

Fire resistance test report

Issuing laboratory: Warringtonfire Testing and Certification Limited

Test standard: BS EN 1634-1:2014 + A1:2018

Test sponsor: Wood International Agency Ltd

16 King Edward Road
Brentwood
Essex
CM14 4HL
United Kingdom

Product: Two Asymmetrical, Single-Acting, Single-Leaf Timber Doorsets

Report number: 556573/R

Test date: 22 December 2025

Issue: 01

Warringtonfire, accredited for compliance with ISO/IEC 17025:2017 – Testing

Registered Laboratory:
Warringtonfire
Holmesfield Road
Warrington
Cheshire
WA1 2DS
United Kingdom



Approved Body Number 0833



Summary of Tested Specimen

For the purposes of the test the doorsets were referenced as A and B and were installed within a standard rigid low-density blockwork supporting construction. Doorset A and Doorset B were installed such that they opened towards the furnace only.

Doorset A had overall nominal dimensions of 2222 mm high by 1089 mm wide, incorporating a single door leaf with nominal dimension of 2175 mm high by 1007 mm wide by 66 mm thick. The door leaf was hung in a sapele hardwood frame using three stainless steel hinges referenced 'RT Hi-Load 207'. The leaf was constructed from a ply faced engineered timber core referenced 'Talisman 54' and incorporated two Pyroguard EI60 glazed vision panels with overall nominal dimensions of 165 mm high by 797 mm wide by 23 mm thick and 601 mm high by 797 mm wide by 23 mm thick. There was a drop down seal referenced 'LAS800 si', a pull handle referenced 'FBD225B' on the unexposed and exposed face, and a concealed door closer referenced 'Rutland ITS. 11204' which ensured the doorset remained closed throughout the test.

Doorset B had overall nominal dimensions of 2222 mm high by 1089 mm wide, incorporating a single door leaf with nominal dimension of 2175 mm high by 1007 mm wide by 56 mm thick. The door leaf was hung in a American poplar hardwood frame using three stainless steel hinges referenced 'RT Hi-Load 207'. The leaf was constructed from a graduated density particleboard core referenced 'Marksman 44'. There was a drop down seal referenced 'LAS800 si', a pull handle referenced 'FBD225B' on the unexposed face, a lever handle referenced 'SP-DU5 / LH.68 Dune lever' on the exposed face, a lockset referenced 'SP-G7008/76.2', an electric strike/keep referenced 'SP-GK450M-FR.01 Monitored electric strike release', a cylinder referenced 'Strada half euro cylinder SP-V10EP55SPBE', an escutcheon referenced 'SP-FB001.03', a concealed security chain referenced 'SP-TSSCONCHAINS.01 Concealed security door chain', a door viewer referenced 'SP-SWLAFEI30.68 Door Viewer' and a concealed door closer referenced 'Rutland ITS. 11204' which ensured the doorset remained closed throughout the test.

Detailed drawings of the test specimen(s) and a comprehensive description of the test construction based on a detailed survey of the specimen(s) and information supplied by the sponsor of the test are included in the Test Specimen and Schedule of Components sections of this report.

Test Results

Integrity It is required that the specimen retains its separating function, without either causing ignition of a cotton pad when applied or permitting the penetration of a gap gauge as specified in BS EN 1634-1: 2014 + A1:2018 or resulting in sustained flaming on the unexposed surface. **These requirements were satisfied for the periods shown below:**

	Specimen A		Specimen B	
Sustained flaming	68 minutes	No failure*	42 minutes	Failure
Gap gauge	68 minutes	No failure*	42 minutes	Area blanked off
Cotton pad	68 minutes	No failure*	42 minutes	Due to sustained flaming

Insulation (I₂) The mean temperature rise of the unexposed surface shall not be greater than 140°C and that the maximum temperature rise shall not be greater than 180°C with the exception that the limit for temperature rise for any frame member or transom member adjacent to the leaf/leaves of the doorset or openable window shall be 360°C. Insulation failure also occurs simultaneously with integrity failure as specified in BS EN 1634-1: 2014 + A1:2018. **These requirements were satisfied for the period shown below:**

Specimen	68 minutes	No failure*	42 minutes	Due to integrity failure
Discrete area (Top vision panel)	68 minutes	No failure*	N/A	N/A
Discrete area (Bottom vision panel)	68 minutes	No failure*	N/A	N/A

Insulation (I₁) The test specimen shall be evaluated against the maximum temperature rise criterion specified in EN 1363-1: 2020 (180°C).

Specimen	68 minutes	No failure*	42 minutes	Due to integrity failure
-----------------	------------	-------------	------------	--------------------------

Radiation BS EN 1363-2: 1999 requires that the time for the measured radiation to exceed 5, 10, 15, 20 and 25 kW/m² is reported.

	5 kW/m ²	10 kW/m ²	15 kW/m ²	20 kW/m ²	25 kW/m ²
Specimen A	68 minutes*	68 minutes*	68 minutes*	68 minutes*	68 minutes*
Specimen B	N/A	N/A	N/A	N/A	N/A

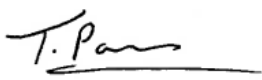
*Test was discontinued after a period of 68 minutes.

Date of test 22 December 2025

Location of test Element Materials Technology, 722 Birchwood Park, Warrington WA3 6FW, United Kingdom

This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Warringtonfire. All work and services carried out by Warringtonfire Testing and Certification Limited are subject to, and conducted in accordance with, the Standard Terms and Conditions of Warringtonfire Testing and Certification Limited, which are available at <https://www.element.com/terms/terms-and-conditions> or upon request.

Quality Management

Issue No: 01		Issue Date: 09 June 2026	
Responsible Officer:	T. Panchbhaya* Technical Officer	Approved By:	P. White* Technical Officer
			

* For and on behalf of **Warringtonfire**.

This copy has been produced from a .pdf format electronic file that has been provided by **Warringtonfire** to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of **Warringtonfire**. The pdf copy supplied is the sole authentic version of this document. All pdf versions of this report bear authentic signatures of the responsible **Warringtonfire** staff.

CONTENTS	PAGE NO.
SUMMARY OF TESTED SPECIMEN.....	2
TEST RESULTS.....	3
QUALITY MANAGEMENT.....	5
TEST CONDITIONS.....	7
TEST SPECIMEN DRAWINGS	9
SCHEDULE OF COMPONENTS.....	19
DOORSET CLEARANCE GAPS.....	43
TEST OBSERVATIONS.....	45
TEST PHOTOGRAPHS	46
TEST DATA.....	53
ON-GOING IMPLICATIONS	75
SAMPLE REPORT.....	77

Test Conditions

Standard

In accordance with BS EN 1634-1:2014+A1:2018 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows.

Sampling

A representative of **Warringtonfire** sample selected the following components of the tested specimen:

Component	Sampling date	Sampling report reference
Doorset A	15/12/2025	SC25307T
Doorset B	15/12/2025	SC25308T

Copies of sampling reports are available on request.

Installation

The doorsets were received on the 20 December 2025 and mounted within an apertures in a blockwork wall construction; the leaves were single -acting and could open towards the furnace only. Representatives of **Wood International Agency Ltd** conducted the installation on 21 December 2025 and 22nd December 2025.

Specimen Direction

Tested specimen **A** and **B** were **asymmetrical**. The **Test Sponsor** defined the direction in which the specimen was tested, and it is shown in the test specimen drawings section of this report.

Conditioning

The specimen's storage, construction, and test preparation took place in the test laboratory over a total, combined time of seven days. Throughout this period of time both the temperature and the humidity of the laboratory were measured and recorded as being within a range of from 12.0°C to 23.0°C and 41.5% to 63.0% respectively.

Instruction to Test

The test was conducted on the 22 December 2025 at the request of Wood International Agency Ltd, the **Test Sponsor**.

Neil Harrison and Michael Frain; representatives of the **Test Sponsor** witnessed the test.

Pre-Test Conditioning

Prior to testing, the doorset was subjected to appropriate mechanical pre-test conditioning in accordance with the below requirements:

Test	Relevant Clause	Description	Comments
Operability	A.2.2 of EN 16034	25 cycles	25 cycles completed
Self closing	A.2.2 and A.4 of EN 16034	1 cycle	1 cycle completed
Final setting	10.1.4 of EN 1634-1: 2018	1 cycle	1 cycle completed

Ambient Temperature

The ambient air temperature in the vicinity of the test construction was 20.0°C at the start of the test with a maximum variation of -1.0°C during the test.

Furnace

The furnace was controlled so that its mean temperature complied with the requirements of BS EN 1363-1: 2020 Clause 5.1 using eight plate thermometers, distributed over a plane 100 mm from the surface of the test construction.

Thermocouples

Thermocouples were provided to monitor the unexposed surface of the specimens. The output of all instrumentation was recorded at no less than one minute intervals. The locations and reference numbers of the various unexposed surface thermocouples are shown in Figure 1.

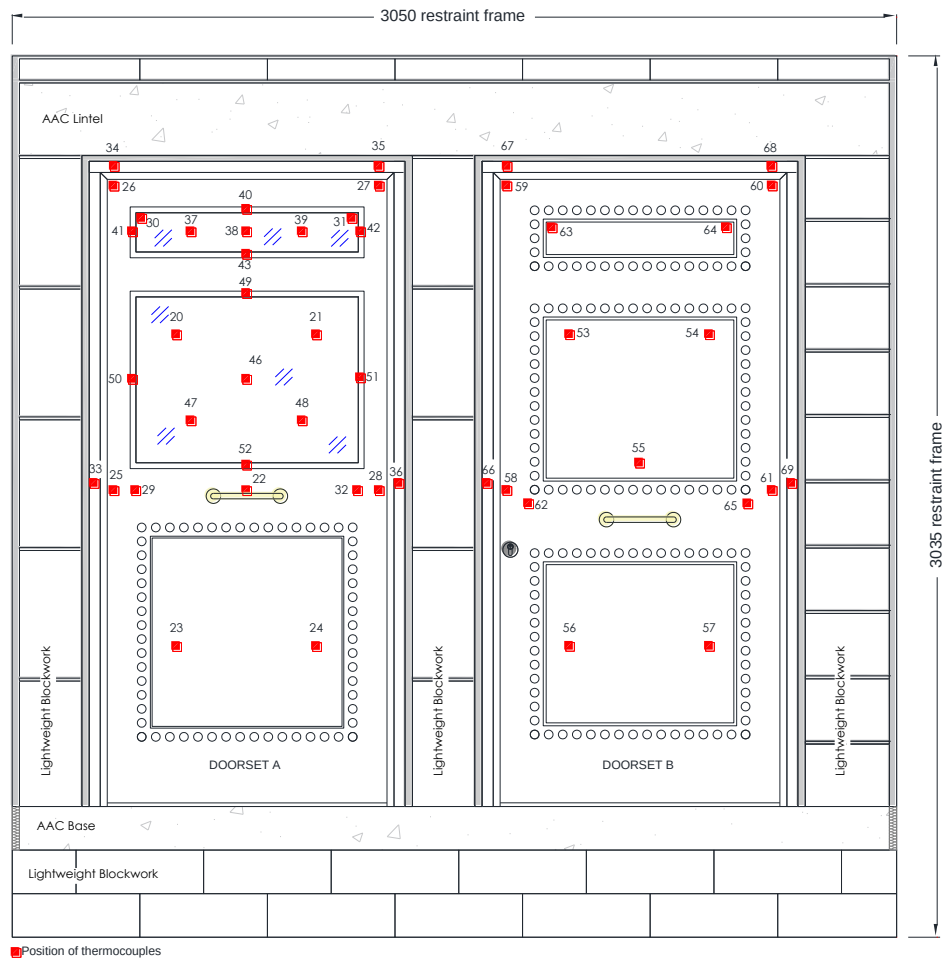
Radiation

A water-cooled foil heat-flux meters were used to record the heat radiation from the specimens. The heat flux meters were positioned at a distance of 1 metre from the centre of the specimens.

Furnace Pressure

After the first five minutes of testing and for the remainder of the test, the furnace atmospheric pressure was controlled so that it complied with the requirements of BS EN 1363-1: 2020, clause 5.2.1 The calculated pressure differential relative to the laboratory atmosphere at the top of the specimen was 14.6 (± 5) Pa between 5 and 10 minutes and 14.6 (± 3) Pa thereafter.

Test Specimen Drawings



GENERAL ELEVATION OF UNEXPOSED FACE SHOWING THERMOCOUPLE POSITIONS

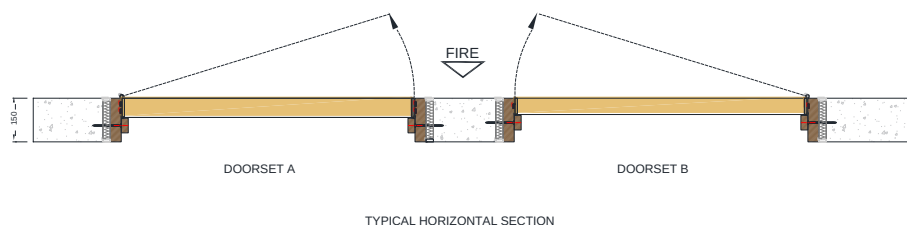


Figure 1. General elevation of unexposed face showing thermocouple positions

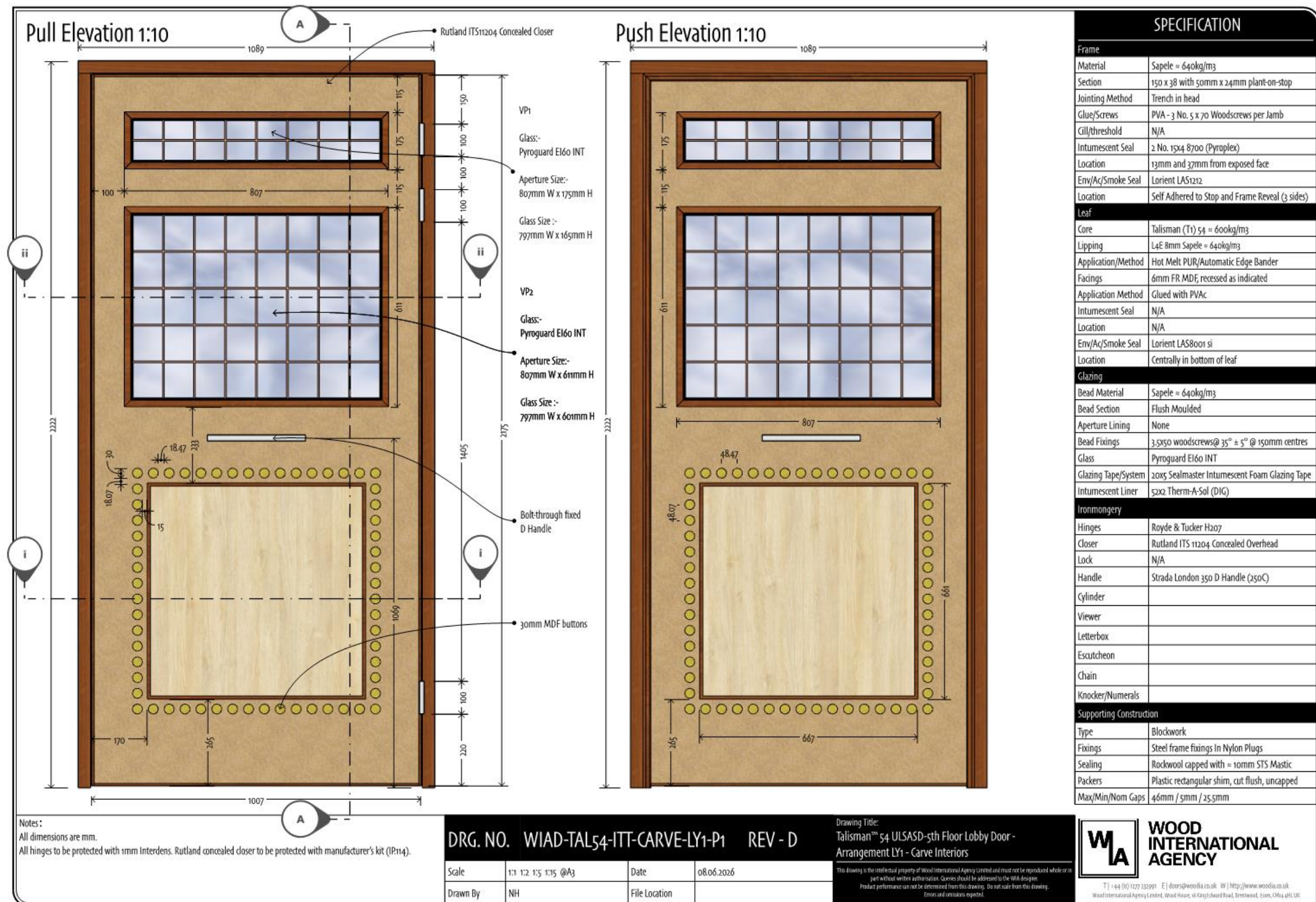


Figure 2. Doorset A - Drawing No. WIAD-TAL54-ITT-CARVE-LY1-P1 Page 1

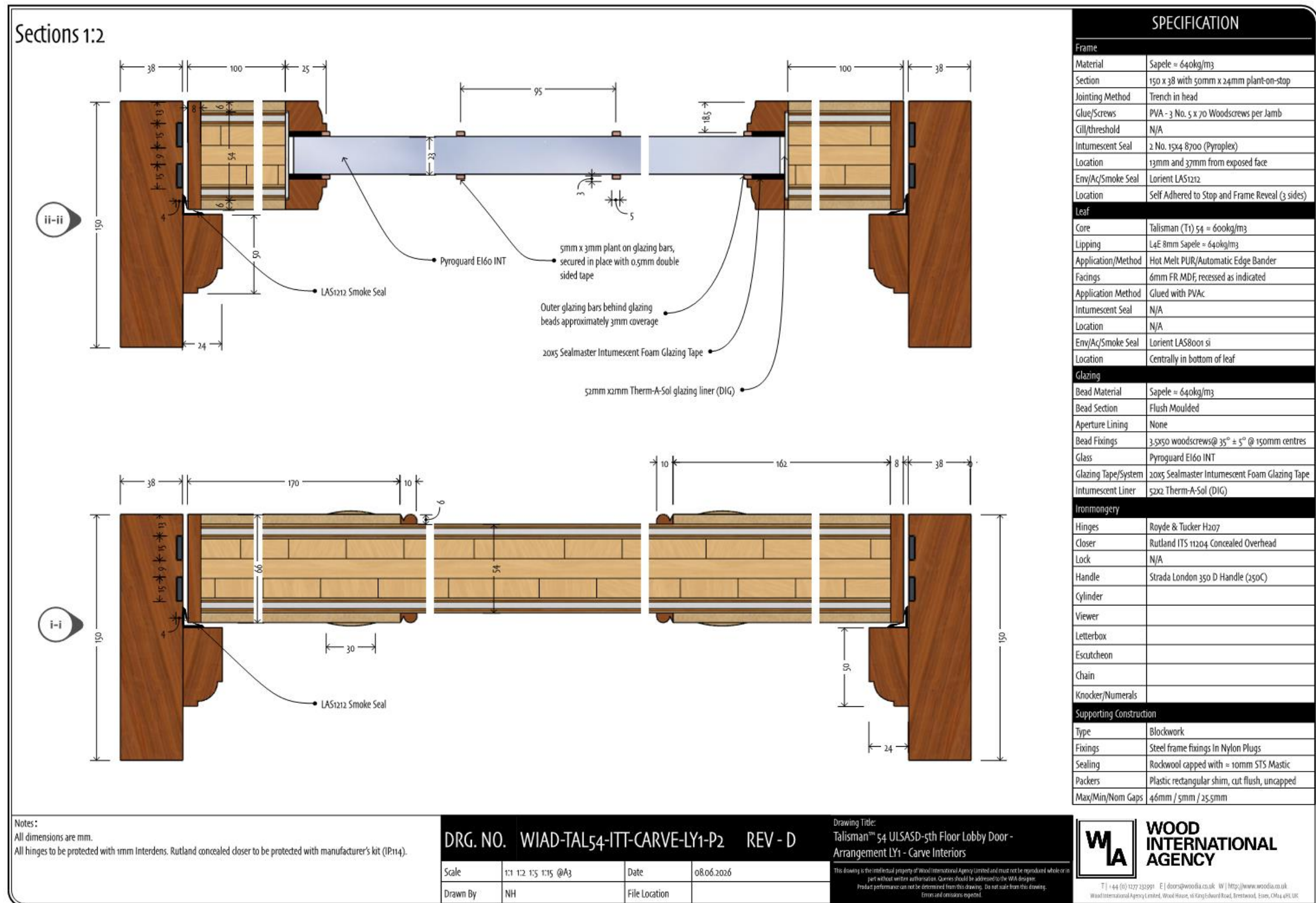


Figure 3. Doorset A - Drawing No. WIAD-TAL54-ITT-CARVE-LY1-P2 Page 2

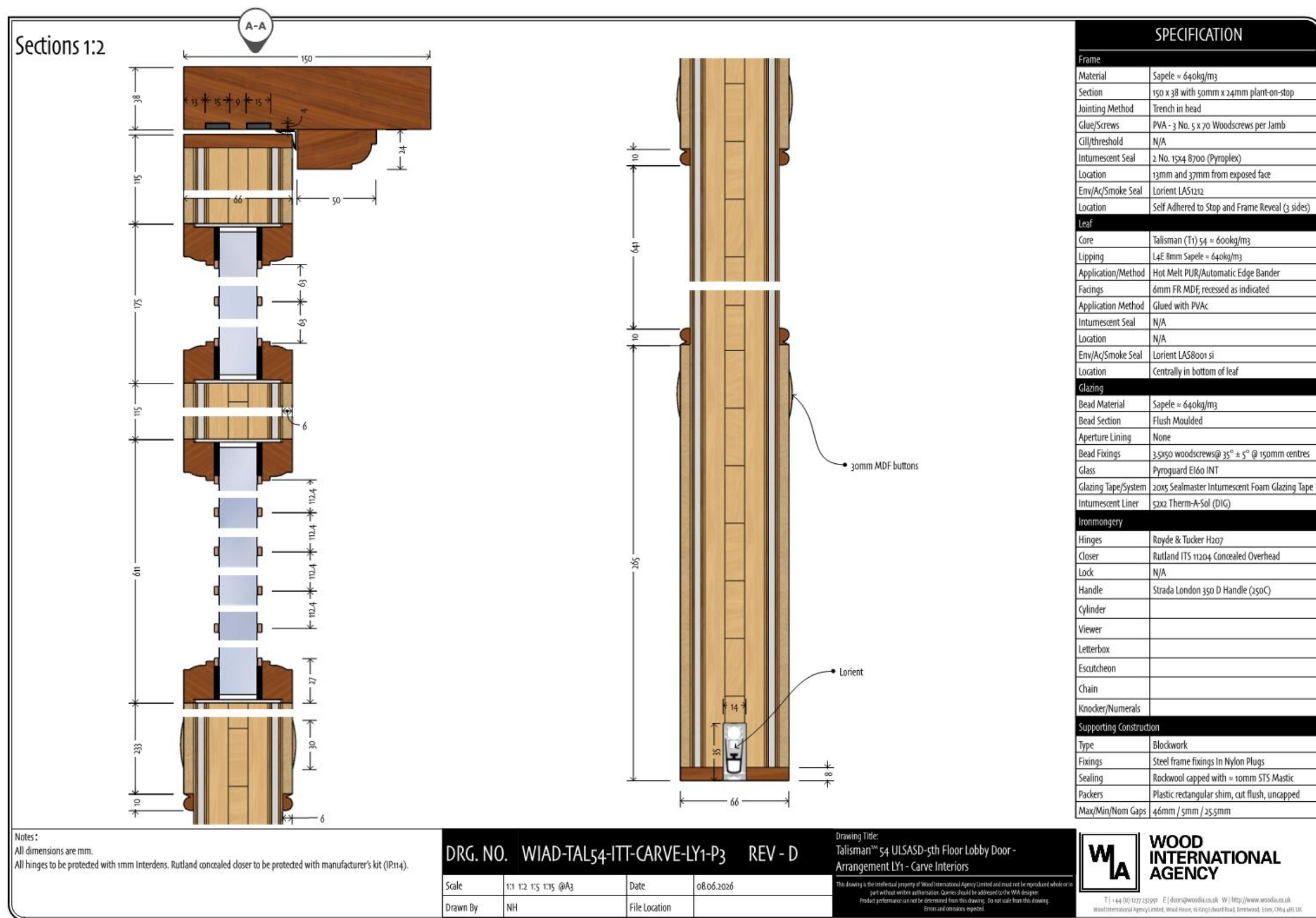


Figure 4. Doorset A - Drawing No. WIAD-TAL54-ITT-CARVE-LY1-P3 Page 3

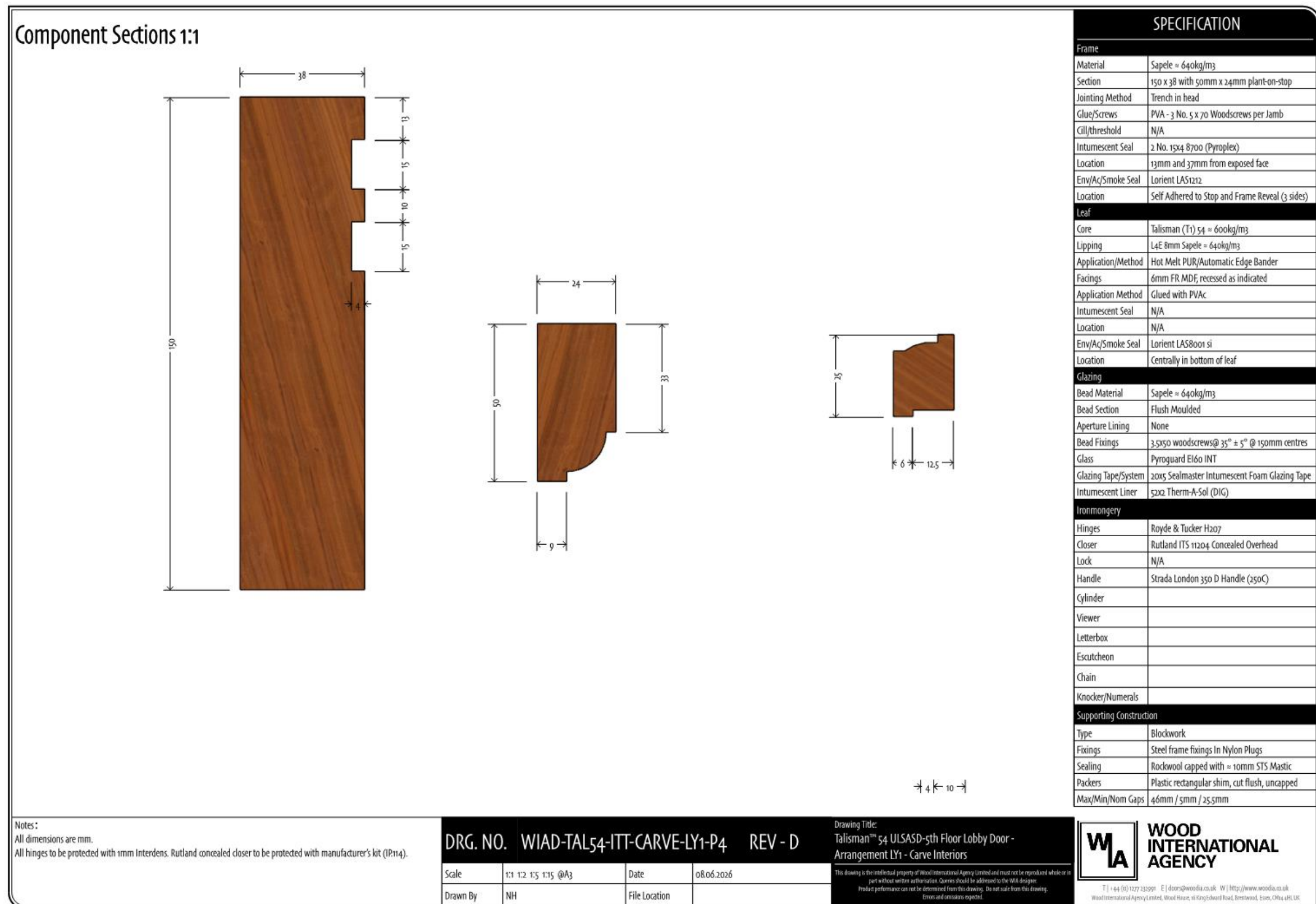


Figure 5. Doorset A - Drawing No. WIAD-TAL54-ITT-CARVE-LY1-P4 Page 4

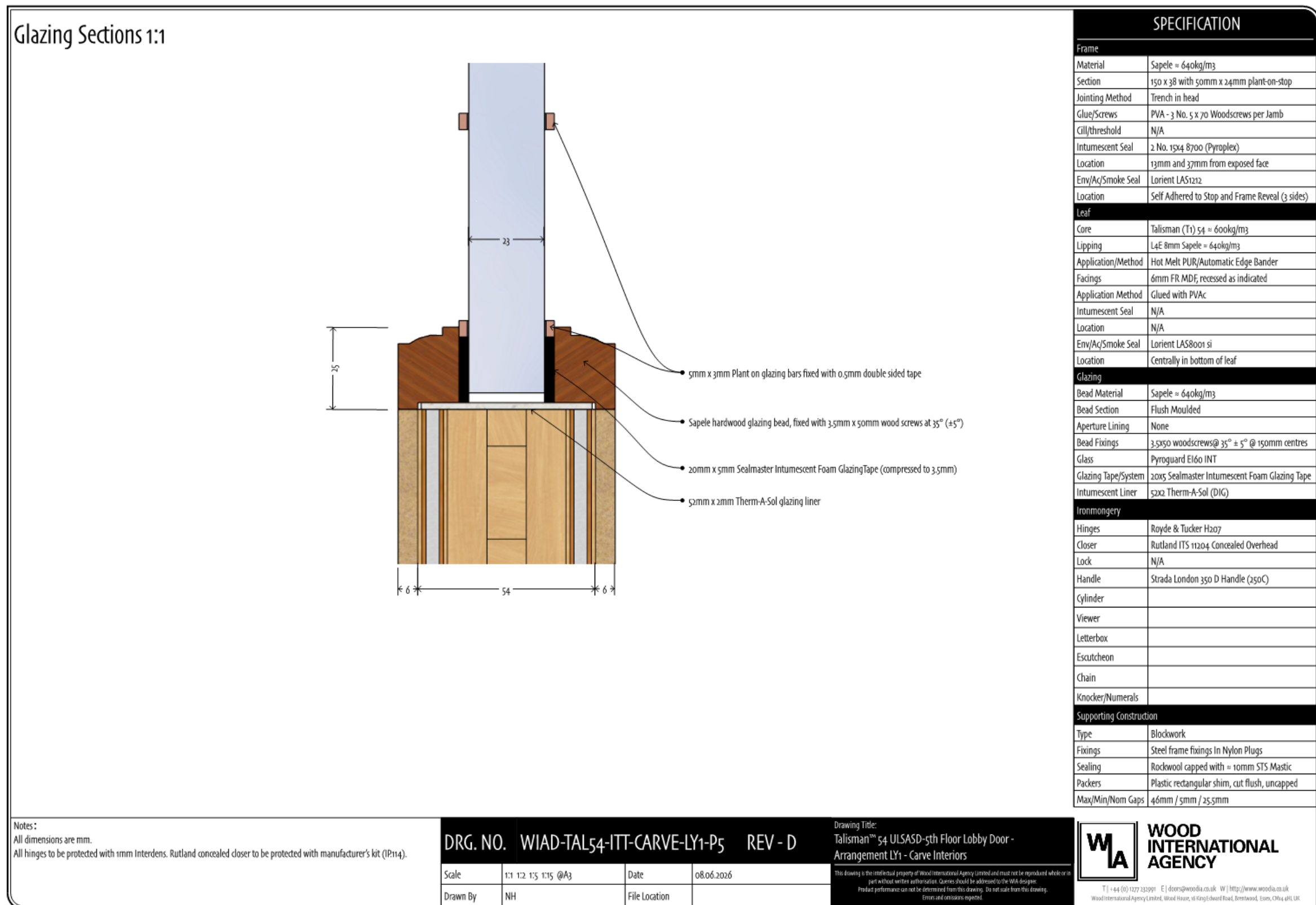


Figure 6. Doorset A - Drawing No. WIAD-TAL54-ITT-CARVE-LY1-P5 Page 5

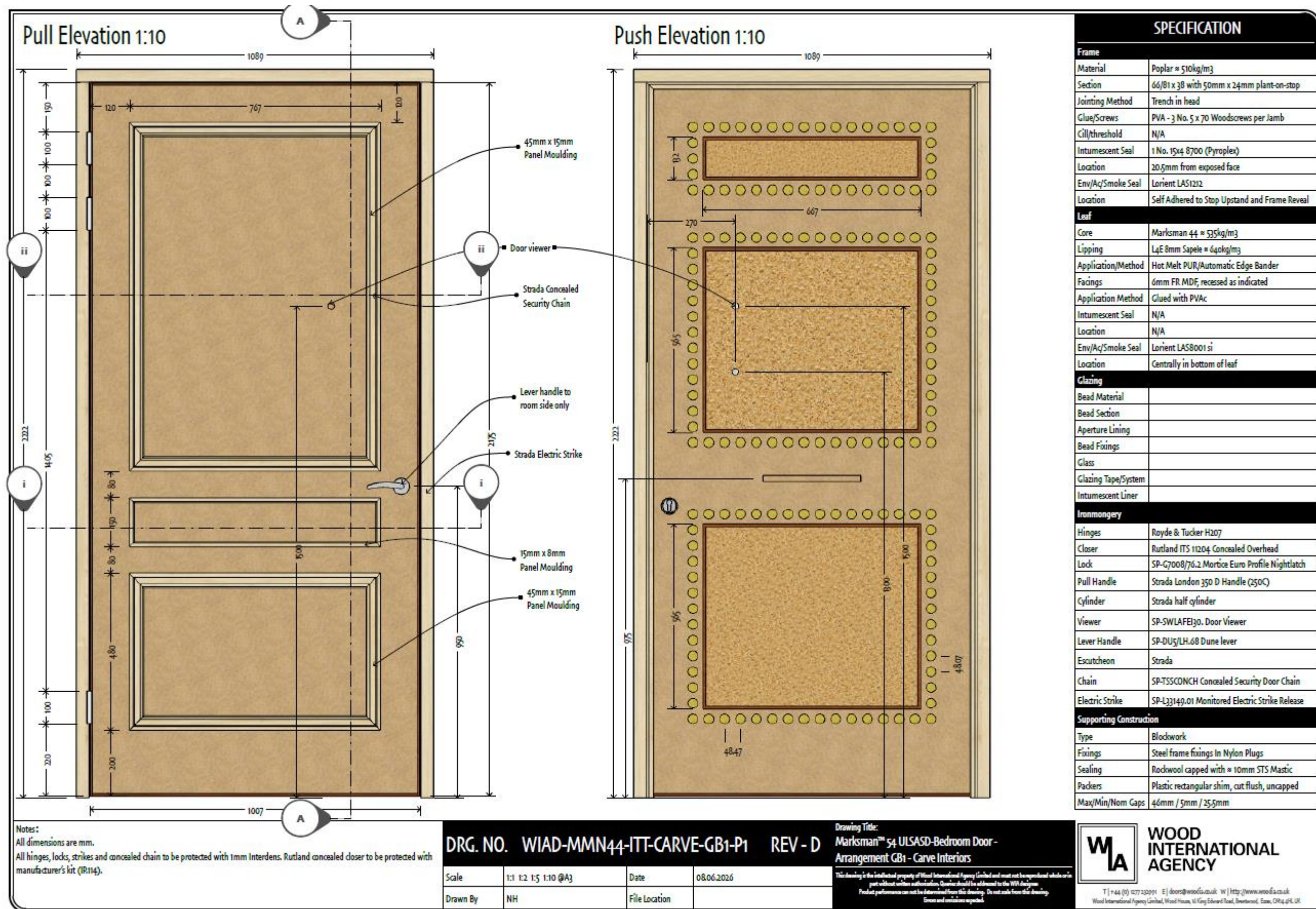


Figure 7. Doorset B - Drawing No. WIAD-MMN44-ITT-CARVE-GB1-P1 Page 1

Test date: 22/12/2025

Test standard: BS EN 1634-1:2014 + A1:2018

Test sponsor: Wood International Agency Ltd

Controlled document no. 112962

Controlled document version no. 5

Job number: 556573/R

Issue: 01

Page 15 of 78

Controlled document date: 05 Aug 2025

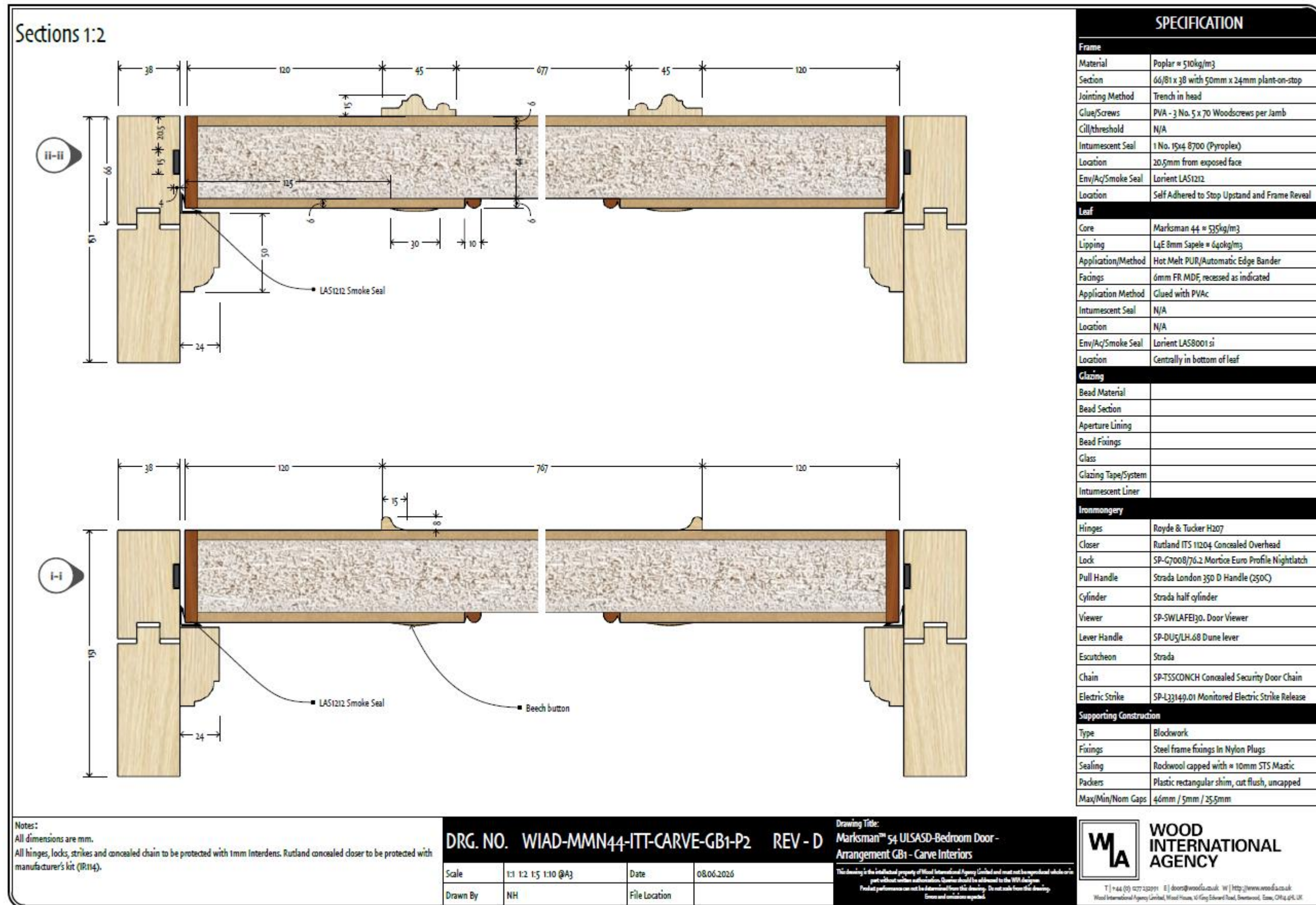


Figure 8. Doorset B - Drawing No. WIAD-MMN44-ITT-CARVE-GB1-P2 Page 2

Test date: 22/12/2025

Test standard: BS EN 1634-1:2014 + A1:2018

Test sponsor: Wood International Agency Ltd

Controlled document no. 112962

Controlled document version no. 5

Job number: 556573/R

Issue: 01

Page 16 of 78

Controlled document date: 05 Aug 2025

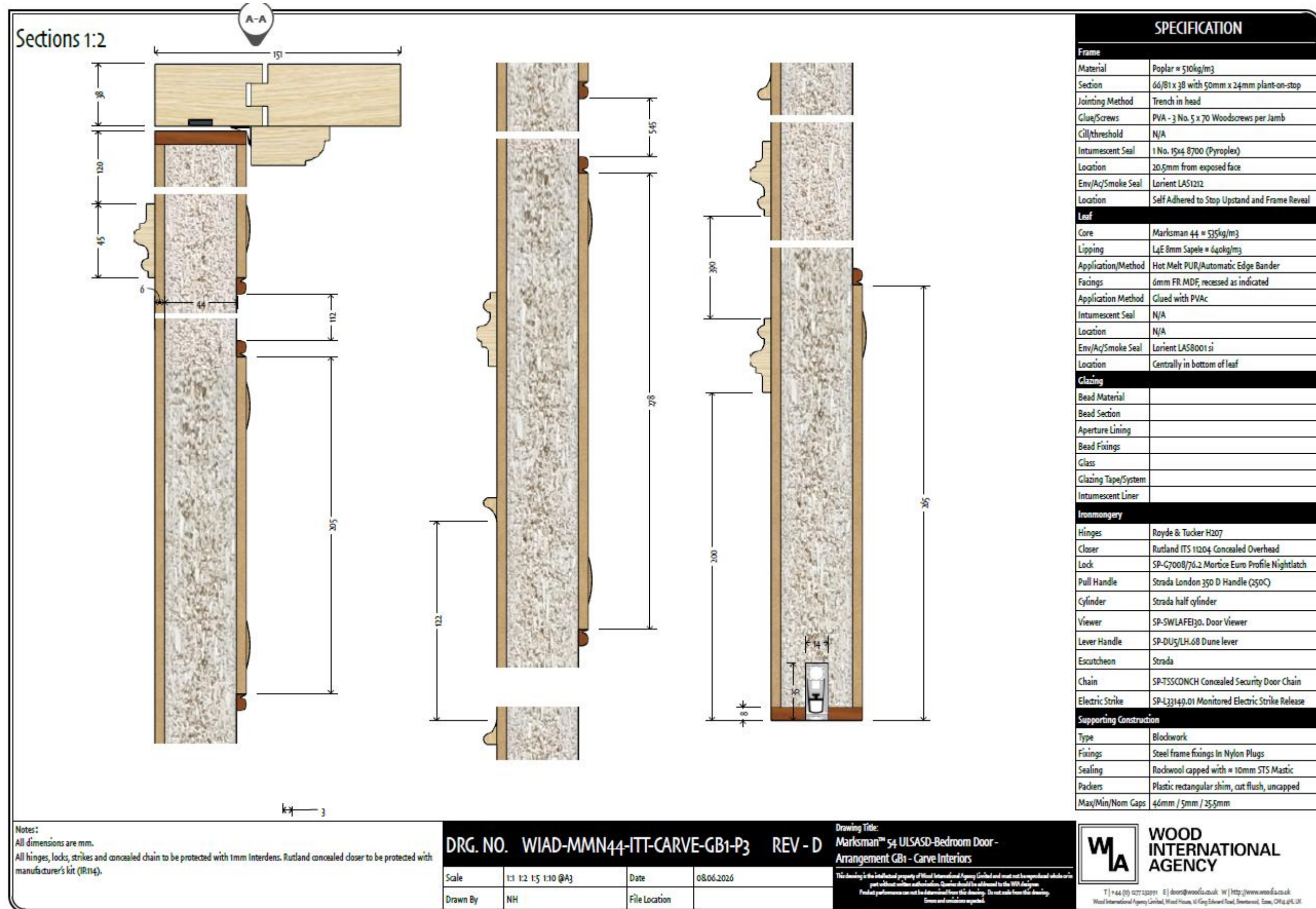


Figure 9. Doorset B - Drawing No. WIAD-MMN44-ITT-CARVE-GB1-P3 Page 3

Test date: 22/12/2025

Test standard: BS EN 1634-1:2014 + A1:2018

Test sponsor: Wood International Agency Ltd

Controlled document no. 112962

Controlled document version no. 5

Job number: 556573/R

Issue: 01

Page 17 of 78

Controlled document date: 05 Aug 2025

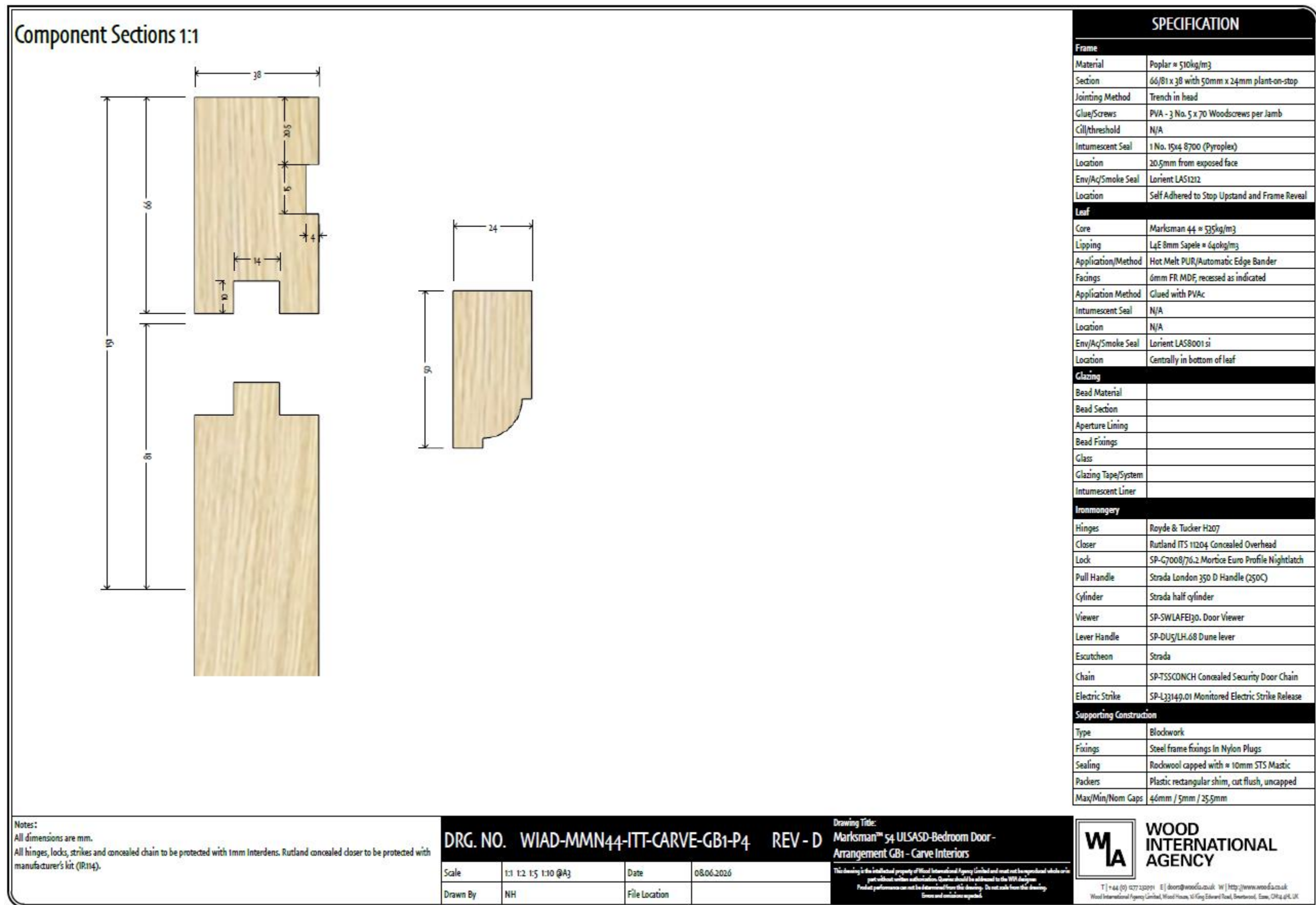


Figure 10. Doorset B - Drawing No. WIAD-MMN44-ITT-CARVE-GB1-P4 Page 4

Test date: 22/12/2025

Test standard: BS EN 1634-1:2014 + A1:2018

Test sponsor: Wood International Agency Ltd

Controlled document no. 112962

Controlled document version no. 5

Job number: 556573/R

Issue: 01

Page 18 of 78

Controlled document date: 05 Aug 2025

Schedule of Components

The schedule of components describes the test specimen and lists the components used in the construction of the test specimen. These were provided by the test sponsor and surveyed by Warringtonfire.

All measurements were verified by Warringtonfire unless stated otherwise in the schedule of components. All components marked with an “*” have not been verified by Warringtonfire.

Door Frame A

1. Door frame	
Manufacturer	Carve Interiors Ltd
Reference	N/A
Material head and jambs	Sapele hardwood
Density	640 kg/m ³ (nominal)
Moisture content	10.5 % (measured by Warringtonfire)
Overall size	2222 mm high x 1089 mm wide
Frame profile size	
Frame (head and jambs)	150 mm wide x 38 mm thick with a planted stop (item 2)
Jamb to head jointing method, fixing detail and location	3 No. 70 mm long × 5 mm diameter woodscrews fixed through trench in head into each jamb
Presence of adhesives	Yes
Manufacturer	Maxitek
Type	D3 PVA
Reference	D3 PVA Wood adhesive
Curing method	Evaporation
Application method	Hand spread
2. Planted door stop	
Manufacturer	Carve Interiors Ltd
Material	Sapele hardwood
Size	50 mm wide x 24 mm thick
Stop to frame jointing method, fixing detail and location	Pinned to frame using 38 mm 16g pins with at approx. 50 mm from internal corners and a range of 277 mm – 310 mm centres
Density	640 kg/m ³ (nominal)
Presence of adhesives	No

3. Intumescent to frame reveal			
Quantity	2 No.		
Manufacturer	Pyroplex®		
Reference	8700		
Material	Expanding graphite insert encapsulated within a 0.5 mm durable unplasticized polyvinyl chloride (PVC-u) outer casing		
Overall section size	15 mm wide x 4 mm thick		
Application method	Self-adhered to grooves within rebate of frame		
Location	13 mm and 38 mm from opening face of door leaf		
Presence of adhesives	Yes – Self-adhesive to the rear of the seal		
4. Smoke seal to frame reveal			
Quantity	1 No.		
Manufacturer	Lorient		
Reference	LAS1212 Batwing acoustic and smoke seal		
Material	Co-extruded rigid back PVC with flexible elastomer fins		
Overall section size	12 mm x 12 mm		
Application method	Self-adhered by hand		
Location	Self-adhered within 3 sides of frame / stop rebate		
Presence of adhesives	Yes – Self-adhesive to the rear of the seal		
5. Door frame fixings to supporting construction			
Manufacturer	Würth		
Reference	AMO III Schruben Senkfräskopf ø 12 mm		
Type	Steel (blue galvanised)		
Size	120 mm long x 7.5 mm diameter (measured)		
Location	4 no. per each jamb, 100 mm from base and at 600 mm centres, no fixings in head		
Frame to supporting construction gaps	Latch jamb 17 mm – 27 mm	Hinge jamb 25 mm – 27 mm	Head 16 mm – 17 mm
Interruptions to intumescent within the frame reveal	No		
Packers' details*			
Manufacturer	Easyfix		
Reference	Glazing packer shims		
Material	Plastic		
Size	100 mm x 28 mm x 1 / 2 / 3 / 4 / 5 / 6 mm thick		
Location	Stacked where necessary		

Door Frame B

6. Door frame	
Manufacturer	Carve Interiors Ltd
Reference	N/A
Material head and jambs	American poplar hardwood
Density	450 kg/m ³ (nominal)
Moisture content	10.7 % (measured by Warringtonfire)
Overall size	2222 mm high x 1089 mm wide
Frame profile size (head & jambs)	150 mm wide x 38 mm thick
Jamb to head jointing method, fixing detail and location	3 No. 70 mm long × 5 mm diameter woodscrews fixed through trench in head into each jamb
Presence of adhesives	Yes
Manufacturer	Maxitek
Type	D3 PVA
Reference	D3 PVA Wood adhesive
Curing method	Evaporation
Application method	Hand spread
7. Planted door stop	
Manufacturer	Carve Interiors Ltd
Material	American poplar hardwood
Size	50 mm wide x 24 mm thick
Stop to frame jointing method, fixing detail and location	Pinned to frame using 38 mm 16g pins with at approx. 50 mm from internal corners and a range of 242 mm centres
Density	450 kg/m ³ (nominal)
Presence of adhesives	No
8. Intumescent to frame reveal	
Quantity	1 No.
Manufacturer	Pyroplex®
Reference	8700
Material	Expanding graphite insert encapsulated within a 0.5mm durable unplasticized polyvinyl chloride (PVC-u) outer casing
Overall section size	15 mm wide x 4 mm thick
Application method	Self-adhered to grooves within rebate of frame
Location	20.5 mm from opening face of door leaf
Presence of adhesives	Yes – Self-adhesive to the rear of the seal

9. Smoke seal to frame reveal

Quantity	1 No.
Manufacturer	Lorient
Reference	LAS1212 Batwing acoustic and smoke seal
Material	Co-extruded rigid back PVC with flexible fins
Overall section size	12 mm x 12 mm
Application method	Self-adhered by hand
Location	Self-adhered within 3 sides of frame / stop rebate
Presence of adhesives	Yes – Self-adhesive to the rear of the seal

10. Door frame fixings to supporting construction

Manufacturer	Würth		
Reference	AMO III Schruben Senkfräskopf ø 12 mm		
Type	Steel (blue galvanised)		
Size	120 mm long x 7.5 mm diameter (measured)		
Location	4 no. per each jamb, 100 mm from base and at 600 mm centres, no fixings in head		
Frame to supporting construction gaps	Latch jamb 25 mm – 29 mm	Hinge jamb 27 mm – 29 mm	Head 18 mm – 19 mm
Interruptions to intumescent within the frame reveal *	No		
Packers' details*			
Manufacturer	Easyfix		
Reference	Glazing packer shims		
Material	Plastic		
Size	100 mm x 28 mm x 1 / 2 / 3 / 4 / 5 / 6 mm thick		
Location	Stacked where necessary		

Fire Stopping – Doorset A and B

11. High temperature insulation	
Manufacturer	Morgan Advanced Materials
Reference	Superwool Plus
Material	Alkaline Earth Silicate Fibre Based Insulation
Thickness	25 mm, uncompressed
Density	96 kg/m3 (stated)
Application method	Compressed into gap between frame and supporting construction
12. Intumescent sealant	
Manufacturer	Sealed Tight Solutions Ltd
Reference	ST88
Material	Intumescent acrylic sealant
Size	nominally 10 mm deep
Application method	Cartridge gunned over the ceramic fibre between the full perimeter of the frame and the supporting construction

Door Leaf A

13. Door leaf	
Manufacturer	Wood International Agency Ltd
Reference	Talisman 54
Quantity of leaves per doorset	1 No.
Glazing location relative to the head and closing edge	VP1 - 115 mm from the head of leaf and 100 mm from the closing edge of leaf. VP2 - 405 mm from head of leaf (115 mm from VP1) and 100 mm from closing edge of leaf
Overall leaf size prior to trimming*	1220 mm x 2440 mm x 54 mm
Overall leaf size	2175 mm high x 1007 mm wide x 66 mm thick
Orientation of heating conditions	Opening towards furnace
Intumescent to leaf edge	None
14. Leaf decoration	
Manufacturer	Wood International Agency Ltd
Reference	Buttons
Material	European beech
Size	30 mm diameter
Density	700 kg/m ³ (nominal)
Location	Buttons positioned in linear arrays along the perimeter of recessed panels
Fixing method	Glued and pinned using Omer® 22 mm long x 23g headless pins
Presence of adhesives	Yes, Maxitek D3 PVA
15. Core element	
Manufacturer	Wood International Agency Ltd
Reference	Talisman 54
Material	Ply faced engineered timber
Thickness	54 mm
Density	600 kg/m ³ (nominal)
Presence of mechanical fixings	Yes

16. Lipping	
Manufacturer	Carve Interiors Ltd
Reference	N/A
Material	Sapele
Density	640 kg/m ³ (stated)
Moisture content at sampling visit	11% (stated)
Moisture Content	9.8 % (measured by Warringtonfire)
Overall size	66 mm wide x 8 mm thick
Fixing method	Hand applied, bonded with PVA adhesive and clamped until cured
Location	All four edges of the door leaf
Presence of mechanical fixings	No
Details of adhesive	
Manufacturer	Maxitek
Type	D3 PVA
Product (product reference)	D3 PVA Wood adhesive
Application (example: spatula, nozzle, roller, hot press, cold press, edge bander)	Hand spread and clamped
Quantity of adhesive applied	Approximately 150 – 200 g/m ²
Curing / drying	Evaporation
Glue spread	Approximately 150 – 200 g/m ²
Pressure	Not recorded

17. Facings	
Manufacturer	Meditate
Reference	FR Euroclass B MDF
Material	6 mm Fire-retardant medium density fibreboard
Location	To both sides
Density	700 kg/m ³ (nominal)
Overall thickness and reduced thickness if door leaf incorporates fielded areas	6 mm thick. Full cut-outs: For glazing: 807 mm wide x 175 mm high (100 mm from side, 115 mm from top) 807 mm wide x 611 mm high (100 mm from side, 115 mm from top aperture) For panel: (MDF fully cut-out to expose blank facing) 667 mm wide x 661 mm high (170 mm from side, 265 mm from bottom) Panel recess is lined with a 10 mm x 6 mm poplar hardwood bead
Application method	Adhered with polyvinyl acetate glue (PVAc)
Details of adhesive	
Manufacturer	Übabond
Type	Single component resin adhesive
Product (product reference)	Ü30
Application (example: spatula, nozzle, roller, hot press, cold press, edge bander)	Roller
Quantity of adhesive applied	80 – 100 g/m ²
Curing / drying	Evaporation
Glue spread	80 – 100 g/m ²
Pressure (example: N/mm ²)	19 N/mm ²

18. Drop down seal	
Manufacturer	Lorient
Reference	LAS800 si
Material	
Body	Mill finish aluminium carrier
Seal	Silicon rubber
Overall size	
Body	35 mm high x 14 mm wide
Length	To suit leaf width
Fixing method, type and location	As per manufacturers specification
Location within leaf	Centrally on bottom of leaf
Maximum operating drop	13 mm

Door Leaf B

19. Door leaf	
Manufacturer	Wood International Agency Ltd
Reference	Marksman 44
Quantity of leaves per doorset	1 No.
Overall leaf size prior to trimming *	1220 mm x 2440 mm x 44 mm
Overall thickness and reduced thickness if door leaf incorporates fielded areas	44 mm reduced by 6 mm (to top panel only), filled with 6 mm FR MDF adhered using PVA adhesive. Numbers engraved into MDF 4.5 mm deep
Overall leaf size	2175 mm high x 1007 mm wide x 56 mm thick
Orientation of heating conditions	Opening towards furnace
Intumescent to leaf edge	None
20. Leaf decoration	
Manufacturer	Wood International Agency Ltd
Reference	Beech Buttons
Material	Beech hardwood
Size	30 mm diameter
Density	700 kg/m ³ (nominal)
Location	Beech hardwood buttons positioned in linear arrays along the perimeter of recessed panels
Fixing method	Glued and pinned using Omer® 22 mm long x 23g headless pins and PVA adhesive
Presence of adhesives	Yes, to recess accepting buttons using Maxitek D3 PVA

21. Panel moulding			
Manufacturer	Carve Interiors Ltd		
Reference	Panel moulding		
Material	American poplar hardwood		
Size	1st panel: 1066 mm high x 767 mm wide x 45 mm x 15 mm	2nd panel: 150 mm high x 767 mm wide x 15 mm x 8mm	3rd panel: 480 mm high x 767 mm wide x 45 mm x 15 mm
Density	510 kg/m³		
Location relative to top of leaf and closing edge of leaf	120 mm in from closing edge of leaf and 120 mm from top of leaf. There is an 80 mm space between the top – middle moulding and 80 mm space between the middle – bottom moulding.		
Fixing method	Glued and pinned using Omer® 22 mm long x 23g headless pins		
Presence of adhesives	Yes, Maxitek D3 PVA		
22. Core element			
Manufacturer	Wood International Agency Ltd		
Reference	Marksman 44		
Material	Graduated density particleboard		
Thickness	44 mm		
Density	535 kg/m³		
Presence of mechanical fixings	No		

23. Lipping

Manufacturer	Carve Interiors Ltd
Reference	N/A
Material	Sapele hardwood
Density	640 kg/m ³ (nominal)
Moisture content at sampling visit	11% (stated)
Moisture Content	10.2 % (measured by Warringtonfire)
Overall size	56 mm wide x 8 mm thick
Fixing method	Automatic edge bander
Location	Adhered to all four edges of the door leaf and applied facings
Presence of mechanical fixings	No
Details of adhesive	
Manufacturer	Ostermann
Type	Hot Melt Polyurethane
Product (product reference)	Redocol Kantomelt
Application	Automatic edge bander
Quantity of adhesive applied	11 g/m ²
Curing / drying	Chemical reactive
Glue spread	11 g/m ²
Pressure	0.6894 N/mm ²

24. Facings	
Manufacturer	Medite
Reference	Medite Premier FR Euroclass B
Material	6 mm Fire-retardant medium density fibreboard
Location	To both faces
Density	Nominally 750 kg/m ³
Overall thickness and reduced thickness if door leaf incorporates fielded areas	Reduced
Application method	Adhered with polyvinyl acetate glue (PVAc)
Details of adhesive	
Manufacturer	Übabond
Type	Single component resin adhesive
Reference	Ü30
Application	Roller
Quantity of adhesive applied	80 – 100g/m ²
Curing / drying	Evaporation
Glue spread	80 – 100g/m ²
Pressure	19 N/mm ²
25. Drop down seal	
Manufacturer	Lorient
Reference	LAS800 si
Material	
Body	Mill finish aluminium carrier
Seal	Silicon rubber
Overall size	
Body	35 mm high x 14 mm wide
Length	To suit leaf width
Fixing method, type and location	As per manufacturers specification
Location within leaf	Centrally on bottom of leaf
Maximum operating drop	13 mm

Glazing – Doorset A

26. Glass	
Manufacturer / supplier	Pyroguard
Reference (Declaration of Performance)	Pyroguard E160 INT
Unit overall size *	VP1 - 165 mm high x 797 mm wide x 23 mm thick VP2 - 601 mm high x 797 mm wide x 23 mm thick
Aperture size (prior to any lining) *	VP1 - 175 mm high x 807 mm wide VP2 - 611 mm high x 807 mm wide
Sight size	VP1 - 115 mm high x 748 mm wide VP2 - 550 mm high x 748 mm wide
Expansion allowance	5 mm all around including intumescent liner (so 3 mm + 2 mm Liner)
Presence of timber aperture lining	No
Glass to exposed / unexposed face	Both glazing panels are dual orientation so both orientations are tested in the same leaf
27. Beading	
Manufacturer	Carve Interiors Limited
Reference	N/A
Material	Sapele hardwood
Density	640 kg/m ³ (nominal)
Overall size (bead profile)	25 mm x 18.5 mm
Fixing method	50 mm long x 3.5 mm diameter woodscrews at 35° ± 5°
Location	50 mm in from inside corners and 150 mm centres at 35° ± 5° to the face of the glass
Planted glazing bars	7 mm (measured) x 3 mm secured in place with 0.5 mm double sided tape x 95 mm centres
28. Glazing liner	
Manufacturer	Dixon International Group Limited
Reference	Therm-A-Sol (ISL)
Material	Sodium silicate
Overall size	52 mm x 2 mm
Fixing method	Self-adhesive tape

29. Seal applied between glazing bead on internal face of leaf

Manufacturer	Dixon International Group Limited
Reference	Sealmaster intumescent foam glazing tape
Material	Open cell foam glazing tape
Overall size	20 mm wide x 5 mm thick
Fixing method	Adhered to upstand of glazing bead

30. Seal applied between glazing bead on external face of leaf

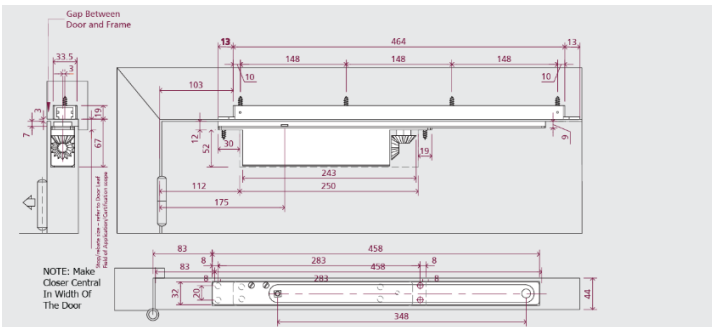
Manufacturer	Dixon International Group Limited
Reference	Sealmaster intumescent foam glazing tape
Material	Open cell foam glazing tape
Overall size	20 mm wide x 5 mm thick
Fixing method	Adhered to upstand of glazing bead

31. Glazing setting blocks

Manufacturer / Supplier	Carve Interiors Ltd
Reference	Sapele hardwood
Overall size	30 mm x 12 mm x 4 mm
Fixing method and location	As required
Presence of adhesives to seal unit	No

Hardware – Doorset A

32. Hinges	
Manufacturer / supplier	Royde & Tucker Ltd
Reference	RT Hi-Load 207
Quantity	3 No.
Primary material	Grade 13 stainless steel
Type	3 Knuckle butt-hinge
Size	
Knuckle	106 mm high x 13 mm diameter
Blades	102 mm high x 38 mm wide
Fixings	
Type	Countersunk pozi-drive wood screws
Material	Steel
Size	32 mm long x 5 mm diameter
Number off per blade	4 No.
Position of each hinge relative to the head of the leaf and top of hinge knuckle	Top: 150 mm Middle: 350 mm Bottom: 1850 mm
Details of intumescent protection (as per client notes)	
Manufacturer	Wolman Wood and Fire Protection GmbH
Reference	Interdens® intumescent
Material	Monoammonium phosphate
Overall size	1 mm
Fixing method and location	Behind each hinge blade
Interruptions to intumescent within the frame reveal	Fully interrupted strip at 13 mm from the opening face of leaf
33. Pull handle	
Manufacturer	Strada London Ltd
Reference	FBD225B
Material	Polished Brass
Overall Section Size	250 mm long x 19 mm diameter handle 50 mm diameter x 8mm projection rose
Cut out size in leaf	N/A
Fixing method	Face fixed behind rose with 4 No. steel woodscrews 28 mm x 8g to exposed and unexposed face
Intumescent protection	None

34. Door closer	
Manufacturer / supplier	Rutland
Reference	Rutland ITS. 11204
Material	
Body	Die-cast aluminium
Closer arm	Steel
Cover	Aluminium
Configuration	Concealed within door leaf
Overall size	
Body	243 mm long x 32 mm wide x 52 mm deep 
Fixing method	Using manufactures fixing instructions
Details of intumescent protection	Manufacturers kit. IP.114 - 2 mm thick graphite-based intumescent sheet material
Interruptions to intumescent within the frame reveal	Partially interrupted strip at 13 mm from opening face and fully interrupted strip at 37 mm from opening face
Average opening force	61.7 N (measured by Warringtonfire)
Average closing force	31.9 N (measured by Warringtonfire)
Distance from hinge	750 mm

Hardware – Doorset B

35. Hinges	
Manufacturer / supplier	Royde & Tucker Ltd
Reference	RT Hi-Load 207
Quantity	3 No.
Primary material	Grade 13 stainless steel
Type	3 Knuckle butt-hinge
Size	
Knuckle	106 mm high x 13 mm diameter
Blades	102 mm high x 38 mm wide
Fixings	
Type	Countersunk pozi-drive wood screws
Material	Steel
Size	32 mm long x 5 mm diameter
Number off per blade	4 No.
Position of each hinge relative to the head of the leaf and top of hinge knuckle	Top: 150 mm Middle: 350 mm Bottom: 1850 mm
Details of intumescent protection (as per client notes)	
Manufacturer	Wolman Wood and Fire Protection GmbH
Reference	Interdens® intumescent
Material	Monoammonium phosphate
Overall size	1 mm
Fixing method and location	Behind each hinge blade
Interruptions to intumescent within the frame reveal	Partially interrupted strip
36. Pull handle (unexposed face)	
Manufacturer	Strada London Ltd
Reference	FBD225B
Material	Polished Brass
Overall Section Size	250 mm long x 19 mm diameter handle 50 mm diameter x 8mm projection rose
Cut out size in leaf	N/A
Fixing method	Face fixed behind rose with 4 No. steel woodscrews 28 mm x 8g to unexposed face
Intumescent protection	None

37. Lever handle (exposed face)	
Manufacturer	Manital
Supplier	Strada London Ltd
Reference	SP-DU5 / LH.68 Dune lever
Material	Brass
Overall size	
Lever	128 mm long x 21 mm wide with a 57 mm projection
Rose	50 mm diameter x 10 mm thick
Fixing method and location	Concealed screw-fixed to exposed face only
Details of intumescent protection	None

[illegible]

39. Lockset	
Manufacturer / supplier	Imperial Locks – supplied by Strada London Ltd
Reference	SP-G7008/76.2
Material	
Lockcase	Steel
Forend plate	Stainless steel
Latch bolt	Solid brass
Lock bolt	N/A
Overall sizes	
Central Lockcase *	108 mm high x 76 mm deep x 14 mm wide with a 57 mm backset (latch removed)
Forend plate	152 mm high x 25 mm wide x 4 mm thick
Latch bolt	22 mm high x 10 mm wide with 12 mm projection (removed for test purposes)
Fixing method	Screw-fixed
Operation of latch bolt	Disengaged (latch removed)
Interruptions to Intumescent on the door leaf edge	N/A
Location of centre of the spindle relative to the bottom of the leaf	950 mm
Details of intumescent protection (as per client notes)	
Manufacturer	Wolman Wood and Fire Protection GmbH
Reference	Interdens® intumescent
Material	Monoammonium phosphate
Overall size	1 mm
Fixing method and location	Wrapped around body and bedded under forend plate
Interruptions to intumescent within the frame reveal	Partially interrupted strip

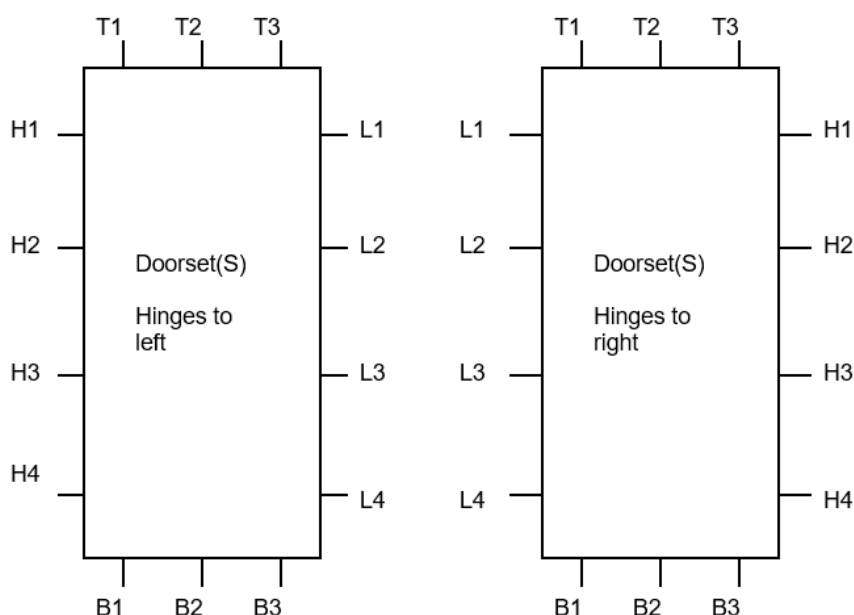
40. Electric strike / keep	
Manufacturer / supplier	GEM - Strada London Ltd
Reference	SP-GK450M-FR.01 Monitored electric strike release
Material	
Centre strike plate and keep	Stainless steel
Overall sizes	
Centre strike plate	123.8 mm high x 31.75 mm wide with 85 mm 17 mm tongue
Centre keep plate	45 mm high x 26 mm wide
Fixing method	
Centre strike plate and keep	Screw-fixed
Interruptions to intumescent within the frame reveal	Fully interrupted
Details of intumescent protection (as per client notes)	
Manufacturer	Wolman Wood and Fire Protection GmbH
Reference	Interdens® intumescent
Material	Monoammonium phosphate
Overall size	1 mm
Fixing method and location	Bedded under strike plate
Interruptions to intumescent within the frame reveal	Partially interrupted strip
41. Cylinder *	
Manufacturer / supplier	Strada London Ltd
Reference	Strada half euro cylinder SP-V10EP55SPBE
Material	Brass
Overall size	55 mm x 32 mm
Fixing method	Fixed with supplied machine screw
Intumescent protection	None
42. Escutcheon	
Manufacturer / supplier	Strada London Ltd
Reference	SP-FB001.03
Material	Brass
Overall size	50 mm diameter x 8 mm thick
Fixing method	Fixed using supplied screws 28 mm x 8g
Details of intumescent protection	None

43. Concealed security chain	
Manufacturer / supplier	Trade Security Supplies (TSS) / Strada London Ltd
Reference	SP-TSSCONCHAINS.01 Concealed security door chain
Material	
Face plate to leaf	Stainless steel
Face plate to frame	Stainless steel
Chain	Steel
Overall size	
Face plate to leaf	25.4 mm wide x 57.5 mm high
Face plate to frame	25.4 mm wide x 57.5 mm high with 50 mm 43 mm return
Location	Concealed within the door leaf edge and corresponding door frame reveal (lock side)
Fixing method	Faceplates screw-fixed into pre-morticed recesses in the door leaf and door frame using countersunk wood screws
Details of intumescent protection (as per client notes)	
Manufacturer	Wolman Wood and Fire Protection GmbH
Reference	Interdens® intumescent
Material	Monoammonium phosphate
Overall size	1 mm
Fixing method and location	Bedded under strike plate
Interruptions to intumescent within the frame reveal	Partially interrupted strip
44. Door viewer	
Manufacturer	Strada London Ltd
Reference	SP-SWLAFEI30.68 Door Viewer
Material	Brass and glass
Overall size	
Body	14 mm diameter
Footprint	27 mm diameter x 3 mm projection
Cut out	15 mm diameter
Fixing method	Morticed
Location of centre of the viewer relative to the bottom of the leaf	1500 mm
Details of intumescent protection	1 mm graphite (integral to viewer)

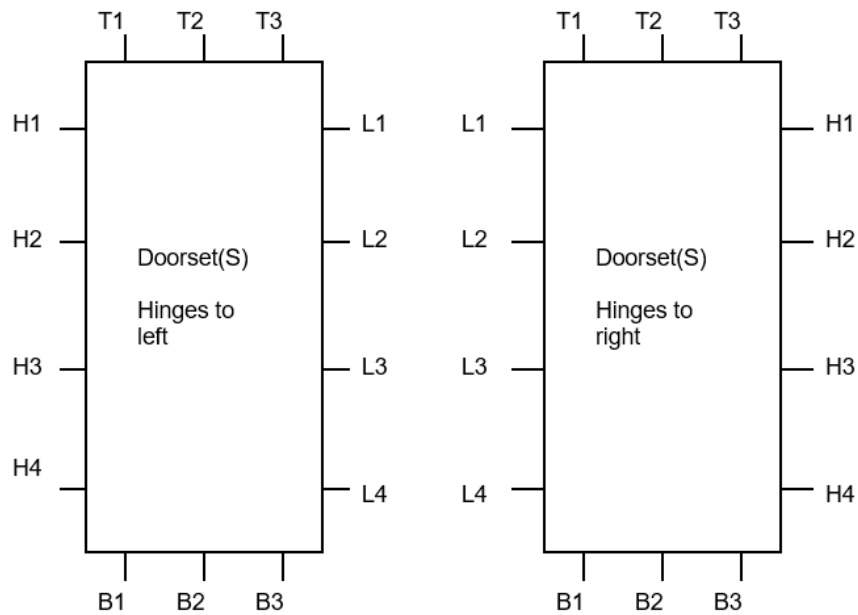
Supporting construction

45. AAC Base Slab	
Type	Steel reinforced concrete lintel
Material	Steel reinforced autoclaved aerated concrete
Overall size	600 mm wide x 150 mm high x 3000 mm long
Density	550 ~ 650 kg/m ³ (nominal)
Fixing method	Ordinary sand/cement mortar, mix 3:1
46. Lightweight blockwork	
Manufacturer	THERMALITE
Reference	THERMALITE Shield
Material	Lightweight concrete blocks
Thickness	150 mm high x 215 mm wide x 440 mm long
Density	600 kg/m ³ (nominal)
Fixing method	Ordinary sand/cement mortar, mix 3:1
Aperture door A and door B	2242 mm high x 1140 mm wide
47. AAC lintel	
Type	Steel reinforced concrete lintel
Material	Steel reinforced autoclaved aerated concrete
Overall size	150 mm wide x 250 mm high x 3000 mm long
Density	550 ~ 650 kg/m ³ (nominal)
Fixing method	Ordinary sand/cement mortar, mix 3:1

Doorset clearance gaps



Doorset A (mm)					
Hinge Side	Primary	Leaf to Stop	Leading Edge	Primary	Leaf to Stop
H1	3.60	4.49	L1	1.27	2.71
H2	3.23	4.49	L2	2.49	2.71
H3	3.14	3.79	L3	3.46	2.71
H4	2.88	3.79	L4	3.58	2.71
Mean	3.21		Mean	2.70	
Max	3.60		Max	3.58	
Min	2.88		Min	1.27	
Max Permitted	5.41		Max Permitted	5.14	
Top edge	Primary	Leaf to stop	Threshold	Primary	
T1	4.81	2.50	B1	3.80	
T2	3.59	2.00	B2	5.28	
T3	2.58	2.00	B3	6.92	
Mean	3.66		Mean	5.33	
Max	4.81		Max	6.92	
Min	2.58		Min	3.80	
Max Permitted	6.24		Max Permitted	8.13	



Doorset B (mm)					
Hinge Side	Primary	Leaf to Stop	Leading Edge	Primary	Leaf to Stop
H1	4.00	1.78	L1	1.50	6.80
H2	3.90	1.72	L2	1.37	5.87
H3	3.54	1.72	L3	1.20	3.00
H4	3.03	1.72	L4	2.40	3.05
Mean	3.62		Mean	1.62	
Max	4.00		Max	2.40	
Min	3.03		Min	1.20	
Max Permitted	5.81		Max Permitted	4.01	
Top edge	Primary	Leaf to stop	Threshold	Primary	
T1	3.12	5.55	B1	8.02	
T2	3.75	3.42	B2	6.10	
T3	5.40	1.93	B3	4.64	
Mean	4.09		Mean	6.25	
Max	5.40		Max	8.02	
Min	3.12		Min	4.64	
Max Permitted	6.75		Max Permitted	9.14	

Test Observations

Time		All observations are from the unexposed face unless noted otherwise.
mins	secs	
00	00	The Test Commences.
01	40	Smoke release from head of Door Leaf A and Door Leaf B.
02	18	Bottom vision panel on Doorset A reacting and turning white.
03	01	Smoke release leading edge of Doorset B.
04	24	Patches of brown discolouration on vision panels on Doorset A.
04	57	Doorset A and Doorset B unrestrained.
05	52	Grey discolouration on right-hand side frame of Doorset B.
06	17	Smoke release from hinged edge of Doorset A.
07	17	Moisture discolouration around door viewer on Doorset B.
09	42	Moisture discolouration on leading edge of Doorset B, next to escutcheon.
11	48	Vision panels on Doorset A have discoloured to white.
14	51	Brown/black discolouration at head of Door Leaf A and Door Leaf B.
15	37	Moisture discolouration at bottom of Doorset B.
21	47	Brown/black discolouration around door viewer on Doorset B.
34	27	Brown/black discolouration on top frame of Doorset B.
39	06	Cotton pad applied near door viewer on Doorset B for 30 seconds. No glowing embers present and did not ignite.
39	23	Glowing around door viewer on Doorset B.
42	12	Sustained flaming near door viewer on Doorset B. This means sustained flaming and cotton pad integrity failure are deemed to have occurred on Doorset B.
42	36	Sustained flaming on Doorset B extinguished.
42	55	Doorset B blanked off to allow testing to continue for Doorset A.
60	33	Glazing on Doorset A crackling.
64	02	Piece of glass fallen from glazing on Doorset A.
64	42	Brown/black discolouration on right-hand side edge of bottom vision panel.
66	12	Glazing has detached slightly from right-hand side edge of bottom vision panel.
68	14	The test is discontinued at the Sponsor's request.

Test Photographs

The exposed face of the specimens prior to testing



The unexposed face of the specimens prior to the start of the test



The unexposed
face of the
specimens after a
test duration of 5
minutes



The unexposed
face of the
specimens after a
test duration of 10
minutes



The unexposed face of the specimens after a test duration of 15 minutes



The unexposed face of the specimens after a test duration of 20 minutes



The unexposed
face of the
specimens after a
test duration of 25
minutes



The unexposed
face of the
specimens after a
test duration of 30
minutes



The unexposed face of the specimens after a test duration of 35 minutes



The unexposed face of the specimens after a test duration of 40 minutes



The unexposed face of the specimens after a test duration of 50 minutes



The unexposed face of the specimens after a test duration of 60 minutes



The unexposed face of the specimens after a test duration of 68 minutes



The exposed face of the specimens immediately after the test



Test Data

Mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1: 2020

Time Mins	Specified Furnace Temperature Deg. C	Actual Furnace Temperature Deg. C
0	20	20
2	445	318
4	544	584
6	603	629
8	645	645
10	678	684
12	705	708
14	728	755
16	748	770
18	766	767
20	781	774
22	796	784
24	809	801
26	820	816
28	831	829
30	842	842
32	851	854
34	860	865
36	869	876
38	877	886
40	885	891
42	892	892
44	899	897
46	906	899
48	912	904
50	918	908
52	924	913
54	930	923
56	935	944
58	940	952
60	945	952
62	950	950
64	955	949
66	960	947
68	964	946

Individual and mean temperatures recorded on the unexposed surface of Doorset A

Time Mins	T/C Number 20 Deg. C	T/C Number 21 Deg. C	T/C Number 22 Deg. C	T/C Number 23 Deg. C	T/C Number 24 Deg. C	Mean Temp Deg. C
0	22	20	19	19	19	20
2	23	21	19	19	19	20
4	32	32	19	19	19	24
6	49	46	19	19	19	30
8	62	57	19	19	19	35
10	73	68	19	19	19	40
12	85	79	19	19	19	44
14	96	90	19	20	19	49
16	100	96	19	20	19	51
18	101	99	19	20	20	52
20	103	101	19	20	20	53
22	106	104	19	21	20	54
24	109	106	20	22	21	56
26	107	105	20	23	22	55
28	106	106	20	24	23	56
30	105	106	20	26	24	56
32	104	105	21	28	26	57
34	104	105	21	30	27	57
36	105	105	22	32	29	59
38	106	105	23	34	31	60
40	107	106	23	37	33	61
42	105	107	24	38	35	62
44	106	108	25	40	38	63
46	107	108	26	42	40	65
48	108	108	27	44	43	66
50	109	107	29	45	46	67
52	110	108	30	47	50	69
54	112	110	32	49	54	71
56	116	111	33	52	59	74
58	120	113	35	55	64	77
60	127	109	36	59	68	80
62	130	110	37	64	70	82
64	126	111	39	69	73	84
66	121	110	41	75	82	86
68	117	112	44	77	86	87

Individual temperatures recorded on the door leaf 25 mm away from the edges on Doorset A

Time Mins	T/C Number 25 Deg. C	T/C Number 26 Deg. C	T/C Number 27 Deg. C	T/C Number 28 Deg. C
0	18	19	20	19
2	18	21	21	19
4	18	26	24	19
6	19	26	25	20
8	18	26	26	20
10	18	27	27	20
12	19	27	27	20
14	19	29	28	20
16	19	32	29	20
18	19	34	30	20
20	19	37	31	20
22	20	38	32	21
24	20	39	32	21
26	21	40	34	22
28	21	42	35	22
30	22	42	38	25
32	23	43	41	26
34	24	45	48	28
36	26	47	53	31
38	28	50	57	31
40	31	54	59	32
42	39	58	61	34
44	37	64	63	35
46	37	74	64	36
48	38	80	66	37
50	39	82	68	39
52	41	76	70	41
54	42	76	73	42
56	44	77	75	45
58	46	77	78	47
60	48	78	79	50
62	50	77	81	53
64	53	79	82	56
66	57	80	83	60
68	60	83	85	62

Individual temperatures recorded on the door leaf 100 mm away from the edges on Doorset A

Time Mins	T/C Number 29 Deg. C	T/C Number 30 Deg. C	T/C Number 31 Deg. C	T/C Number 32 Deg. C
0	20	19	20	19
2	20	20	21	19
4	20	27	28	19
6	20	42	42	19
8	20	54	54	19
10	20	65	64	19
12	20	74	72	19
14	20	82	81	19
16	20	88	88	19
18	20	93	93	19
20	20	98	98	19
22	20	101	101	19
24	20	104	104	19
26	20	106	106	20
28	21	108	108	20
30	21	109	109	20
32	22	110	111	21
34	22	111	110	22
36	23	111	108	23
38	24	110	106	23
40	25	111	107	24
42	26	112	107	25
44	27	110	107	27
46	29	110	107	28
48	30	111	107	29
50	31	112	107	31
52	33	113	108	32
54	34	114	110	34
56	36	117	115	36
58	38	119	117	38
60	40	123	122	40
62	42	125	127	43
64	44	128	135	46
66	47	132	144	50
68	50	138	154	53

Individual temperatures recorded on the frame for Doorset A

Time Mins	T/C Number 33 Deg. C	T/C Number 34 Deg. C	T/C Number 35 Deg. C	T/C Number 36 Deg. C
0	19	19	19	19
2	19	20	19	19
4	19	22	20	19
6	19	22	20	19
8	19	21	21	19
10	19	21	21	19
12	19	21	23	19
14	19	21	23	19
16	19	21	23	19
18	19	22	25	19
20	19	22	27	19
22	19	22	26	19
24	19	22	25	19
26	19	23	25	19
28	19	23	25	19
30	19	23	25	19
32	19	23	26	19
34	19	24	27	19
36	19	24	27	19
38	20	25	28	19
40	20	25	29	19
42	20	26	29	19
44	20	27	29	19
46	20	27	30	20
48	20	30	30	20
50	20	29	29	20
52	20	29	30	20
54	21	30	30	20
56	21	29	31	20
58	21	30	31	21
60	21	30	32	21
62	22	31	34	21
64	22	32	37	22
66	23	33	46	22
68	23	33	59	23

Individual and mean temperatures recorded on the top vision panel of Doorset A

Time Mins	T/C Number 37 Deg. C	T/C Number 38 Deg. C	T/C Number 39 Deg. C	Mean Temp Deg. C
0	21	21	21	21
2	22	22	22	22
4	32	31	33	32
6	48	46	48	47
8	61	58	60	60
10	73	69	71	71
12	84	80	82	82
14	93	90	90	91
16	97	97	93	96
18	100	99	96	98
20	102	98	100	100
22	104	98	104	102
24	104	98	108	103
26	105	98	107	103
28	106	99	107	104
30	106	99	106	104
32	106	99	106	104
34	106	100	107	104
36	106	101	108	105
38	106	101	111	106
40	104	102	113	106
42	102	100	110	104
44	101	100	110	104
46	102	100	111	104
48	103	102	112	106
50	104	103	112	106
52	105	105	111	107
54	108	107	111	109
56	107	107	109	108
58	103	103	109	105
60	104	103	111	106
62	104	104	112	107
64	105	104	114	108
66	107	105	114	109
68	110	108	116	111

Individual temperatures recorded on the top vision panel frame of Doorset A

Time Mins	T/C Number 40 Deg. C	T/C Number 41 Deg. C	T/C Number 42 Deg. C	T/C Number 43 Deg. C
0	19	19	20	20
2	20	20	20	20
4	23	20	20	20
6	22	20	20	20
8	25	20	21	21
10	25	21	21	22
12	25	23	22	23
14	27	24	23	24
16	29	25	24	25
18	32	27	26	27
20	35	29	28	29
22	37	30	30	30
24	39	32	33	32
26	42	33	35	33
28	44	35	38	35
30	46	37	40	37
32	47	40	42	39
34	48	41	43	41
36	49	43	45	42
38	50	45	46	44
40	51	47	48	46
42	52	49	49	47
44	53	50	50	49
46	54	52	52	51
48	55	53	53	52
50	56	54	55	53
52	57	55	56	55
54	58	56	58	57
56	59	59	60	59
58	61	61	62	61
60	62	63	63	63
62	64	65	65	65
64	66	67	68	67
66	68	68	70	69
68	70	70	72	71

Individual and mean temperatures recorded on the bottom vision panel of Doorset A

Time Mins	T/C Number 20 Deg. C	T/C Number 21 Deg. C	T/C Number 46 Deg. C	T/C Number 47 Deg. C	T/C Number 48 Deg. C	Mean Temp Deg. C
0	22	20	21	21	21	21
2	23	21	22	22	22	22
4	32	32	32	32	33	32
6	49	46	47	49	48	48
8	62	57	60	62	61	60
10	73	68	72	75	72	72
12	85	79	84	87	83	84
14	96	90	94	94	92	93
16	100	96	97	96	95	97
18	101	99	99	97	96	98
20	103	101	101	101	97	101
22	106	104	104	105	100	104
24	109	106	108	109	105	107
26	107	105	109	106	108	107
28	106	106	110	104	109	107
30	105	106	110	103	110	107
32	104	105	109	103	109	106
34	104	105	109	103	108	106
36	105	105	109	105	108	106
38	106	105	111	108	108	108
40	107	106	113	107	106	108
42	105	107	115	106	104	107
44	106	108	113	106	103	107
46	107	108	111	106	104	107
48	108	108	109	106	103	107
50	109	107	108	106	102	106
52	110	108	108	107	103	107
54	112	110	109	110	104	109
56	116	111	111	113	106	111
58	120	113	114	117	110	115
60	127	109	120	123	116	119
62	130	110	126	129	123	124
64	126	111	125	105	128	119
66	121	110	119	98	127	115
68	117	112	119	95	121	113

Individual temperatures recorded on the bottom vision panel frame of Doorset A

Time Mins	T/C Number 49 Deg. C	T/C Number 50 Deg. C	T/C Number 51 Deg. C	T/C Number 52 Deg. C
0	20	18	19	19
2	20	18	19	19
4	20	18	19	19
6	21	18	19	19
8	23	18	20	19
10	24	19	20	20
12	26	20	21	20
14	28	21	22	21
16	31	22	23	21
18	34	24	25	22
20	38	26	28	23
22	40	28	30	25
24	43	30	32	26
26	46	33	34	28
28	48	35	36	30
30	50	36	38	31
32	51	38	40	33
34	52	39	41	34
36	53	41	43	35
38	54	41	44	37
40	55	43	46	38
42	56	44	47	39
44	57	45	49	41
46	58	47	50	42
48	59	48	52	44
50	61	50	54	45
52	62	51	55	47
54	64	52	57	48
56	65	54	59	50
58	67	55	61	52
60	69	57	63	53
62	71	59	65	55
64	73	60	67	56
66	75	62	69	58
68	76	64	70	60

Individual and mean temperatures recorded on the unexposed surface of Doorset B

Time Mins	T/C Number 53 Deg. C	T/C Number 54 Deg. C	T/C Number 55 Deg. C	T/C Number 56 Deg. C	T/C Number 57 Deg. C	Mean Temp Deg. C
0	19	19	18	19	19	19
2	19	19	18	19	19	19
4	19	19	18	19	19	19
6	19	19	18	19	19	19
8	20	19	18	19	19	19
10	21	19	18	19	19	19
12	22	20	18	19	19	20
14	35	38	*	33	27	33
16	47	51	*	55	59	53
18	53	55	43	62	63	55
20	57	57	44	64	65	57
22	61	58	44	64	65	58
24	61	59	43	64	65	58
26	65	59	43	63	64	59
28	65	60	44	63	63	59
30	68	61	45	62	63	60
32	73	62	46	62	62	61
34	76	63	48	62	62	62
36	79	64	51	63	62	64
38	81	66	54	64	63	66
40	85	67	56	65	64	67
42	90	69	59	67	66	70
44	**	**	**	**	**	**
46	**	**	**	**	**	**
48	**	**	**	**	**	**
50	**	**	**	**	**	**
52	**	**	**	**	**	**
54	**	**	**	**	**	**
56	**	**	**	**	**	**
58	**	**	**	**	**	**
60	**	**	**	**	**	**
62	**	**	**	**	**	**
64	**	**	**	**	**	**
66	**	**	**	**	**	**
68	**	**	**	**	**	**

*Thermocouple malfunction

**Doorset B blanked off at 42 minutes

Individual temperatures recorded on the door leaf 25 mm away from the edges on Doorset B

Time Mins	T/C Number 58 Deg. C	T/C Number 59 Deg. C	T/C Number 60 Deg. C	T/C Number 61 Deg. C
0	19	18	20	21
2	19	18	21	21
4	19	24	21	21
6	19	28	21	21
8	19	33	24	21
10	20	49	27	21
12	20	54	31	21
14	21	56	35	22
16	22	54	49	22
18	25	57	53	23
20	28	63	55	25
22	30	58	59	27
24	32	65	64	29
26	35	63	68	31
28	37	65	68	33
30	40	62	61	35
32	42	63	58	37
34	44	65	59	40
36	47	66	61	43
38	50	70	63	45
40	53	81	67	48
42	56	101	71	51
44	**	**	**	**
46	**	**	**	**
48	**	**	**	**
50	**	**	**	**
52	**	**	**	**
54	**	**	**	**
56	**	**	**	**
58	**	**	**	**
60	**	**	**	**
62	**	**	**	**
64	**	**	**	**
66	**	**	**	**
68	**	**	**	**

****Doorset B blanked off at 42 minutes**

Individual temperatures recorded on the door leaf 100 mm away from the edges on Doorset B

Time Mins	T/C Number 62 Deg. C	T/C Number 63 Deg. C	T/C Number 64 Deg. C	T/C Number 65 Deg. C
0	21	22	22	22
2	21	22	22	22
4	21	22	22	22
6	21	22	22	22
8	22	22	22	22
10	22	22	22	22
12	22	22	23	22
14	22	31	24	22
16	22	44	34	22
18	23	53	45	23
20	25	59	52	25
22	28	62	56	28
24	31	65	59	30
26	34	66	62	33
28	36	67	63	35
30	38	68	64	37
32	40	69	65	39
34	42	70	66	41
36	44	70	66	43
38	45	71	67	44
40	47	72	68	46
42	48	73	69	47
44	**	**	**	**
46	**	**	**	**
48	**	**	**	**
50	**	**	**	**
52	**	**	**	**
54	**	**	**	**
56	**	**	**	**
58	**	**	**	**
60	**	**	**	**
62	**	**	**	**
64	**	**	**	**
66	**	**	**	**
68	**	**	**	**

****Doorset B blanked off at 42 minutes**

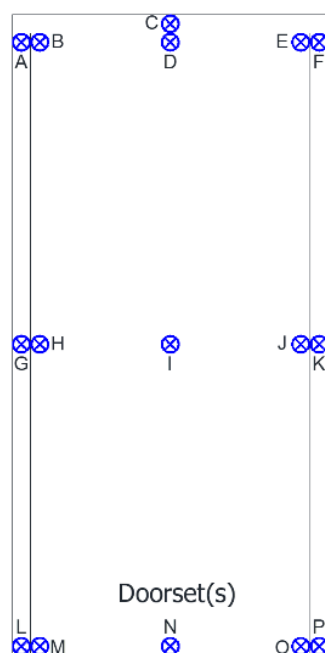
Individual temperatures recorded on the frame of Doorset B

Time Mins	T/C Number 66 Deg. C	T/C Number 67 Deg. C	T/C Number 68 Deg. C	T/C Number 69 Deg. C
0	22	22	21	22
2	22	22	21	22
4	22	22	21	22
6	22	22	21	22
8	22	23	21	22
10	22	29	21	22
12	22	36	22	22
14	22	40	22	22
16	22	46	23	22
18	22	46	24	22
20	22	*	27	22
22	22	*	27	22
24	22	*	28	22
26	22	*	31	22
28	22	*	31	22
30	22	*	30	22
32	22	*	29	23
34	23	*	28	23
36	23	*	28	23
38	23	*	28	23
40	23	*	28	23
42	23	*	28	23
44	**	**	**	**
46	**	**	**	**
48	**	**	**	**
50	**	**	**	**
52	**	**	**	**
54	**	**	**	**
56	**	**	**	**
58	**	**	**	**
60	**	**	**	**
62	**	**	**	**
64	**	**	**	**
66	**	**	**	**
68	**	**	**	**

*Thermocouple malfunction

**Doorset B blanked off at 42 minutes

Horizontal deflections of Doorset A



Deflections (mm)																
Time-mins	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	-1	11	3	-4	-5	2	0	4	3	3	2	3	-1	1	-1	1
20	-3	-1	0	-4	4	-1	-2	0	3	4	2	-1	1	***	1	0
30	-4	3	-3	1	0	1	-3	7	4	3	0	3	0	***	3	2
40	-2	0	1	-3	2	-1	0	2	3	1	3	2	0	3	2	2
50	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
60	0	-1	3	-5	-3	1	-3	4	1	2	0	3	0	-1	2	-1
68	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

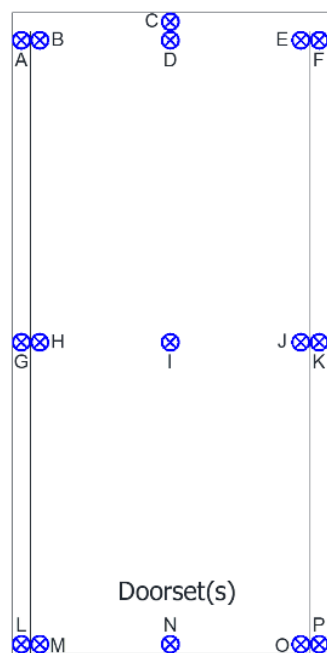
*Unable to measure due to blanking off of Doorset B

**Unable to measure due to extinguishing of flaming on Doorset B.

***Deflection gauge malfunction.

Positive values indicate movement towards the furnace

Horizontal deflections of the Doorset B



Deflections (mm)																
Time-mins	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	-1	3	0	2	6	-2	2	0	1	1	1	0	0	-1	0	-2
10	1	*	1	-1	8	1	3	1	0	-13	0	0	5	2	2	-2
15	2	-2	-2	0	6	1	2	2	-3	-4	1	-1	7	2	3	0
20	-3	1	-2	2	11	3	2	-3	-1	-1	1	0	7	0	4	-1
25	2	0	0	0	*	-1	1	-4	-4	-4	1	1	7	1	4	-1
30	2	2	3	-1	10	0	0	1	-2	0	0	-1	8	4	3	-4
35	0	-2	0	-2	10	1	0	1	-2	-3	2	3	8	3	4	-4
40	1	-3	-4	1	6	-3	0	1	-7	-3	-1	0	9	3	3	-4

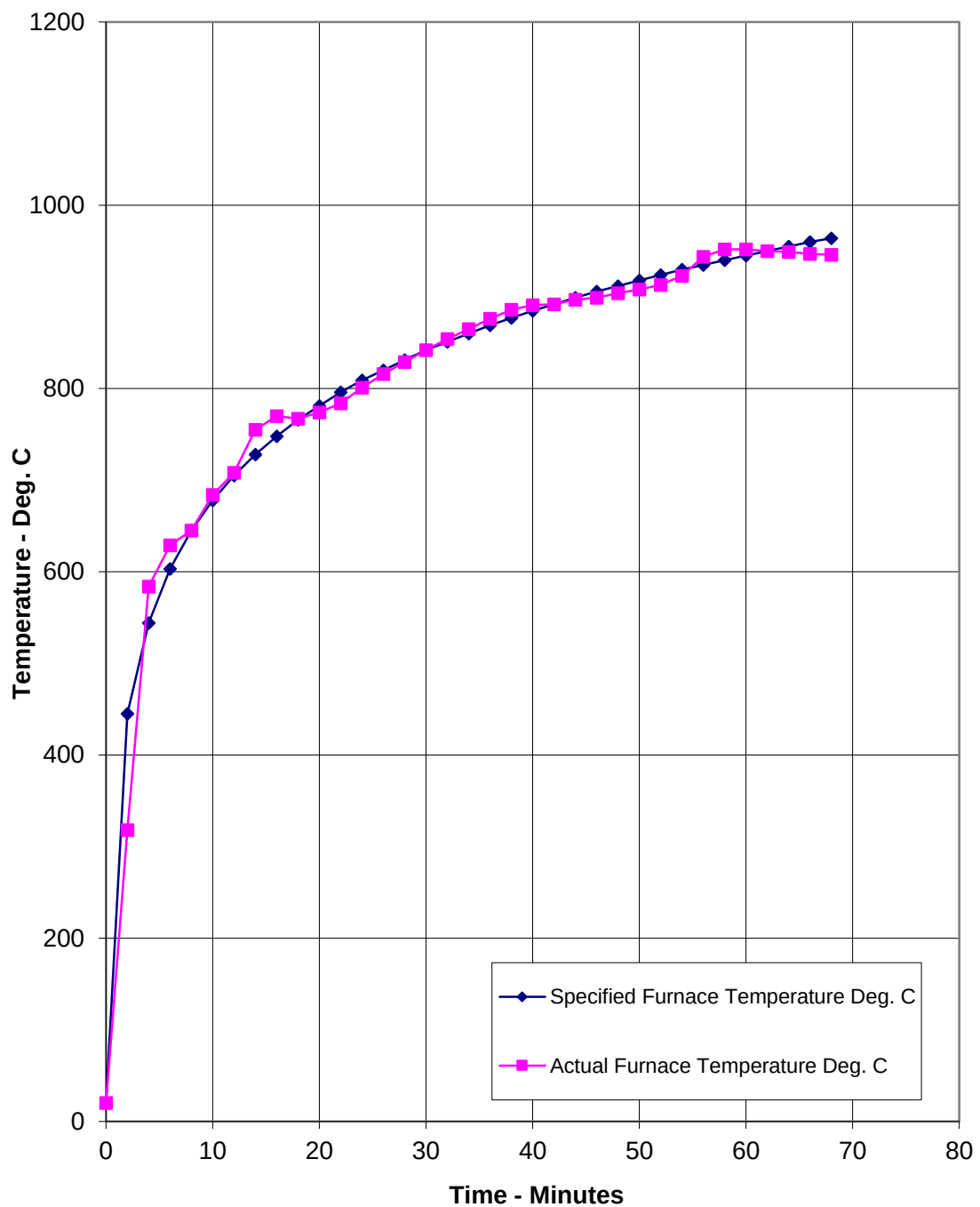
*Deflection gauge malfunction.

Positive values indicate movement towards the furnace

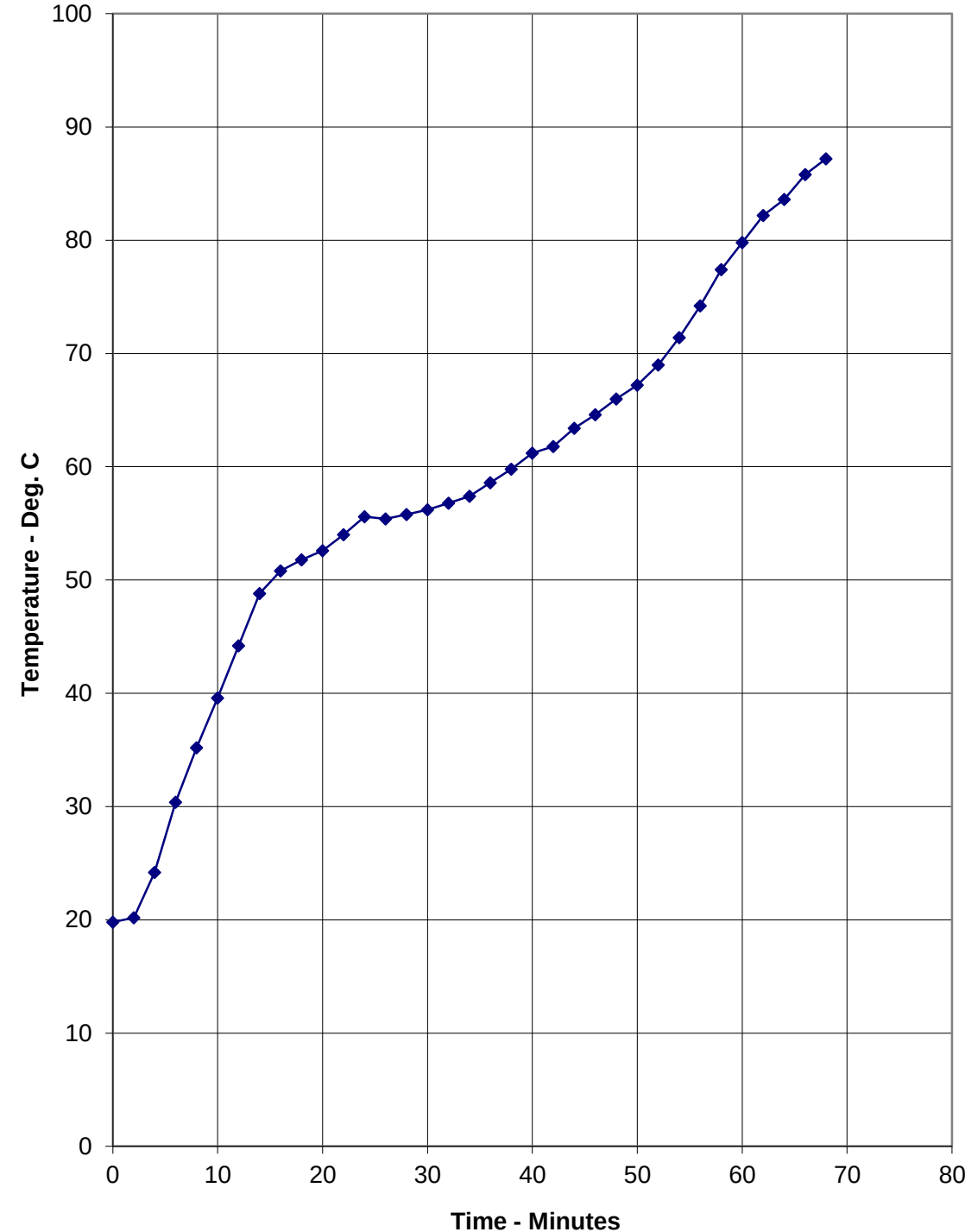
Recorded heat radiation intensity from Doorset A

Time Mins	Radiation Intensity kW/m2
0	0.001
2	0.007
4	0.012
6	0.024
8	0.029
10	0.050
12	0.064
14	0.072
16	0.091
18	0.090
20	0.099
22	0.108
24	0.103
26	0.117
28	0.113
30	0.112
32	0.121
34	0.119
36	0.119
38	0.137
40	0.125
42	0.143
44	0.131
46	0.123
48	0.137
50	0.131
52	0.133
54	0.163
56	0.179
58	0.176
60	0.212
62	0.225
64	0.288
66	0.330
68	0.498

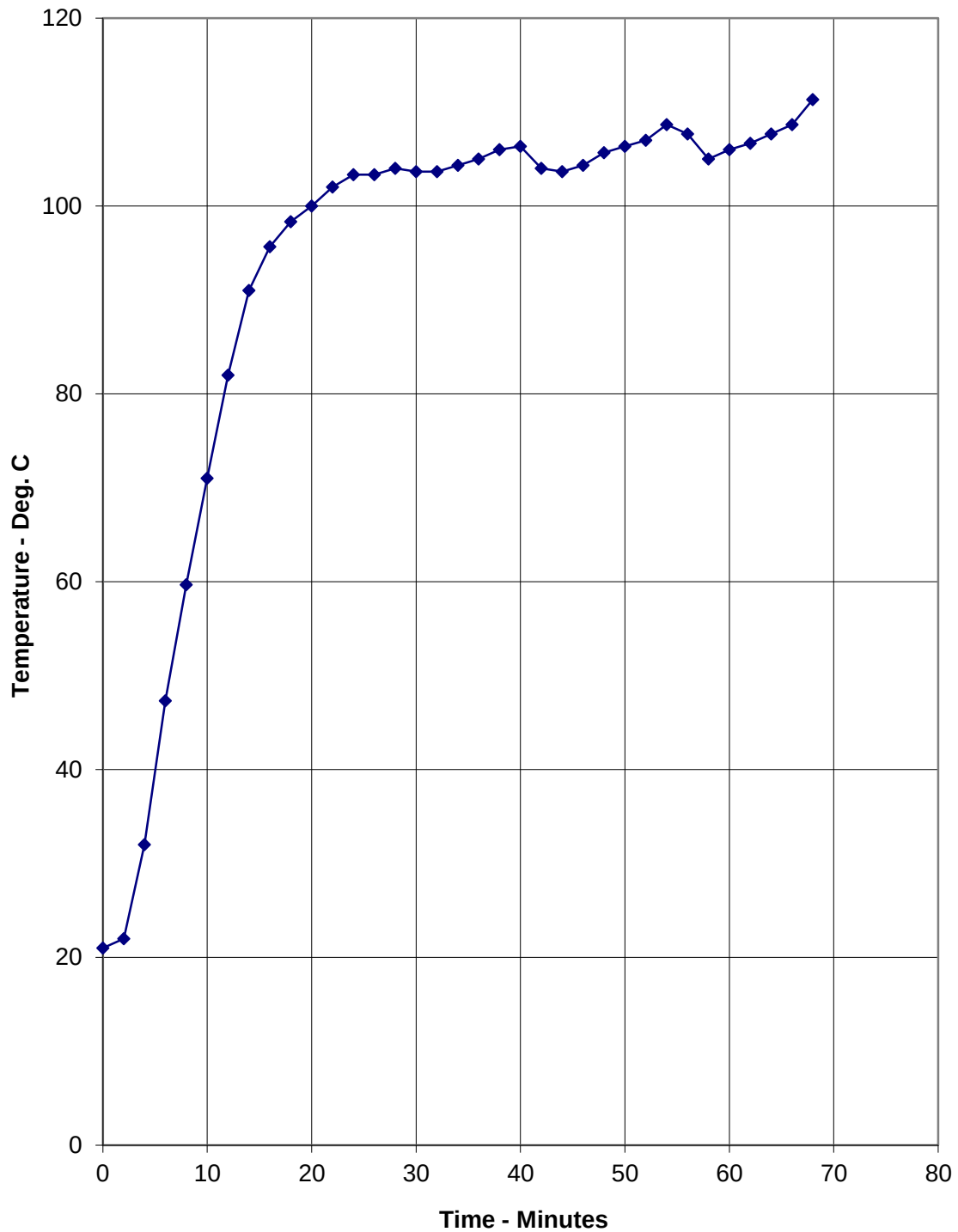
Graph showing mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1: 2020



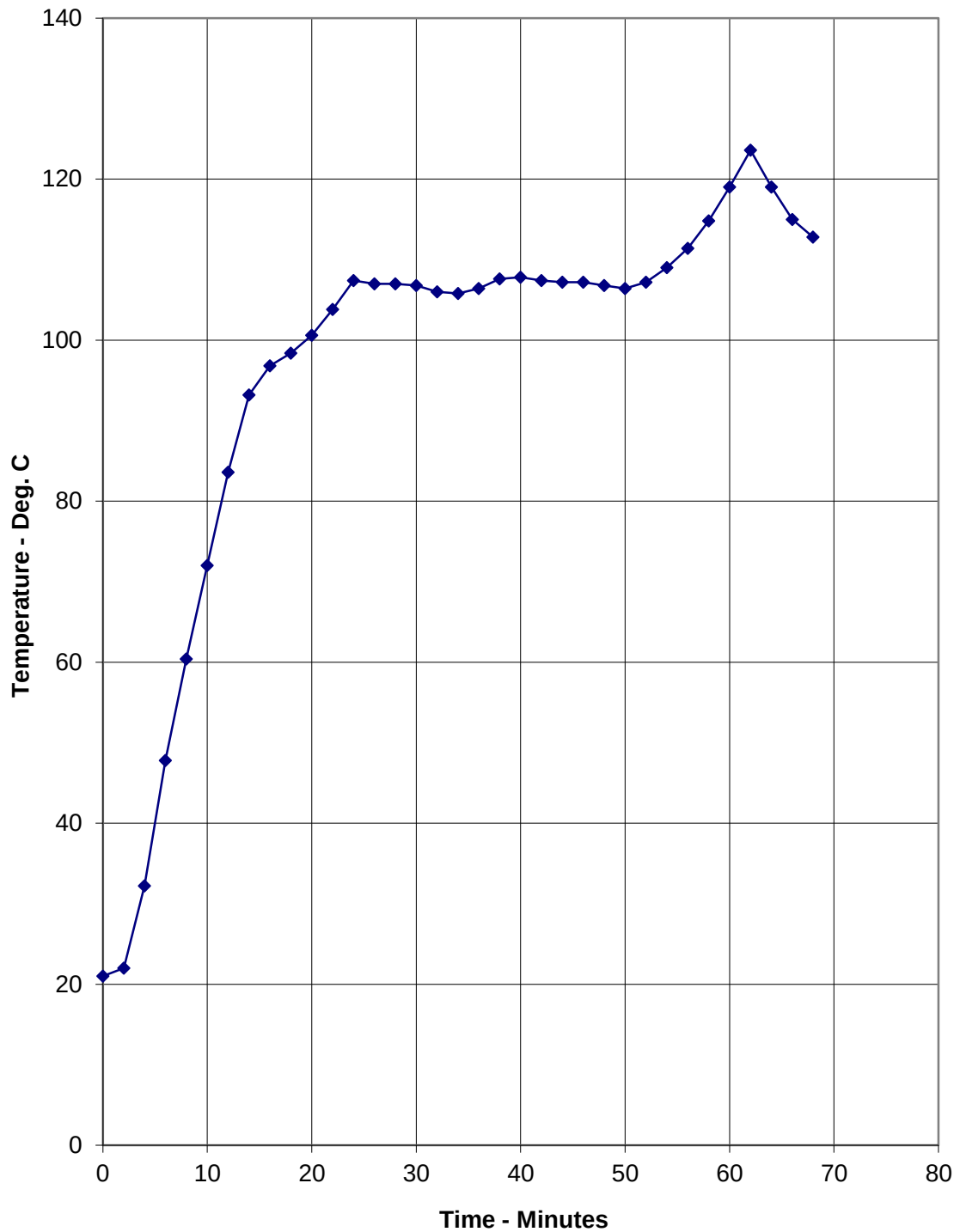
Graph showing mean temperature recorded on the unexposed surface of Doorset A



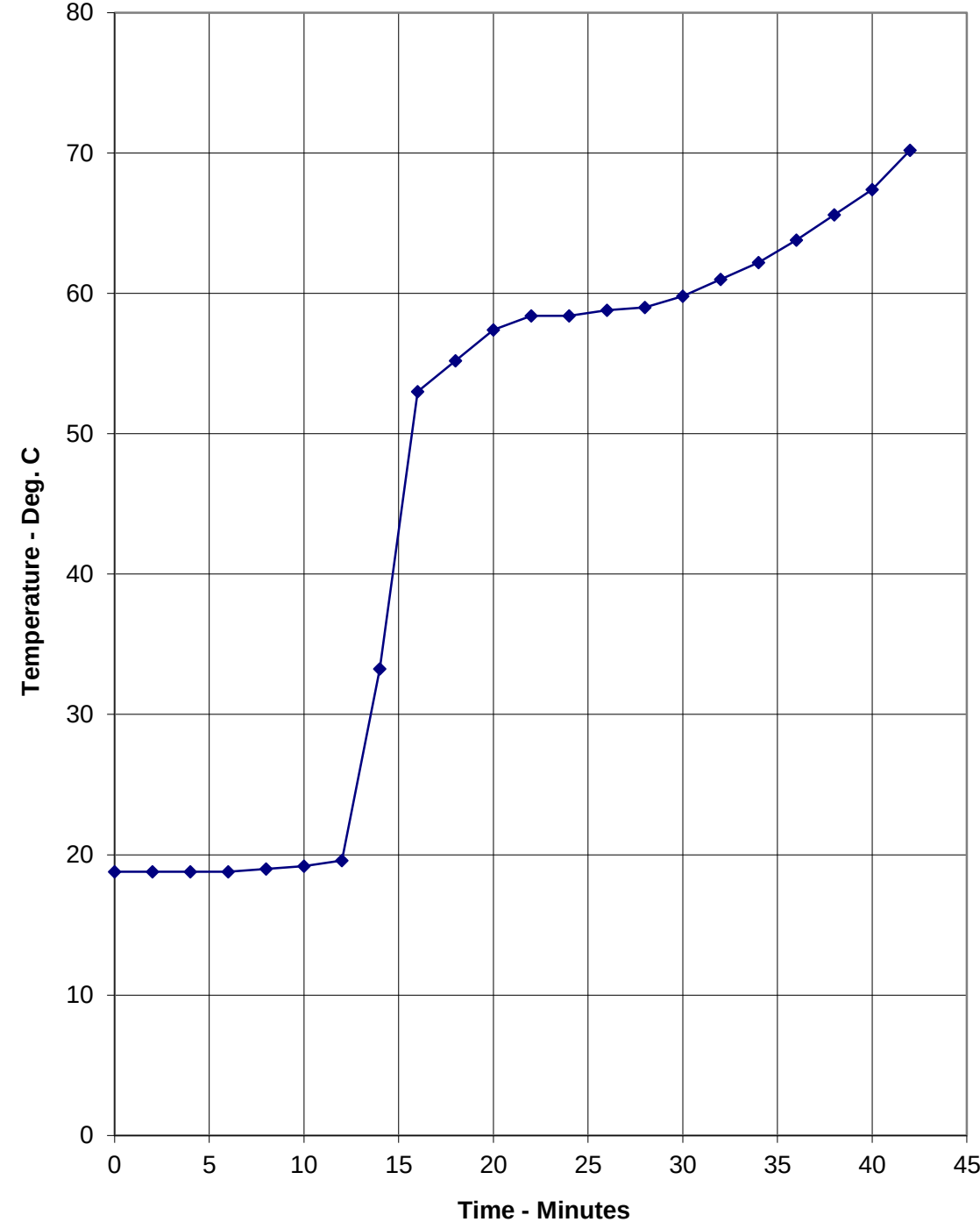
Graph showing mean temperature recorded on the unexposed surface on the top vision panel of Doorset A



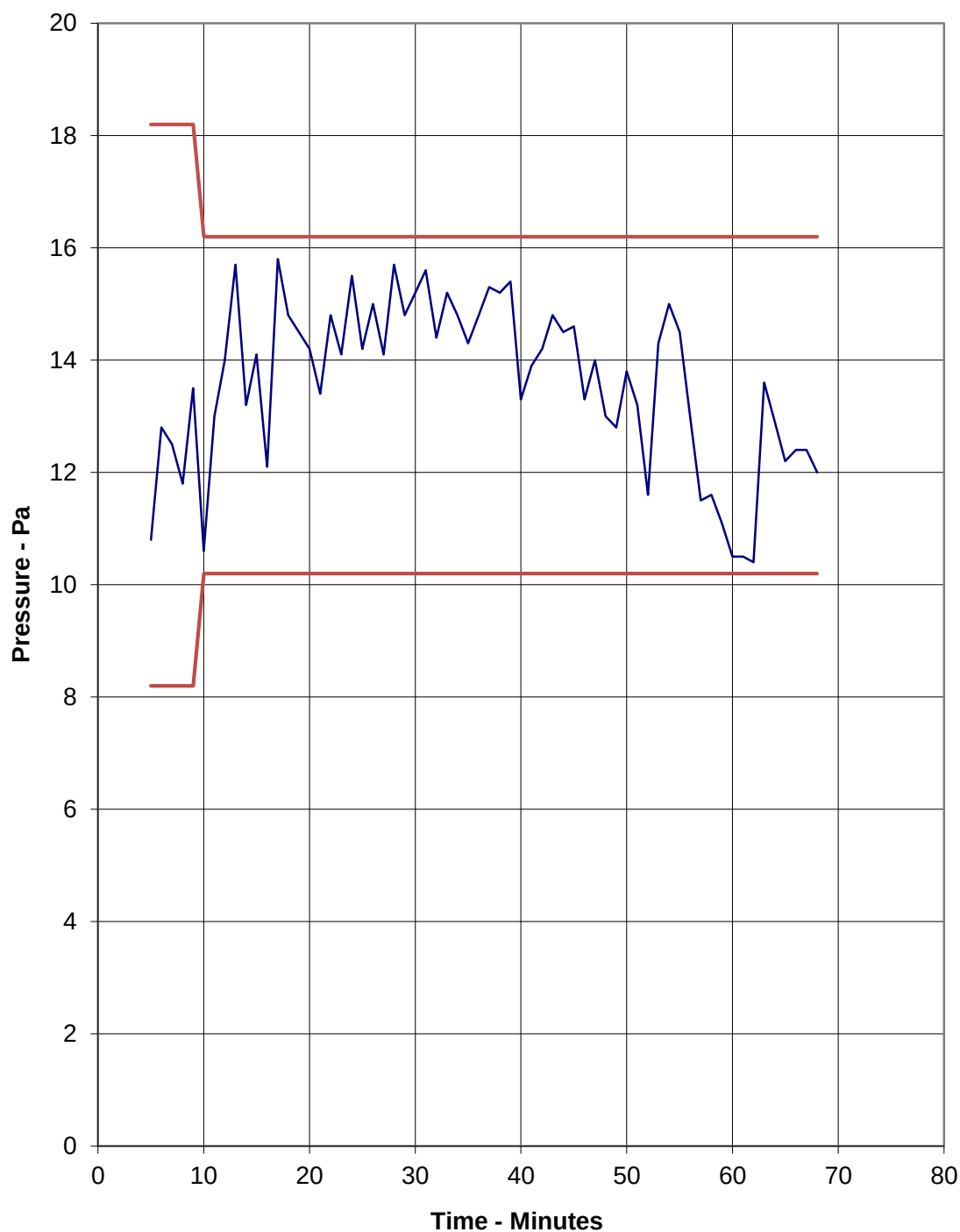
Graph showing mean temperature recorded on the unexposed surface on the bottom vision panel of Doorset A



Graph showing mean temperature recorded on the unexposed surface of Doorset B



Graph showing recorded furnace pressure at 2050 mm above the threshold of the doorsets



On-going Implications

Validity

This document is the original version of this test report and is written in English. In case of doubt, the original version prevails over a translation. This document is issued subject to Warringtonfire's standard terms and conditions, which are available at: [Terms and Conditions | Element](#).

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criteria for assessing the potential fire hazard of the product in use, nor can the results be extrapolated and applied to other products.

Reports are statements of fact(s) prepared in accordance with the referenced version of the standard(s). Reports are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this report apply to the test specimens as received. The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential fire performance of the element in use, nor do they reflect the actual behaviour in fires.

This report details the method of construction, the test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in BS EN 1634-1:2014+A1:2018, BS EN 1363-1:2020, and where appropriate BS EN 1363-2:1999.

Any significant deviation with respect to size, constructional details, loads, stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

Any differences in relation to the aforementioned characteristics may significantly affect the performance and will therefore invalidate the application of the test results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the test sponsor. The test sponsor should then obtain appropriate documentary evidence of compliance from Warringtonfire or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

The specification and the interpretation of fire test methods are both the subject of ongoing development and refinement. Changes in the applicability of the results of tests in relation to associated legislation may also occur. For these reasons the currency and the relevance of test reports should be considered by the user.

The test report also relates only to the sample(s) of the product submitted to the test. The laboratory accepts no responsibility for the representativeness of the test specimens unless so stated in the test report.

Confidence that the product that is supplied to the market will have the performance indicated in the test report can be supported by use of third-party certification schemes.

This report may only be reproduced in full. Extracts or abridgements shall not be published without the express written permission of Warringtonfire.

The report is issued for the benefit of Warringtonfire's direct customer only and may not be relied upon by any third parties without Warringtonfire's express written consent.

Uncertainty of measurements

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

EGOLF

Certain aspects of some fire test specifications are open to different interpretations. EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed:

017-2018 - Position of thermocouples on door frame

019-2018 - Use of the average temperature thermocouples for determining maximum temperature criterion

022-2018 - Discrete areas statement of insulation criteria

032-2018 - Definition of gaps and measurement of size of gaps

034-2018 - Opening/closing of doors before test

062-2022 V2 - Reporting test results

Revision history

N/A

Note: The field of direct application may only be defined following the identification of classification(s). The field of direct and, where applicable, extended application will be included in the classification report.

Sample Report

Not attached - Copies of sampling reports available on request.



Registered office:

Warringtonfire Testing and Certification Limited
3rd Floor, Davidson Building, 5 Southampton Street, London,
WC2E 7HA, United Kingdom
Registered Company No. 11371436

Location of performance of laboratory activities:

Warringtonfire Testing and Certification Limited
Holmesfield Road, Warrington WA1 2DS, United Kingdom
a UKAS accredited testing laboratory No.0249

Element Materials Technology
722 Birchwood Park, Warrington WA3 6FW, United Kingdom
a UKAS accredited testing laboratory No.0249

Fire resistance laboratory locations:

High Wycombe, United Kingdom
a UKAS accredited testing laboratory No.1762
T: +44 (0) 1494 840 780

Warrington, United Kingdom
a UKAS accredited testing laboratory No.0249
T: +44 (0) 1925 655 116

Ghent, Belgium
BELAC accredited laboratory 196-TEST
T: +32 9 243 77 50

Tisselt, Belgium
BELAC accredited laboratory 196-TEST
T: +32 9 243 77 50

Heywood, United Kingdom
a UKAS accredited testing laboratory No.0249
T: +44 (0) 1925 655 116

General conditions of use

The data, methodologies, calculations and results documented in this report specifically relate to the tested specimen/s and must not be used for any other purpose. This report may only be reproduced in full. Extracts or abridgements must not be published without permission from Warringtonfire.

All work and services carried out by Warringtonfire are subject to, and conducted in accordance with, our standard terms and conditions. These are available on request or at <https://www.element.comrms/terms-and-conditions>.