have already established the smokestop compliance.  
 Timber: Species, grade, treatment  
 Weather seals: Required for exterior windows

4.3 GLAZING: FIRE AND SMOKESTOP WINDOWS

FRR: -/30/~  
 Glazing brand/type: ~  
 Glazing brand/type: Georgian wire; to 0.056 sq.m.; 1035 mm maximum height  
 Firelite; to 0.056 sq.m.; 1035 mm maximum height  
 Robax; to 0.056 sq.m.; 1035 mm maximum height  
 Schott Pyran<sup>®</sup> S; to 1345 mm width x 2914 mm height  
 Georgian wire, Firelite; Robax may be made in modules to achieve larger windows

4.4 GLAZING: FIRE AND SMOKESTOP WINDOWS

FRR: -/30/~  
 Glazing brand/type: Schott Pyran<sup>®</sup> S  
 Mullion free, multiple panes, glass butt system

4.5 GLAZING: FIRE AND SMOKESTOP WINDOWS

FRR: -/60/~  
 Glazing brand/type: Schott Pyran<sup>®</sup> S; to 1416 mm width x 2926 mm height

4.6 GLAZING: FIRE AND SMOKESTOP WINDOWS

FRR: -/30/30  
 Glazing brand/type: Schott Pyranova<sup>®</sup> S; to 1500 mm width x 2500 mm height

4.7 GLAZING: FIRE AND SMOKESTOP WINDOWS

FRR: -/60/60  
 Glazing brand/type: Schott Pyranova<sup>®</sup> S; to 1500 mm width x 3000 mm height

4.8 TIMBER FIRE AND SMOKESTOP DOORSETS

Location: ~  
 Manufacturer: B. Mattson Ltd  
 Type: ~  
 FRR: -/~/-~  
 Sm: -/~/-~  
 Leaf size: ~ mm high x ~ mm wide  
 Thickness: ~ mm  
 Core: Solid  
 Edge clashing: Clashed 2 vertical edges  
 Finish: Unpainted/veneers unlacquered.  
 Smoke seals: Fitted to all vertical and horizontal jambs  
 FRR: -/30/-, -/30/30, -/60/60  
 Sm: -/~/-~  
 Thickness: 45 mm for FRR -/30/30; 55 mm for FRR -/60/60  
 Add 6 mm to thickness for exterior doors  
 Where smokestop doors are needed for compliance but no rating is required, they are usually manufactured to a 15 minute rating. Again because they are a performance product, tests have already established the smokestop compliance.

4.9 GLAZING: FIRE AND SMOKESTOP DOORSETS

FRR: -/30/-  
 Glazing brand/type: ~  
 Glazing brand/type: Georgian wire; to 0.44 sq.m.; 850 mm maximum height  
 Firelite; to 0.55 sq.m.; 1060 mm maximum height  
 Robax; to 0.55 sq.m.; 1060 mm maximum height  
 Schott Pyran<sup>®</sup> S; to 0.55 sq. m.; 1060 mm maximum height

4.10 GLAZING: FIRE AND SMOKESTOP DOORSETS

FRR: -/30/30  
 Glazing brand/type: ~  
 Glazing brand/type: Georgian wire; to 0.065 sq. m. maximum

*Firelite; to 0.065 sq. m. maximum  
Robax; to 0.065 sq. m. maximum  
Schott Pyran® S; to 0.065 sq. m. maximum  
Schott Pyranova®; 16 mm; to 0.55 sq.m.; 1060 mm maximum  
height*

4.11 GLAZING: FIRE AND SMOKESTOP DOORSETS

FRR: -/60/60

Glazing brand/type: ~

*Glazing brand/type: Georgian wire; to 0.056 sq. m.; maximum  
Firelite; to 0.056 sq. m.; maximum  
Robax; to 0.056 sq. m.; maximum  
Schott Pyran® S; to 0.056 sq. m.; maximum  
Schott Pyranova®; 16 mm; to 0.55 sq.m.; 1060 mm maximum  
height*

4.12 TIMBER ACOUSTIC DOORSETS

Location: ~

Manufacturer: **B. Mattson Ltd**

Type: ~

Leaf size: ~ mm high x ~ mm wide

Thickness: ~ mm

Core: ~

STC: ~

Edge clashing: Clashed 2 vertical edges

Finish: ~

*Leaf size: As specified, refer to B.Mattson Ltd for advice.*

*Thickness: ~*

*Core: Solid, Hollow*

*STC: 36 to 31*

4.13 HINGES

Type: Radius

Size: ~

Pin: Loose pin

Material: ~

*Type: State whether hinge has bearings*

*Size: 100 mm, 75 mm*

*Material: Zinc-plated steel, stainless steel, satin chrome*

4.14 DOOR GRILLE

Type: Intumescent

Size: 350 mm x 350 mm

Cover plate: 400 mm x 400 mm aluminium

4.15 HARDWARE

*Select from Mattador™ approved fire rated hardware list (FRHL) for a selection of approved  
closers, latches and miscellaneous hardware*

Type: Mattador™

Closers: ~

Latches: ~

Miscellaneous: ~

*The installation of non approved hardware will void the rating of the door system.*

*Delete this clause if specified in a separate schedule.*