27 May 2020

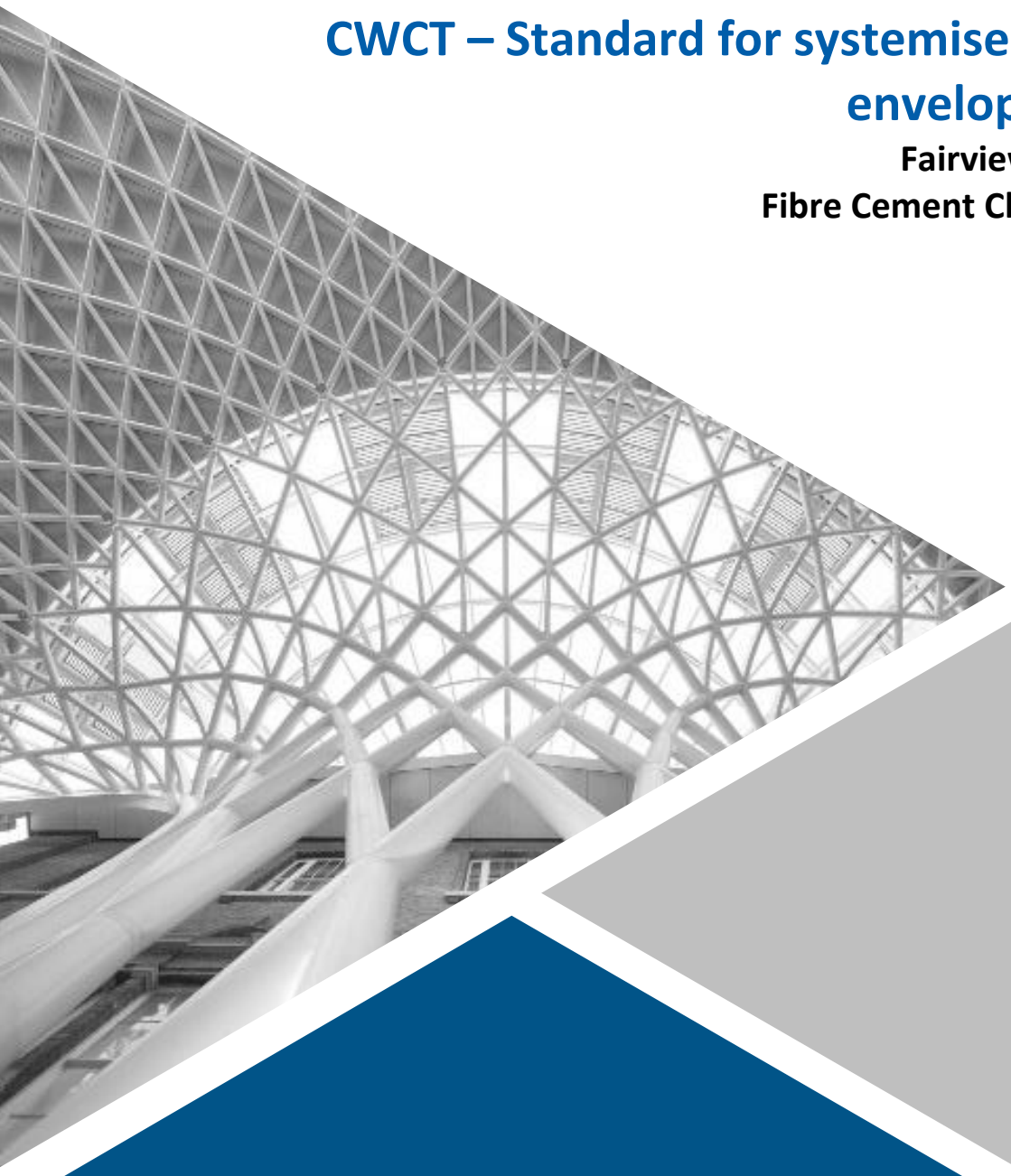
WINTECH
TESTING & CERTIFICATION
by UL

UKAS TESTING
2223

Technical Report – R20933
CWCT – Standard for systemised building envelopes – 2005

Fairview Europe Ltd

Fibre Cement Cladding Panel



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www.wintechtesting.com |Tel: +44 (0)1952 586580

Contents

1. Introduction

This report describes tests carried in order to determine the weather tightness of the sample with respect to wind resistance on sample supplied as follow:

Test Details	
Customer:	Fairview Europe Ltd 7 Robins Drive Castlefields Industrial Estate Bridgwater TA6 4DL
Product Tested:	Fibre Cement Cladding Panel
Date of Test:	25th and 26th February 2020
Test Conducted at:	Wintech Engineering Limited Halesfield 2 Telford Shropshire TF7 4QH
Test Conducted by:	P Seymour – Laboratory Technician D Reynolds – Engineering Technician J Dove – Laboratory Assistant
Test Supervised by:	M Cox – Engineering Leader
Test Witnessed by:	G Besley – Fairview Europe Ltd

Report Authorisation	
Report Compiled by:	D Price – Senior Engineering Associate
Authorised by:	M Wass – Engineering Manager

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2. Summary of Results

2.1 The test methods

The test methods were in accordance with the following standards:

CWCT Standard Test Methods for Building Envelopes - December 2005	
Wind Resistance – Serviceability	CWCT Section 11
Wind Resistance – Safety	CWCT Section 12

2.2 Summary of Results

The following summarises the results of testing carried out, in accordance with the relevant testing and classification standards.

The performance of the sample tested has been assessed against the criteria described in the below standards with the exception of the deflection limits which were pre-agreed with the client prior to the testing being conducted. The results detailed in this test report and marked with an asterisk (*) are within the measurement uncertainty. The result and classifications reported indicates the greater probability of result certainty.

Test Type	Peak Test Pressure	Result	Date of Test
Test 1 – Wind Resistance (Serviceability) – Backing Wall	2400 Pa	Pass*	25.02.20
Test 2 – Wind Resistance (Serviceability) – Cavity	2400 Pa	Pass*	25.02.20
Test 3 - Wind Resistance – Safety – Backing Wall	3600 Pa	Pass*	25.02.20
Test 4 - Wind Resistance – Safety – Cavity	3600 Pa	Pass*	26.02.20
Dismantle, Inspect & Report	**Sample Passed**		

More comprehensive details are reported in Section 6.

These results are valid only for the conditions under which the test was conducted.

All measurement devices, instruments and other relevant equipment were calibrated and traceable to National Standards.

3. Description of Test Sample

The description of the test sample in this section has been supplied by the customer and has not been verified by Wintech Engineering Limited.

See Section 7 for test sample drawings as supplied by Fairview Europe Ltd.

Product Description

Full product name:	Ceramapanel
Product type:	Architectural rainscreen panel
Product description:	Through coloured compressed fibre cement panel
Manufactured by:	Fairview

Support Framing and bracketry

Material:	Aluminium
Finish:	Mill-finish
Vertical rail Ref:	VFTR12560, Vitrafix VF1 T Rail, 125x60mm VFLR50, Vitrafix VF1 L Rail, 50x50mm
Horizontal rail Ref:	Vitrafix VF2 Rail, 30x190mm Vitrafix VF2 Rail, 30x105mm
Fixing method (rail to backing wall):	Self-drilling screw through sheathing board fixing into light weight steel frame vertical studs
Fixing Ref:	VFSD5.535mm Vitrafix Self-Drilling Screws, 5.5x35mm
Fixing method (bracket to horizontal rail):	Vitrafix self-drilling screw
Fixing Ref:	VFSD5.525mm Vitrafix Self-Drilling Screws, 5.5x25mm
Fixing method (bracket to rail):	Vitrafix self-drilling screw
Fixing Ref:	VFSD4.825mm Vitrafix Self-Drilling Screws, 4.8x25mm
Max Span between vertical rails:	650mm
Max Span between brackets/horizontal rails:	550mm
Brackets ref:	VF160SB, Vitrafix VF1, 160mm single brackets VF160DB, Vitrafix VF1, 160mm Double brackets

Panels/tiles

Material:	Compressed Fibre Cement
Material ref (source, spec):	Ceramapanel
Finish:	Natural Textures Raw
Thickness:	10mm and 8mm
Reinforcing:	
Max height of panel:	3050mm
Max width of panel:	1250mm
Max size of panel by area (m2):	3.8125m2
Fixing method:	Face fixed rivets
Bracket/clip ref:	
Screws/fixings ref:	VFSSR4.820, Vitrafix Rivet, 4.8x20mm

Interface Details (curtain wall to window/door inserts)

Window interface detail:	Aluminium pressing/flashing returning into window jamb and head
Door interface detail:	Aluminium pressing/flashing returning into door jamb and head

Backing Wall

Structural support type:	Light weight steel frame – 150mm studs
Insulation type:	
Insulation thickness:	
Airtight membrane:	Warptite (Vapour Permeable, Airtight, Self-Adhesive Membrane) by A. Proctor Group
Watertight membrane:	
Particle board detail:	12mm Y-Wall A1 Sheathing Board
Sealants and tapes:	
Fixings ref:	

Drawings

Drawing/s must be provides covering the below; -Full drawing of sample including front elevation -Cross Sections (Panels/Rails Etc.) -Hardware Locations -Fixings -Drainage Points Note: drawings are required to show all relevant dimensions.	As detailed in Section 7
Test sample size:	9000 x 5000mm

Confirmation

Customer is to confirm that the samples provided for testing are representative of standard production. Please note: the details given above, as well as the drawings supplied by the customer as confirmed as typical of normal production are not verified by UL Wintech Engineering Limited.	
Company:	Fairview Europe Ltd
Name:	Gavin Besley
Position:	Technical Manager
Date:	3rd March 2020

Sample during testing

Photograph No. 1

4. Test Arrangement

4.1 Test Chamber

A specimen, supplied for testing in accordance with CWCT requirements, was mounted on to a rigid test chamber constructed from steel, timber and plywood sheeting.

The pressure within the chamber was controlled by means of a centrifugal fan and a system of ducting and valves. The static pressure difference between the outside and inside of the chamber was measured by means of a differential pressure transmitter.

4.2 Instrumentation

4.2.1 Static Pressure

A differential pressure transmitter capable of measuring rapid changes in pressure to an accuracy within 2%, was used to measure the pressure differential across the sample.

4.2.2 Deflection

Digital linear measurement devices with an accuracy of +/- 0.1 mm were used to measure deflection of principle framing members.

4.2.3 Temperature & Humidity

A digital data logger capable of measuring temperature with an accuracy of ± 1°C and humidity with an accuracy of ± 5 %Rh was used.

4.2.4 Barometric Pressure

A digital barometer capable of measuring barometric pressure with an accuracy of ± 1 kPa was used.

4.2.5 General

Electronic instrument measurements were scanned by a computer-controlled data logger, which processed and recorded the results.

4.3 Pressure Generation

4.3.1 Static Air Pressure

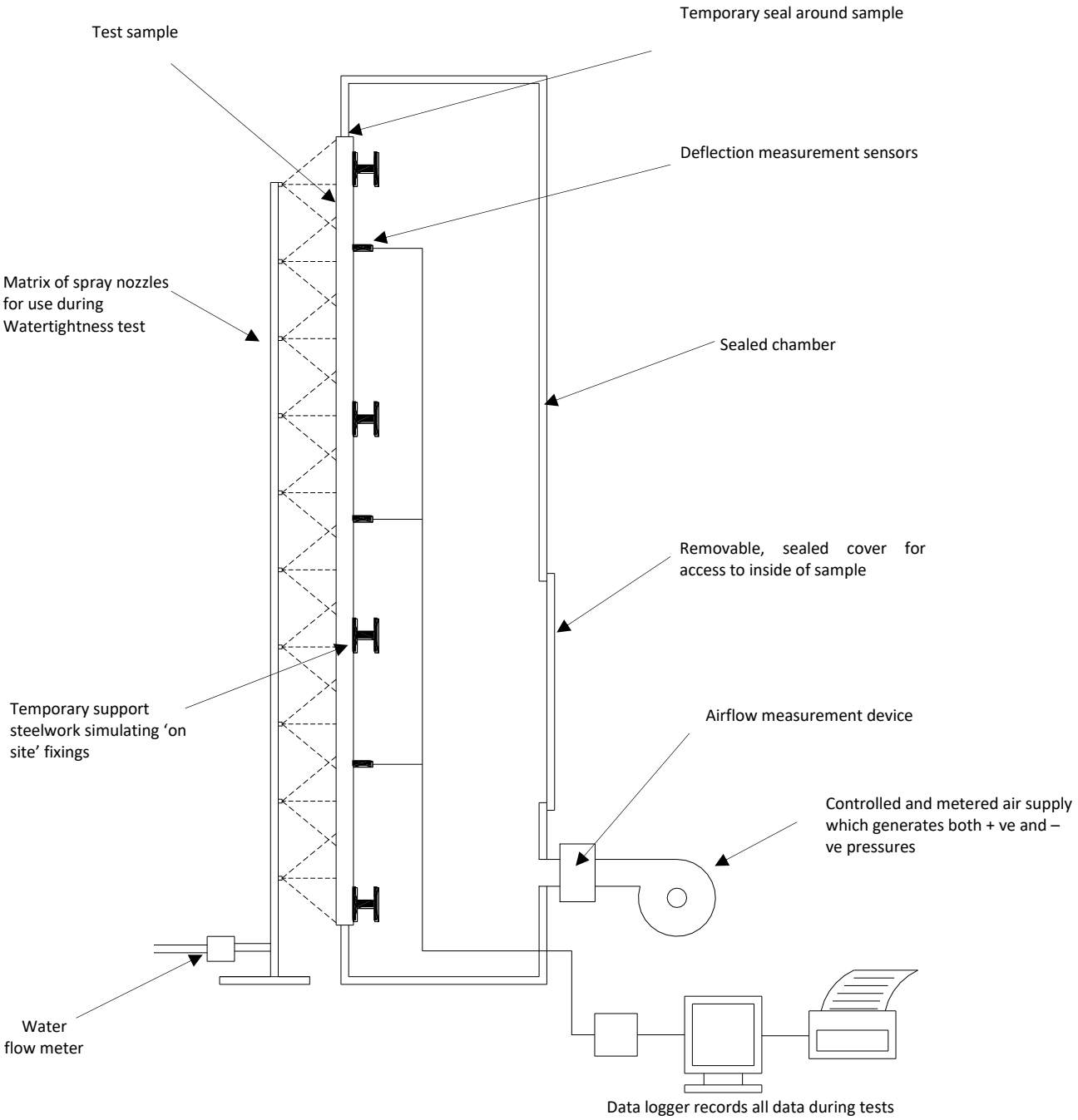
The air supply system comprised of a centrifugal fan assembly and associated ducting and control valves and was used to create both positive and negative static pressure differentials. The fan provided a constant airflow at the required pressure and period required for the tests.

Note: References are made to both positive and negative pressures in this document, it should be noted that in these instances, positive pressure is when pressure on the weather face of the sample is greater than that on the inside face and vice versa.

All measurement devices, instruments and other relevant equipment were calibrated and are traceable to National Standards.

Figure 1 – Test arrangement

General Arrangement of a Typical Test Assembly



5. Test Procedures

5.1 Sequence of Testing

Test 1 – Wind Resistance - Serviceability – Backing Wall
Test 2 – Wind Resistance - Serviceability - Cavity
Test 3 – Wind Resistance – Safety – Backing Wall
Test 4 – Wind Resistance – Safety – Cavity

5.2 Wind Resistance

5.2.1 Wind Resistance - Serviceability

Three (3) preparatory pulses of 1200 Pa (50% of design wind load) positive pressure were applied to the test sample. Upon returning to 0 Pa, any opening parts of the test specimen were opened and closed five (5) times, secured in the closed position. All deflection sensors were then zeroed.

The sample was then subjected to positive pressure stages of 600, 1200, 1800 and 2400 Pa (25%, 50%, 75% and 100% of design wind load) and held at each step for 15 seconds (± 5 secs).

The deformation status of the sample was recorded at each step at characteristic points as stated in the standard, following which the pressure was reduced to 0 Pa and any residual deformations recorded within 1 hour of the test.

The above test sequence was then repeated, including preparation pulses, at a negative pressure differential.

Following each of the above tests, the sample was inspected for permanent deformation or damage.

5.2.2 Wind Resistance - Safety

Three preparatory positive air pressure pulses of 1200 Pa (50% of design wind load) positive pressure were applied to the test sample, and the deflection sensors were zeroed.

The sample was subjected to a positive pressure pulse of 3600 Pa (2400 Pa x 150%). The pressure was applied as rapidly as possible but in not less than 1 second and was maintained for 15 seconds (± 5 secs).

Following this pressure pulse and upon returning to zero (0) pressure, residual deformations were recorded and any change in the condition of the specimen was noted.

After the above sequence, a visual inspection was conducted, any moving parts were operated and any damage or functional defects noted.

The above test sequence was then repeated, including preparation pulses, at a negative pressure differential. The deflection sensors were zeroed following the preparation pulses.

Following each of the above tests, the sample was inspected for any permanent deformation or damage.

6. Test Results

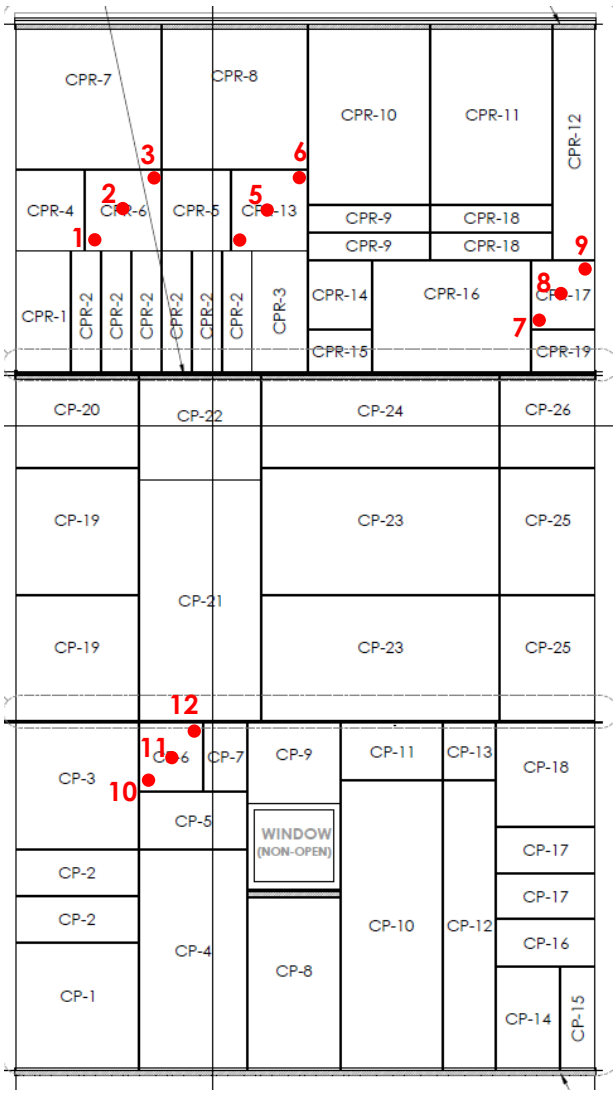
6.1 Wind Resistance

Probe Group Identification	Calculation of deflection
Group A comprised of probes 1, 2 & 3	= Probe 2 – ((Probe 1 + Probe 3)/2)
Group B comprised of probes 4, 5 & 6	= Probe 5 – ((Probe 4 + Probe 6)/2)
Group C comprised of probes 7, 8 & 9	= Probe 8 – ((Probe 7 + Probe 9)/2)
Group D comprised of probes 10, 11 & 12	= Probe 11 – ((Probe 10 + Probe 12)/2)

An inspection carried out following tests 1, 2, 3 and 4, after both positive and negative pressure testing, showed no evidence of any permanent deformation or damage to the test sample.

Figure 2

Positions of Deflection Measurement Probes



View from Outside
Not to Scale

- Deflection probe position

6.2.1 Tests 3 & 4 - Wind Resistance, Serviceability

Temperatures (°C)	Ambient	8.0

Measured Length of Framing Member (mm)		Allowable Deflection					
		Ratio	Calculated (mm)	Ratio Info Only	Calculated (mm)	Ratio Info Only	Calculated (mm)
Group A	825	L/90	9.2	L/360	2.3	L/100	8.3
Group B	820	L/90	9.1	L/360	2.3	L/100	8.2
Group C	580	L/90	6.4	L/360	1.6	L/100	5.8
Group D	670	L/90	7.4	L/360	1.9	L/100	6.7

Frontal deflection shall recover by either 95%, or 1mm, whichever the greater.

6.2.1.1 Wind Resistance, Serviceability - Positive Pressure

Positive Pressure Pa	Results			
	Group A	Group B	Group C	Group D
0	0.0	0.0	0.0	0.0
600	1.1	0.6	0.1	0.4
1200	2.3	1.2	0.4	0.7
1800	3.5	1.8	0.6	1.1
2400	4.6	2.3	1.0	2.0
Residuals Immediately following test	0.2	0.0	0.1	0.1

6.2.1.2 Wind Resistance, Serviceability - Negative Pressure

Negative Pressure Pa	Results			
	Group A	Group B	Group C	Group D
0	0.0	0.0	0.0	0.0
600	2.2	0.5	0.3	0.9
1200	4.7	1.8	0.6	2.0
1800	6.9	2.9	1.0	2.7
2400	8.4	3.6	1.4	3.2
Residuals Immediately following test	0.1	0.1	0.1	0.3

6.2.2 Tests 5 & 6 - Wind Resistance, Safety

Temperatures (°C)	Ambient	5.0

Measured Length of Framing Member (mm)		Allowable Residual Deformation	
		Ratio	Calculated (mm)
Group A	825	L/500	1.7
Group B	820	L/500	1.6
Group C	580	L/500	1.2
Group D	670	L/500	1.3

6.2.2.1 Wind Resistance, Safety - Positive Pressure

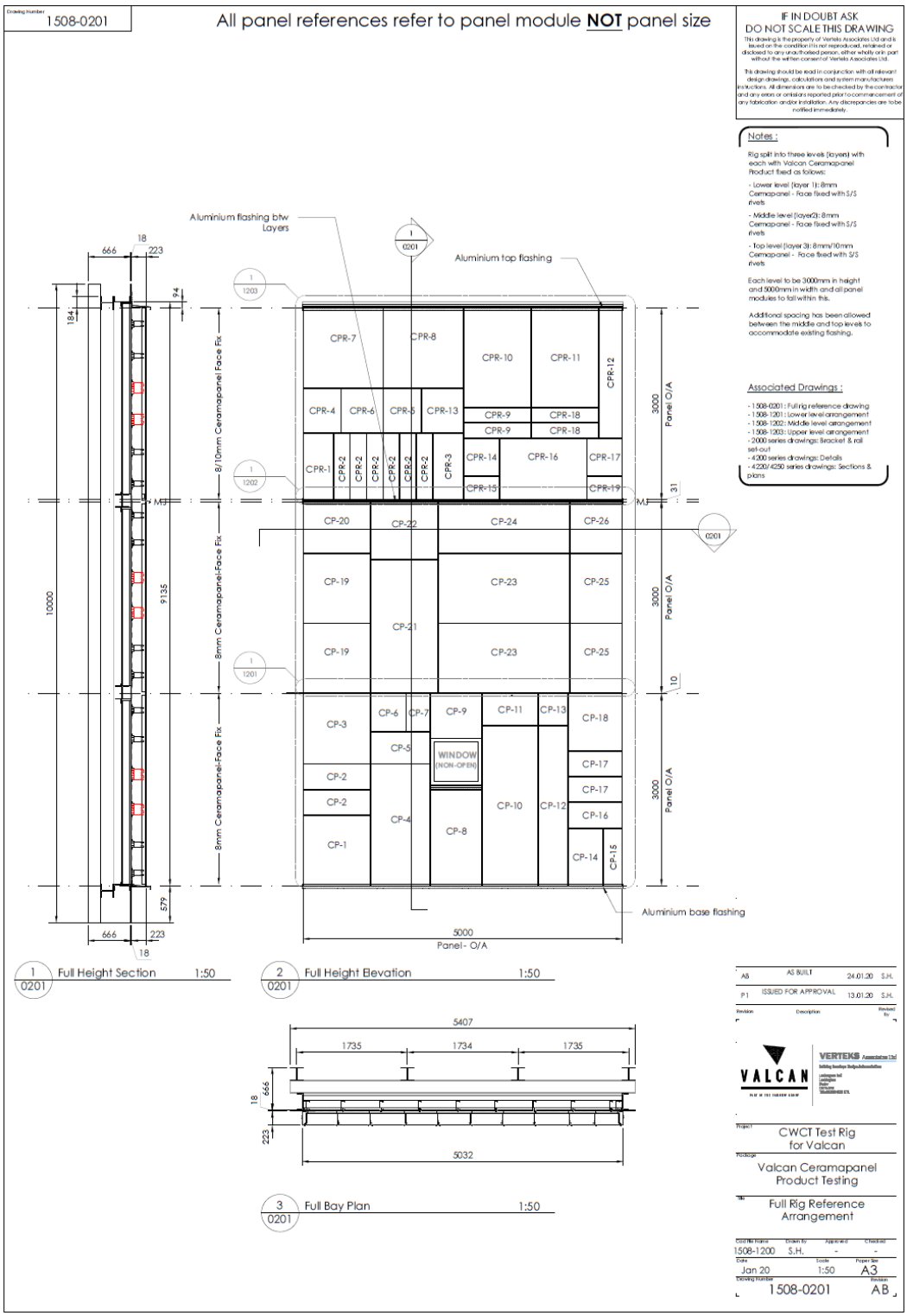
Positive Pressure Pa	Results			
	Group A	Group B	Group C	Group D
0	0.0	0.0	0.0	0.0
3600	6.4	3.3	1.7	7.1
Residuals Immediately following test	0.0	0.0	0.1	0.1

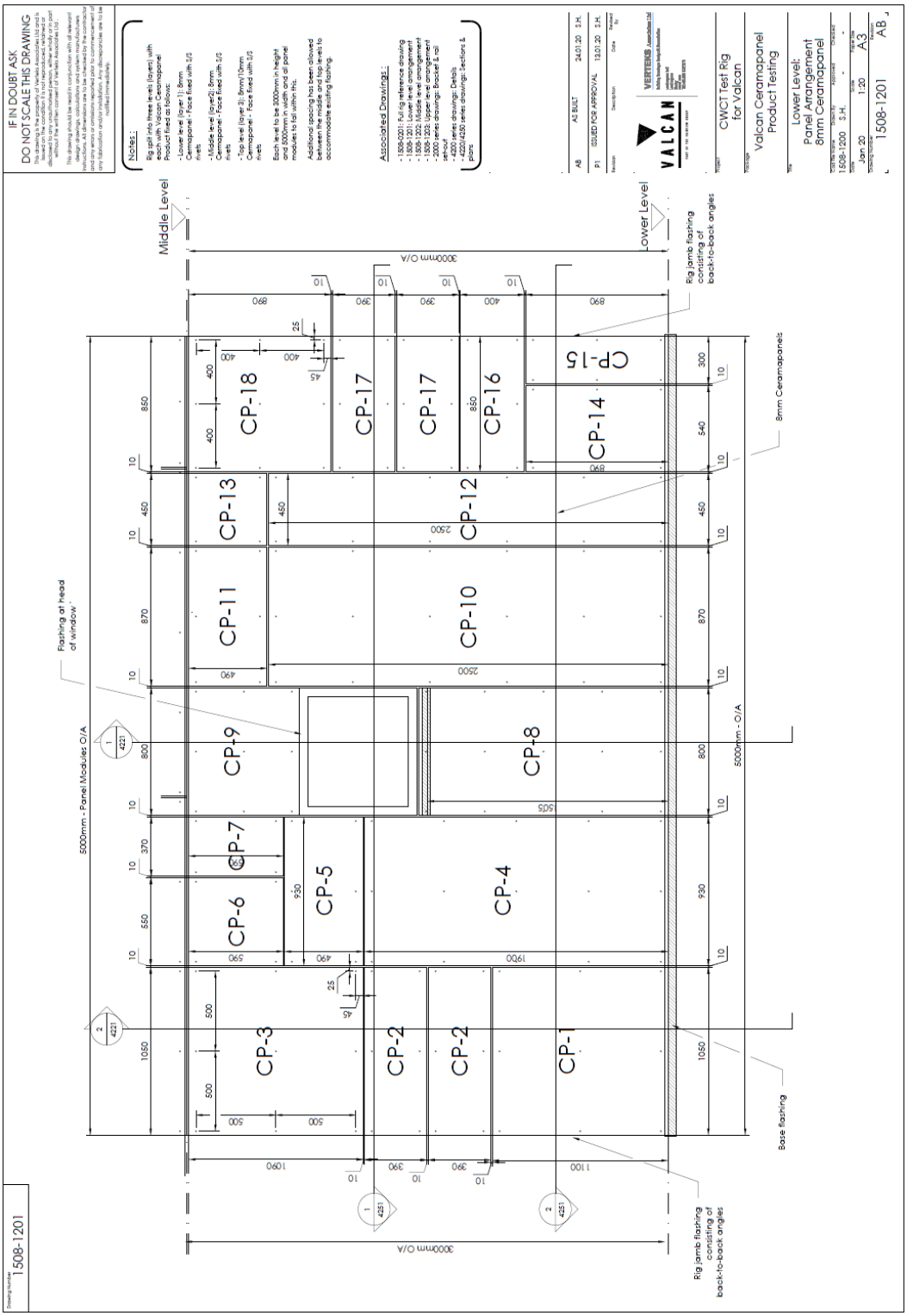
6.2.2.2 Wind Resistance, Safety - Negative Pressure

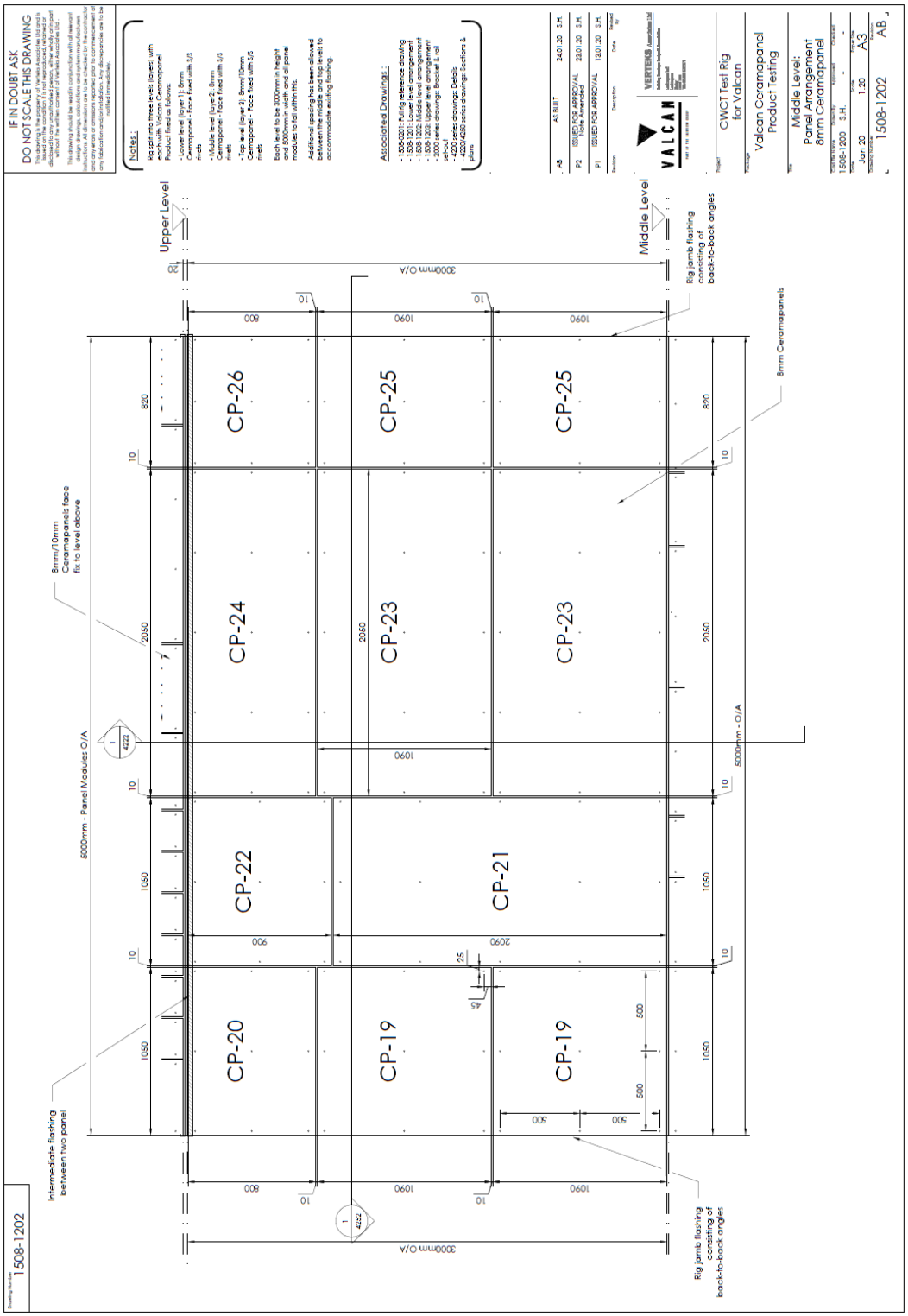
Negative Pressure Pa	Results			
	Group A	Group B	Group C	Group D
0	0.0	0.0	0.0	0.0
3600	5.3	5.3	2.6	0.7
Residuals Immediately following test	0.4	0.1	0.1	0.2

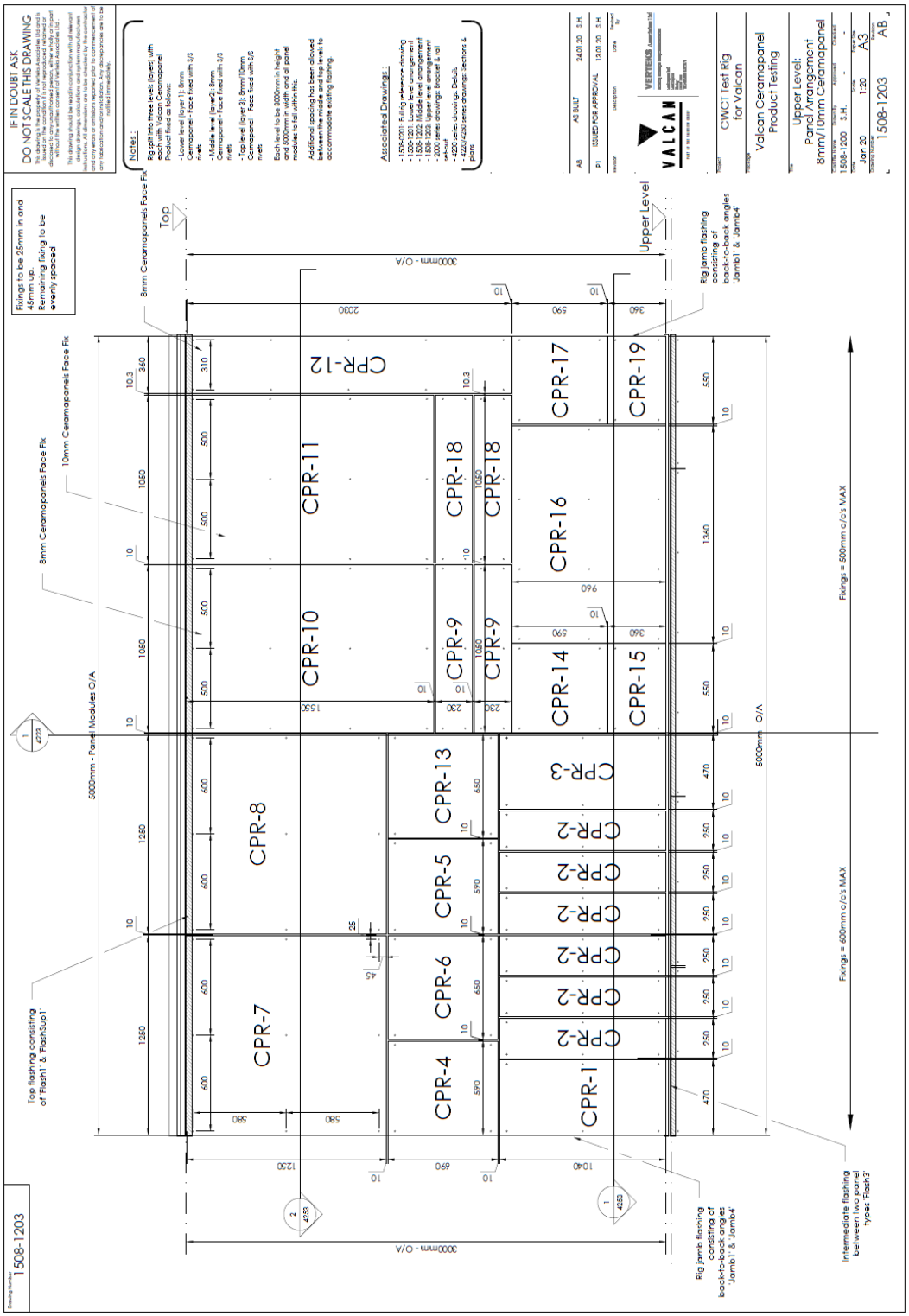
Note: The standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95%, for the above measurements is $\pm$ 2.4 % of the reading

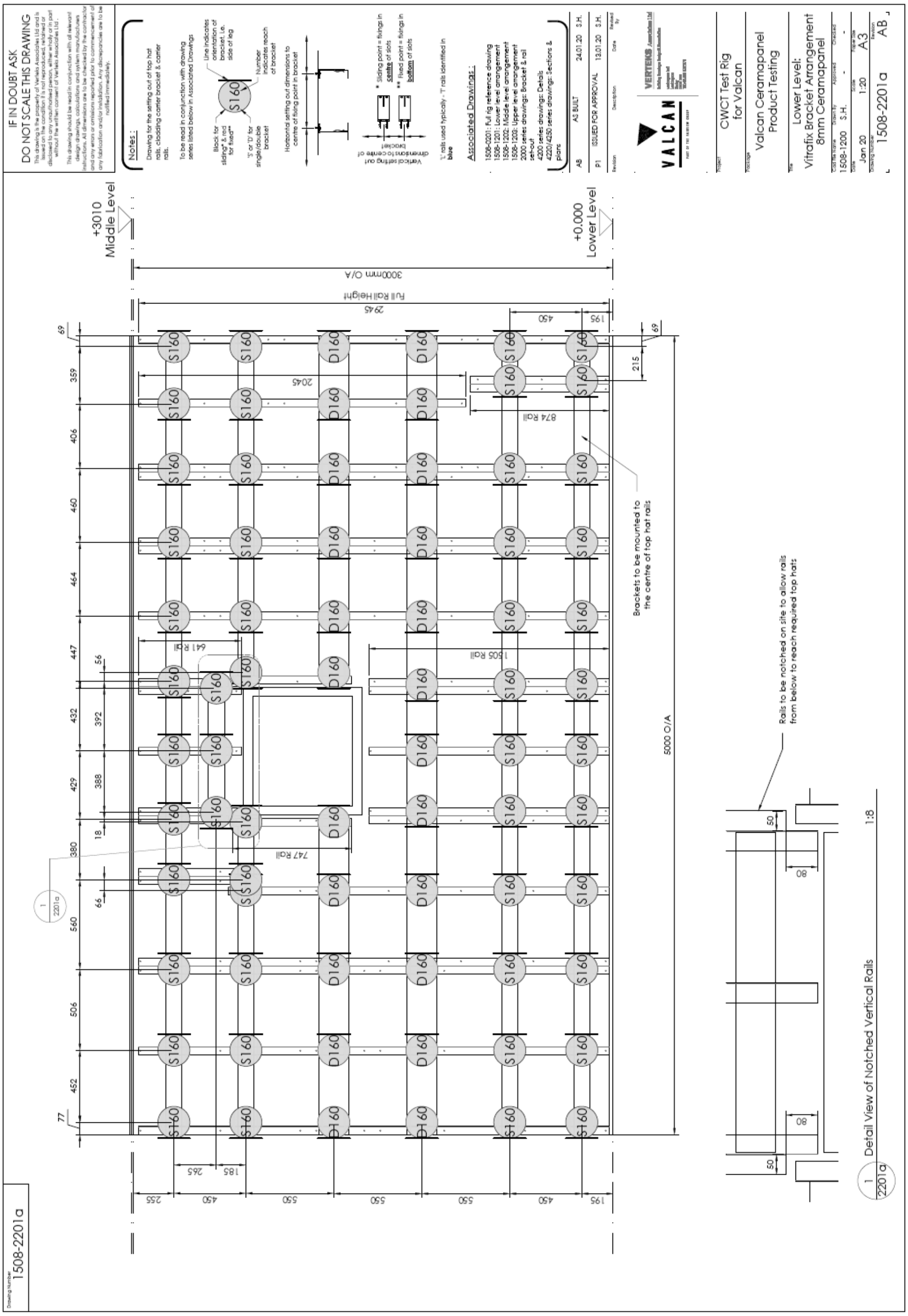
7. System Drawings

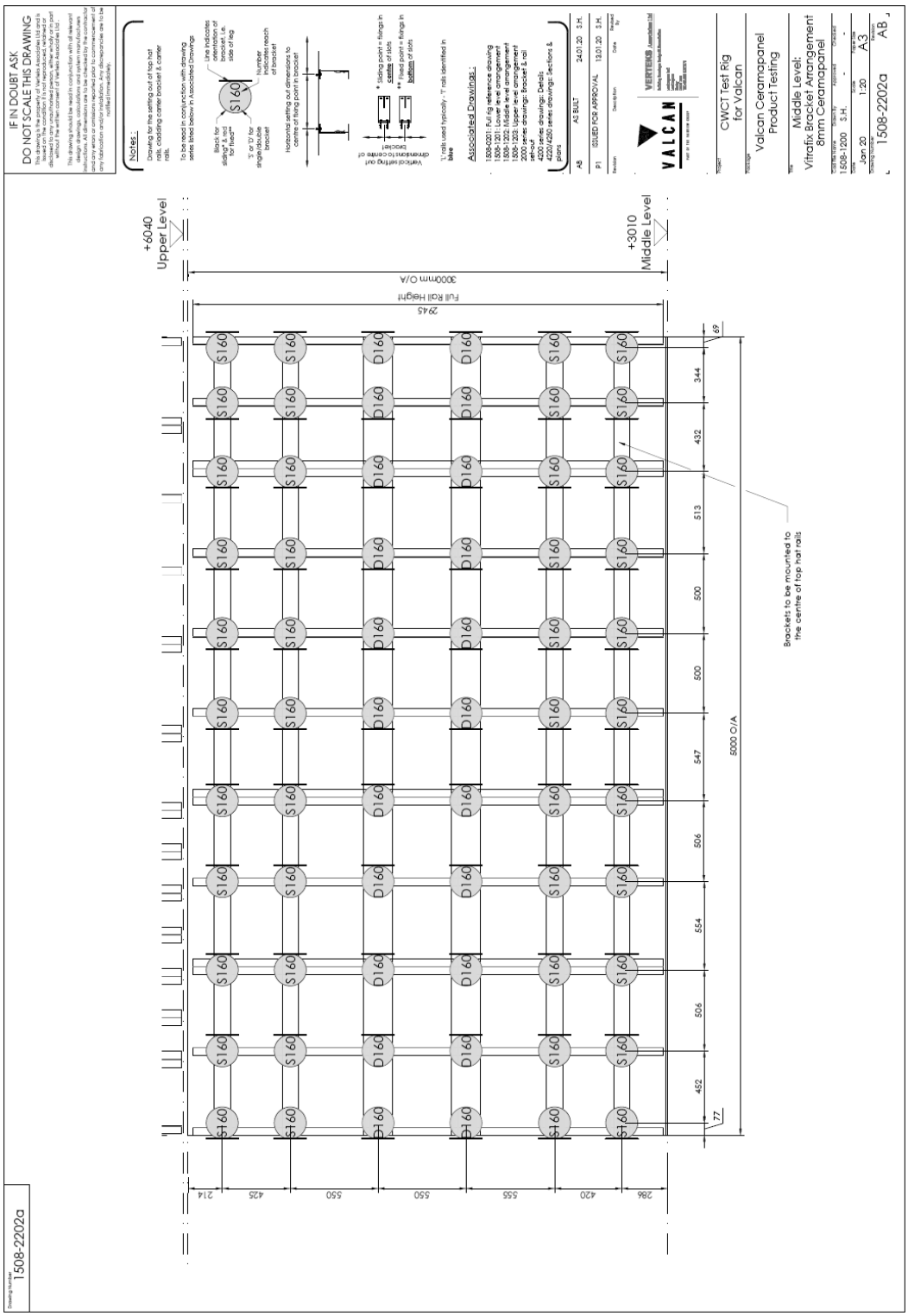



IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
Middle Level
Lower Level
3000mm O/A
5000mm - Panel Modules O/A
5000mm - O/A
Flashing at head of window
Rig jamb flashing consisting of back-to-back angles
8mm Ceramapanels
Base flashing
CP-1
CP-2
CP-2
CP-3
CP-4
CP-5
CP-6
CP-7
CP-8
CP-9
CP-10
CP-11
CP-12
CP-13
CP-14
CP-15
CP-16
CP-17
CP-17
CP-18
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Lower Level: Panel Arrangement 8mm Ceramapanel
1508-1201
AB


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
- 1508-0201: Full rig reference drawing
- 1508-1201: Lower level arrangement
- 1508-1202: Middle level arrangement
- 1508-1203: Upper level arrangement
- 2000 series drawings: Bracket & rail detail
- 4000 series drawings: Details
- 4200/4220 series drawings: Sections & plans
AB AS BUILT 24.01.20 S.H.
P2 ISSUED FOR APPROVAL Note Amended 23.01.20 S.H.
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Middle Level: Panel Arrangement 8mm Ceramapanel
1508-1202
AB
Upper Level
Middle Level
3000mm O/A
5000mm - Panel Modules O/A
8mm/10mm Ceramapanels face fix to level above
8mm Ceramapanels
Rig jamb flashing consisting of back-to-back angles
Intermediate flashing between two panel
CP-26
CP-25
CP-25
CP-24
CP-23
CP-23
CP-22
CP-21
CP-20
CP-19
CP-19
1508-1202


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes:
Associated Drawings:
Fixings to be 25mm in and 45mm up
Remaining fixing to be evenly spaced
Top flashing consisting of Flash1' & Flash5up1'
8mm Ceramapanels Face Fix
10mm Ceramapanels Face Fix
5000mm - Panel Modules O/A
3000mm - O/A
Top
Upper Level
Rig jamb flashing consisting of back-to-back angles Jamb1' & Jamb4'
Fixings = 600mm c/c's MAX
Fixings = 500mm c/c's MAX
Intermediate flashing between two panel types: Flash3'
CPR-1
CPR-2
CPR-3
CPR-4
CPR-5
CPR-6
CPR-7
CPR-8
CPR-9
CPR-10
CPR-11
CPR-12
CPR-13
CPR-14
CPR-15
CPR-16
CPR-17
CPR-18
CPR-19
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Upper Level: Panel Arrangement 8mm/10mm Ceramapanel
1508-1203
AB


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
+3010
Middle Level
+0.000
Lower Level
3000mm O/A
5000 O/A
Detail View of Notched Vertical Rails
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Lower Level: Vitrafix Bracket Arrangement 8mm Ceramapanel
1508-2201a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DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
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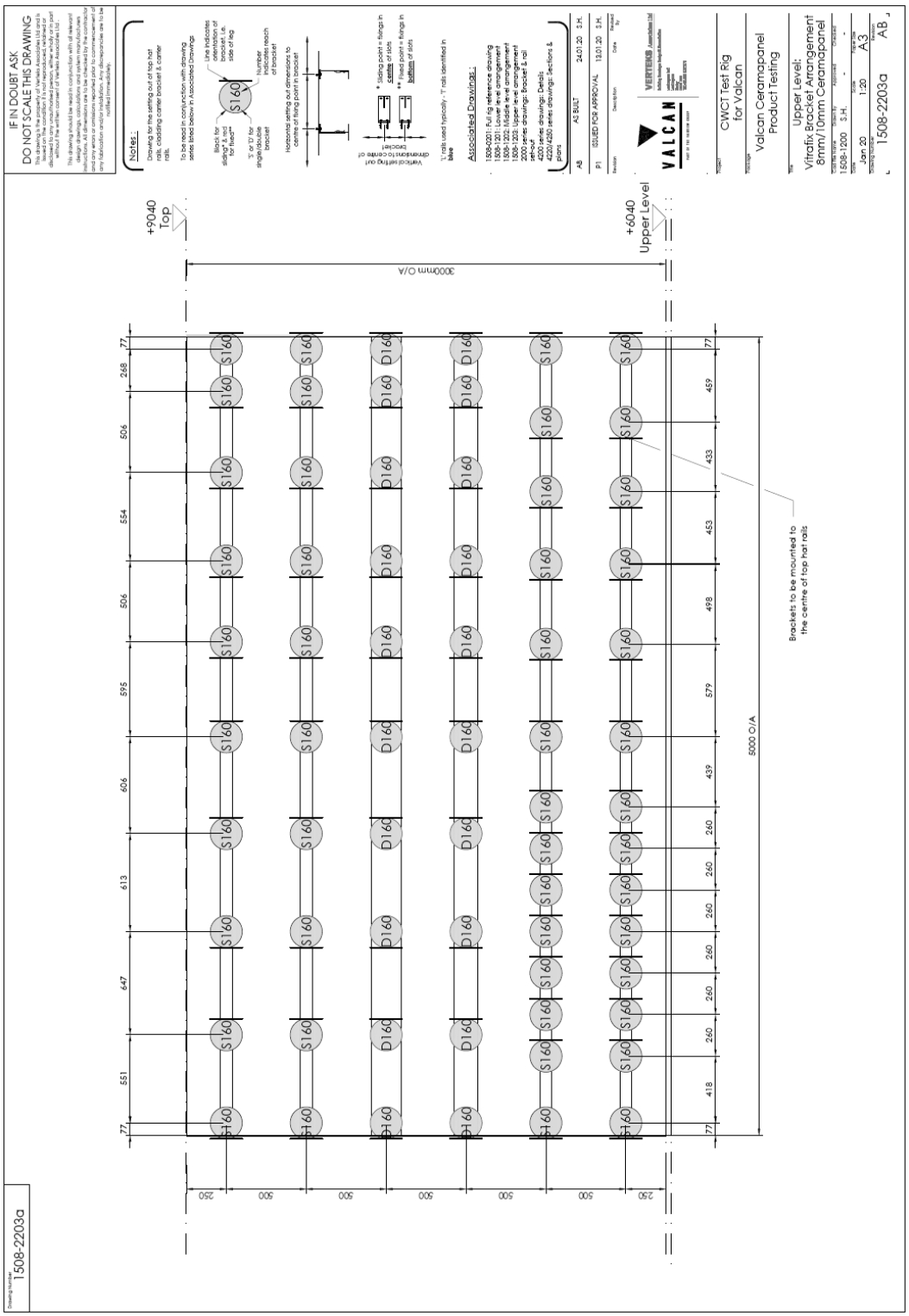
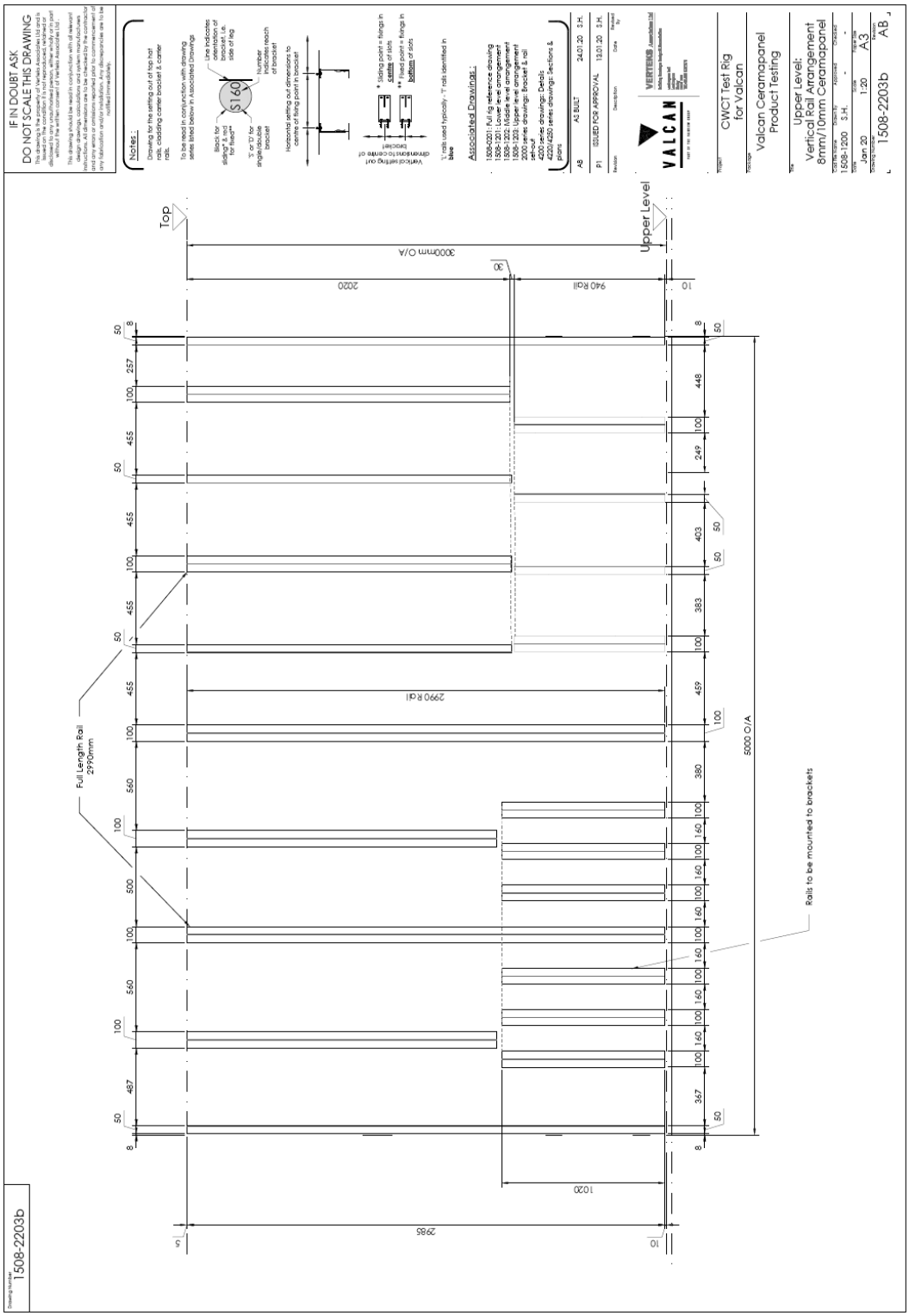
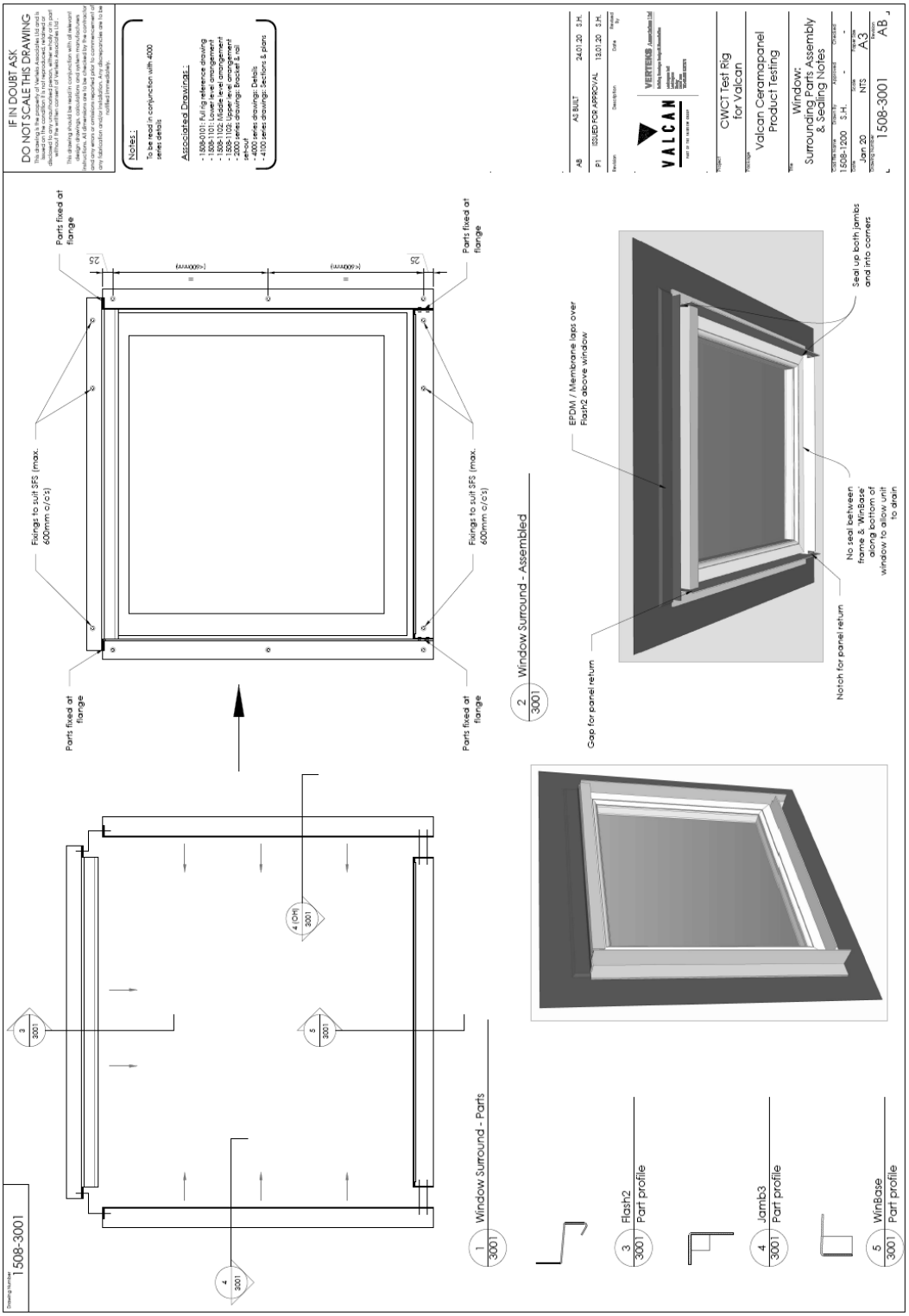
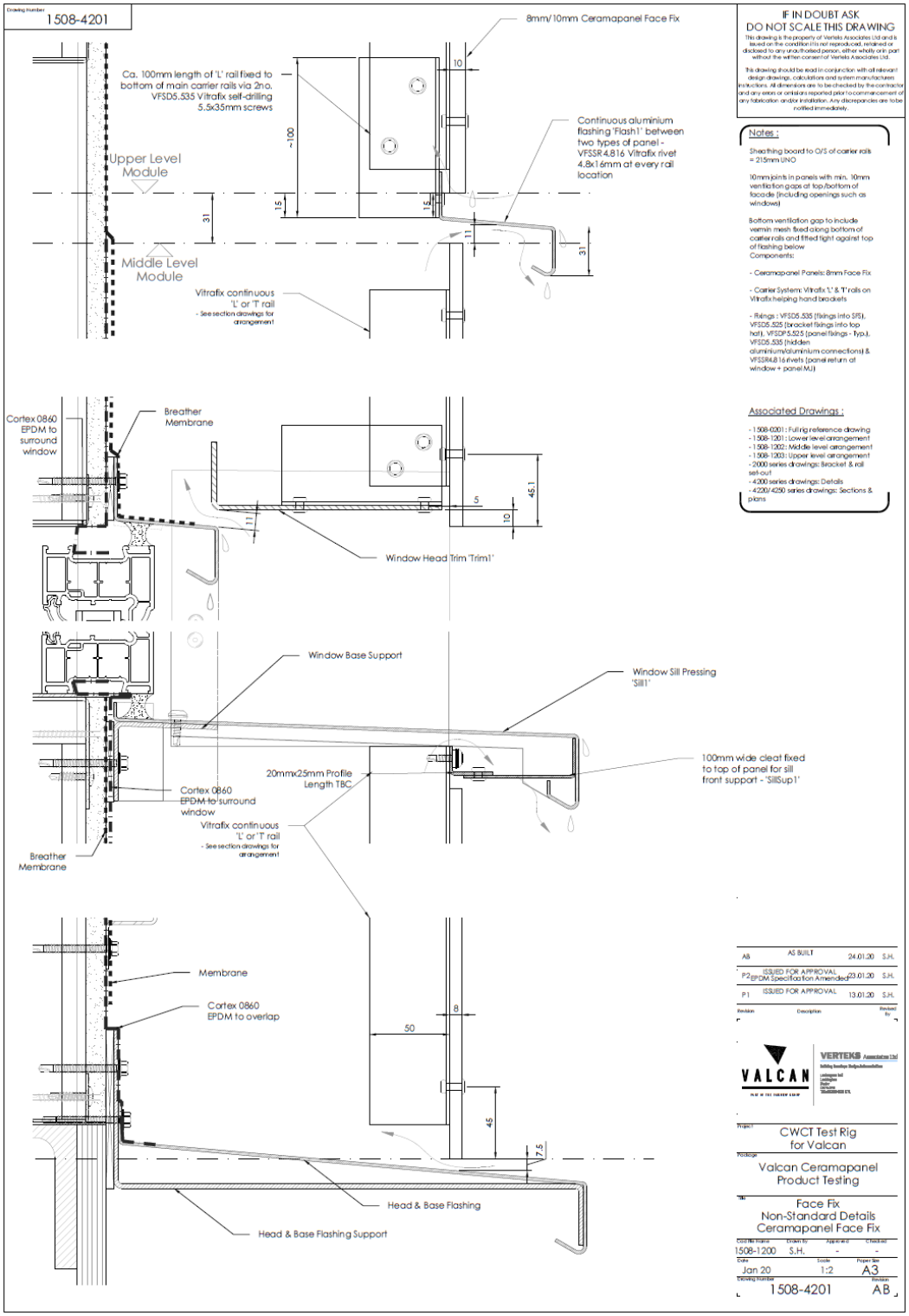
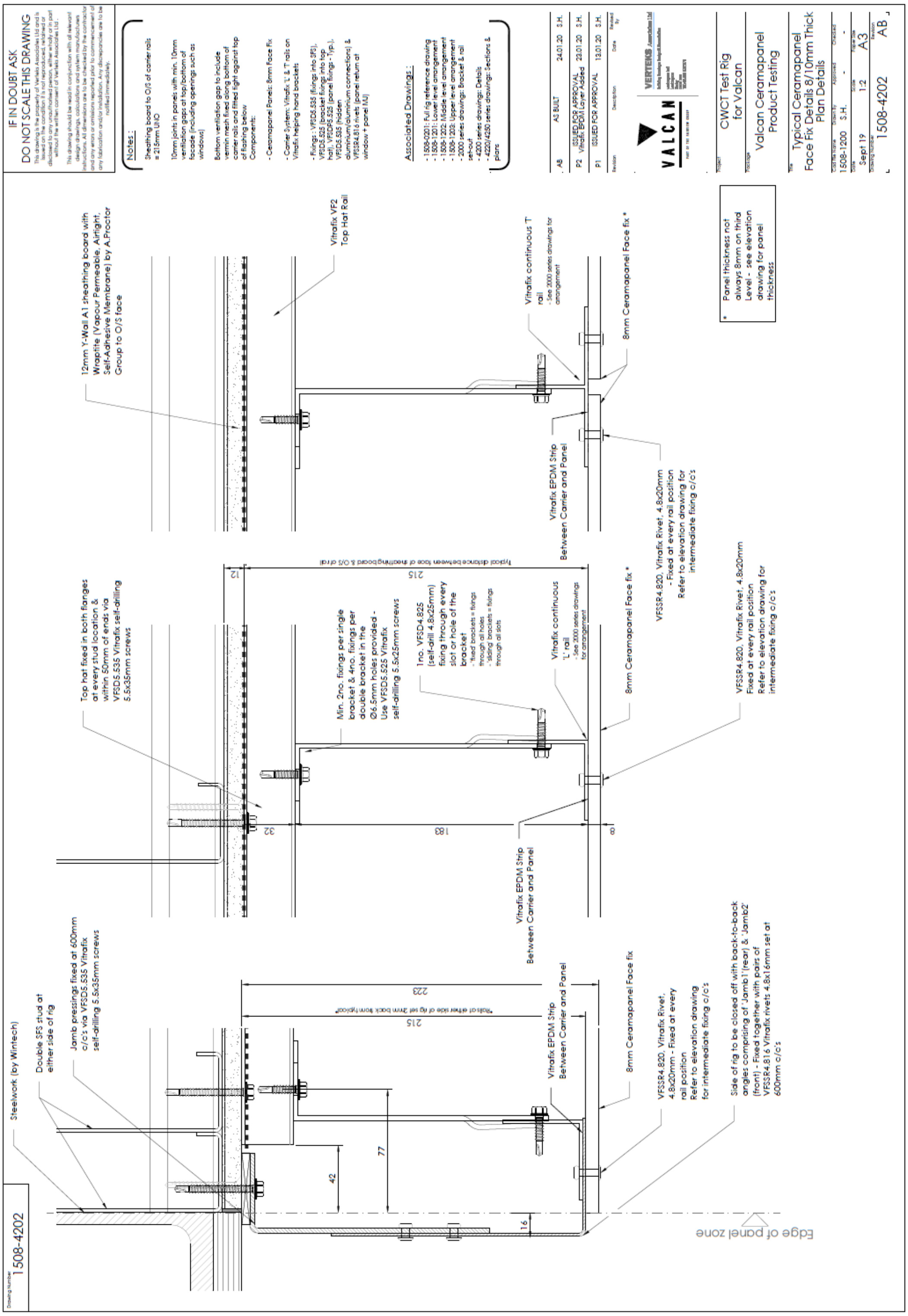
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Middle Level: Vitrafix Bracket Arrangement 8mm Ceramapanel
Jan 20
1:20
A3
1508-2202a
AB
+6040 Upper Level
+3010 Middle Level
3000m.m O/A
Full Rail Height
2945
5000 O/A
Brackets to be mounted to the centre of top hat rails
214
425
550
550
555
420
286
452
506
554
506
547
500
500
513
432
344
69
77


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
A2 SUCT 24.01.20 S.H.
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
CWCT Test Rig
for Valcan
Valcan Ceramapanel
Product Testing
Upper Level:
Vitrafix Bracket Arrangement
8mm/10mm Ceramapanel
1508-2203a AB
+9040
Top
+6040
Upper Level
3000mm O/A
5000 O/A
Brackets to be mounted to
the centre of top hat rails
250
500
77
268
506
554
595
606
613
647
551
459
433
453
498
579
439
260
418


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
CWCT Test Rig
for Valcan
Valcan Ceramapanel
Product Testing
Upper Level:
Vertical Rail Arrangement
8mm/10mm Ceramapanel
1508-2203b
AB
Top
Upper Level
3000mm O/A
2020
940 Rail
2990 Rail
5000 O/A
2985
1020
Full Length Rail
2990mm
Rails to be mounted to brackets


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
To be read in conjunction with 4000 series details
Associated Drawings :
- 1508-0101: Full rig reference drawing
- 1508-1101: Lower level arrangement
- 1508-1102: Middle level arrangement
- 1508-1103: Upper level arrangement
- 2000 series drawings: Bracket & wall detail
- 4000 series drawings: Details
- 4100 series drawings: Sections & plans
AB AS BUILT 24.01.20 S.H.
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Window: Surrounding Parts Assembly & Sealing Notes
Jan 20 NTS A3
1508-3001 AB
Parts fixed at flange
Fixings to suit SFS (max. 600mm c/cs)
25
Window Surround - Assembled
EPDM / Membrane laps over Flash2 above window
Seal up both jambs and into corners
Gap for panel return
Notch for panel return
No seal between frame & 'WinBase' along bottom of window to allow unit to drain
Window Surround - Parts
Flash2 Part profile
Jamb3 Part profile
WinBase Part profile
1508-3001


Drawing Number
1508-4201
8mm/10mm Ceramapanel Face Fix
Ca. 100mm length of 'L' rail fixed to bottom of main carrier rails via 2no. VFSD5.535 Vitrafix self-drilling 5.5x35mm screws
~100
10
Continuous aluminium flashing 'Flash1' between two types of panel - VFSSR4.816 Vitrafix rivet 4.8x16mm at every rail location
Upper Level Module
Middle Level Module
15
31
11
Vitrafix continuous 'L' or 'T' rail
- See section drawings for arrangement
IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
This drawing is the property of Verteks Associates Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without the written consent of Verteks Associates Ltd.
This drawing should be read in conjunction with all relevant design drawings, calculations and system manufacturers instructions. All dimensions are to be checked by the contractor and any errors or omissions reported prior to commencement of any fabrication and/or installation. Any discrepancies are to be notified immediately.
Notes :
Sheathing board to O/S of carrier rails = 215mm UNO
10mm joints in panels with min. 10mm ventilation gaps at top/bottom of facade (including openings such as windows)
Bottom ventilation gap to include vermin mesh fixed along bottom of carrier rails and fitted tight against top of flashing below
Components:
- Ceramapanel Panels: 8mm Face Fix
- Carrier System: Vitrafix 'L' & 'T' rails on Vitrafix helping hand brackets
- Fixings : VFSD5.535 (fixings into SFS), VFSD5.525 (bracket fixings into top hat), VFSDP5.525 (panel fixings - Typ.), VFSD5.535 (hidden aluminium/aluminium connections) & VFSSR4.816 rivets (panel return at window + panel MJ)
Associated Drawings :
- 1508-0001 : Fulring reference drawing
- 1508-1201 : Lower level arrangement
- 1508-1202 : Middle level arrangement
- 1508-1203 : Upper level arrangement
- 2000 series drawings: Bracket & rail set-out
- 4200 series drawings: Details
- 4220/4250 series drawings: Sections & plans
Cortex 0860 EPDM to surround window
Breather Membrane
5
45.1
10
Window Head Trim 'Trim1'
Window Base Support
Window Sill Pressing 'Sill1'
100mm wide cleat fixed to top of panel for sill front support - 'SillSup1'
20mmx25mm Profile Length TBC
Membrane
Cortex 0860 EPDM to overlap
8
50
45
7.5
Head & Base Flashing
Head & Base Flashing Support
A8 AS BUILT 24.01.20 S.H.
P2 ISSUED FOR APPROVAL EPDM Specification Amended 23.01.20 S.H.
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
Revision Description Revised By
VALCAN
VERTEKS
Project
CWCT Test Rig for Valcan
Package
Valcan Ceramapanel Product Testing
Title
Face Fix Non-Standard Details Ceramapanel Face Fix
Job/File Number 1508-1200
Drawn by S.H.
Approved - Checked -
Date Jan 20
Scale 1:2
Paper Size A3
Drawing Number 1508-4201
Revision AB


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes:
Associated Drawings:
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Typical Ceramapanel Face Fix Details 8/10mm Thick Plan Details
1508-4202
12mm Y-Wall A1 sheathing board with Wraptite (Vapour Permeable, Airtight, Self-Adhesive Membrane) by A.Proctor Group to O/S face
Vitrafix VF2 Top Hat Rail
Vitrafix EPDM Strip Between Carrier and Panel
8mm Ceramapanel Face fix
Steelwork (by Wintech)
Double SFS stud at either side of rig
Edge of panel zone
215
183
223
77
42
32
12
16

Drawing Number
1508-4203

IF IN DOUBT ASK
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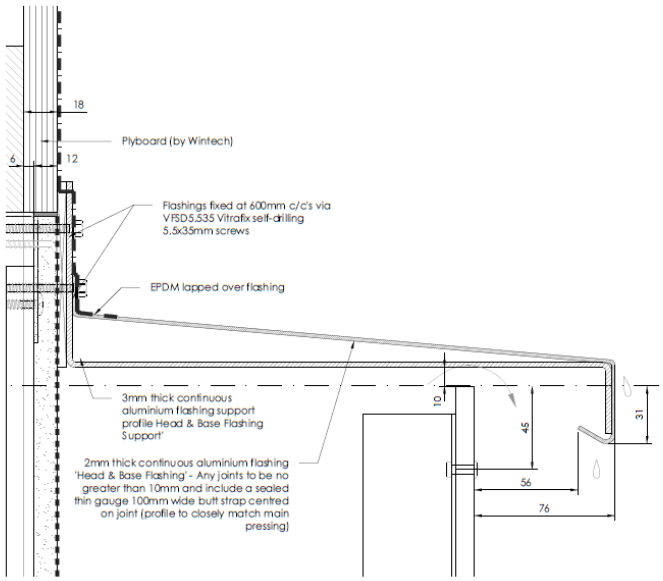
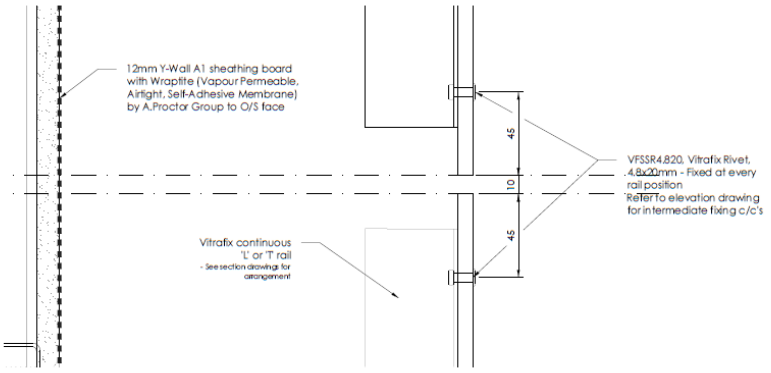
This drawing should be read in conjunction with all relevant design drawings, calculations and system manufacturers instructions. All dimensions are to be checked by the contractor and any errors or omissions reported prior to commencement of any fabrication and/or installation. Any discrepancies are to be notified immediately.





Notes :

Sheathing board to O/S of carrier rails = 215mm UNO

10mm joints in panels with min. 10mm ventilation gaps at top /bottom of facade (including openings such as windows)

Bottom ventilation gap to include vermin mesh fixed along bottom of carrier rails and fitted tight against top of flashing below
Components:

- Ceramapanel Panels: 8mm Face Fix

- Carrier System: Vitrafix 'L' & 'T' rails on Vitrafix helping hand brackets

- Fixings : VFSD5.535 (fixings into SFS), VFSD5.525 (bracket fixings into top hat), VFSDP5.525 (panel fixings - Typ.), VFSD5.535 (hidden aluminium/aluminium connections) & VFSSR4.816 rivets (panel return at window + panel MJ)

Associated Drawings :

- 1508-0201 : Full rig reference drawing
- 1508-1201 : Lower level arrangement
- 1508-1202 : Middle level arrangement
- 1508-1203 : Upper level arrangement
- 2000 series drawings: Bracket & rail set-out
- 4200 series drawings: Details
- 4220/4250 series drawings: Sections & plans

Revision	Description	Revised By
A8	AS BUILT	24.01.20 S.H.
P1	ISSUED FOR APPROVAL	13.01.20 S.H.

VALCAN

VERTEKS Associates Ltd

Project
CWCT Test Rig for Valcan

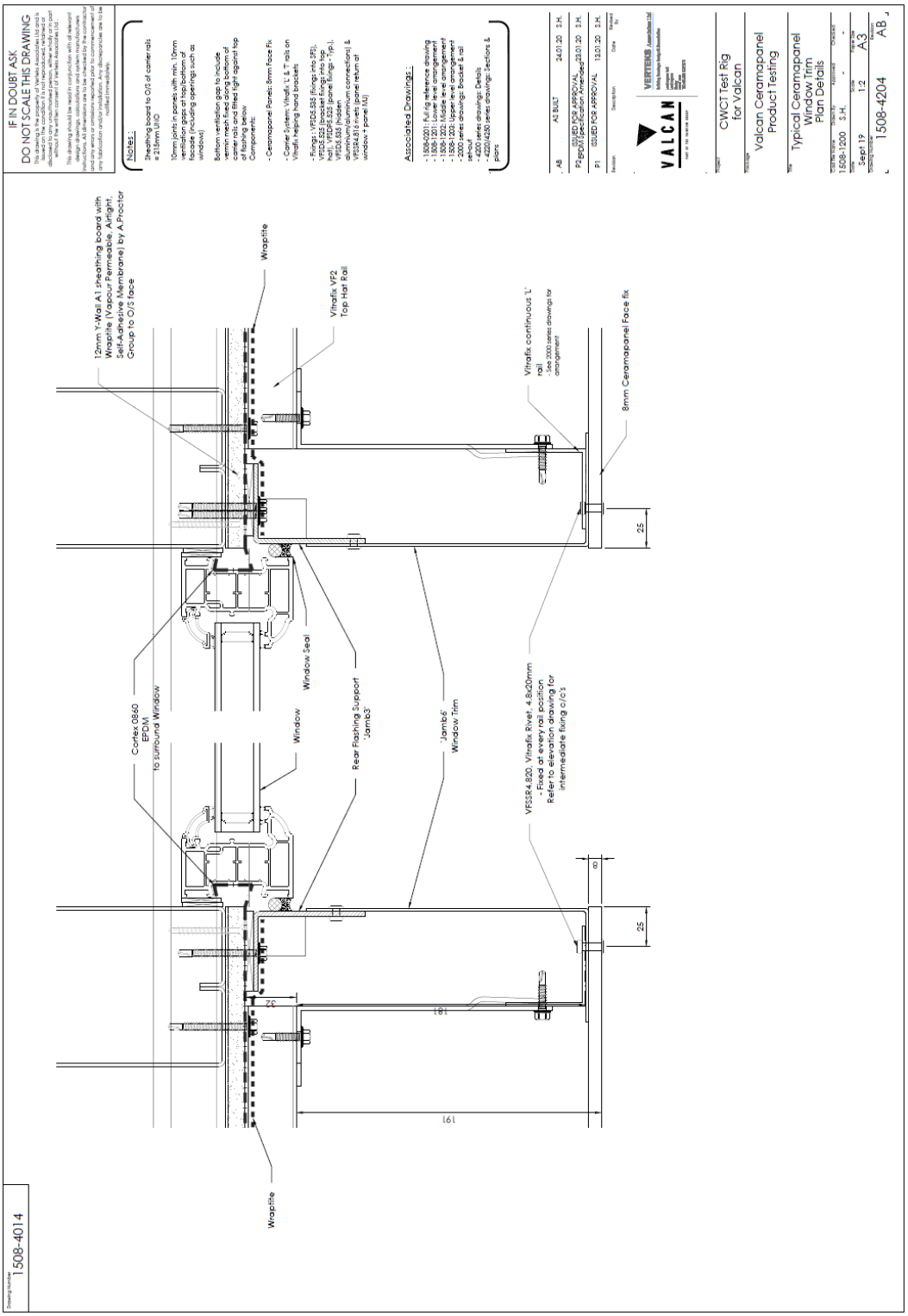
Package
Valcan Ceramapanel Product Testing

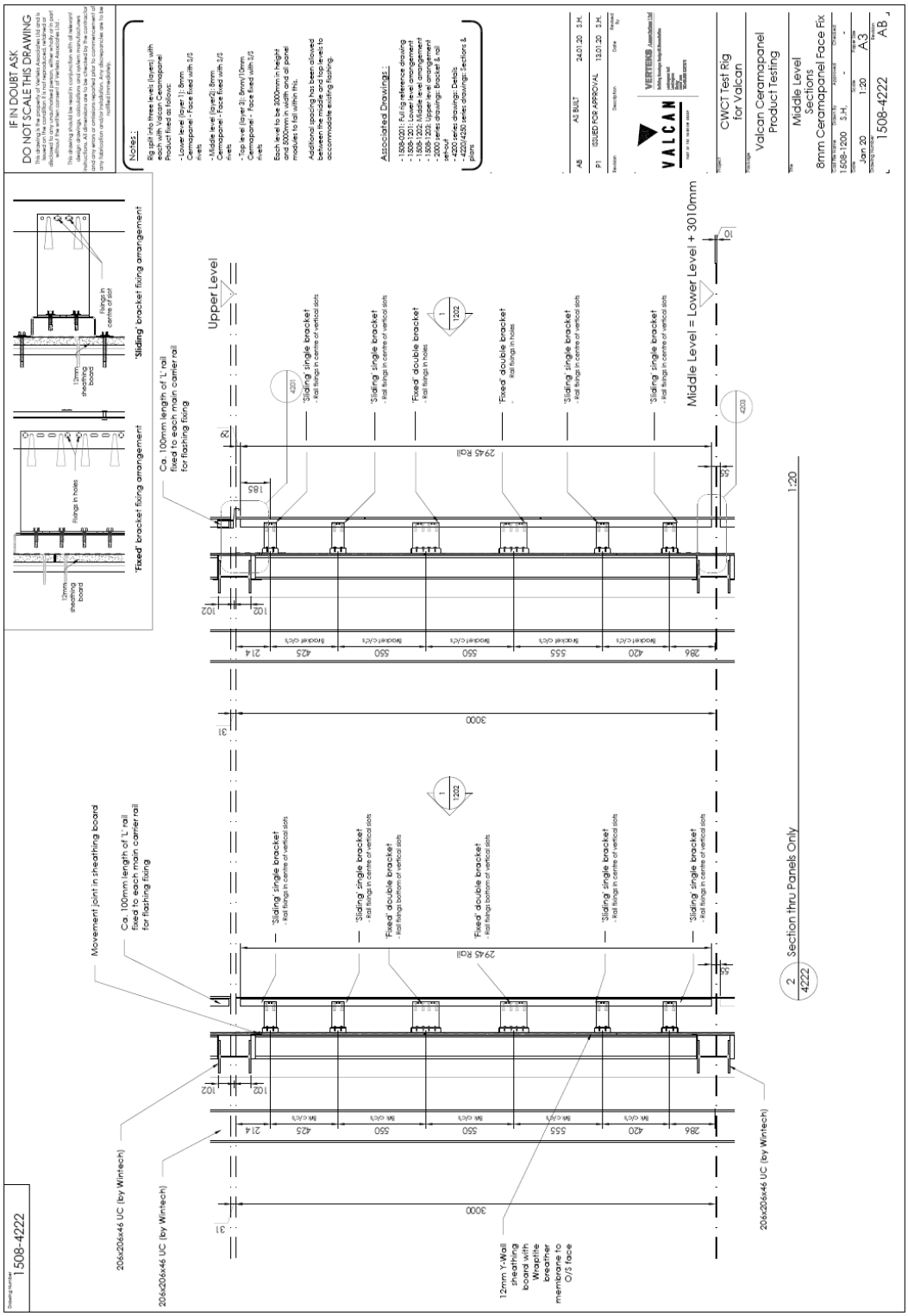
Title
Typical Ceramapanel Face Fix Detail 8/10mm Thick Section Details

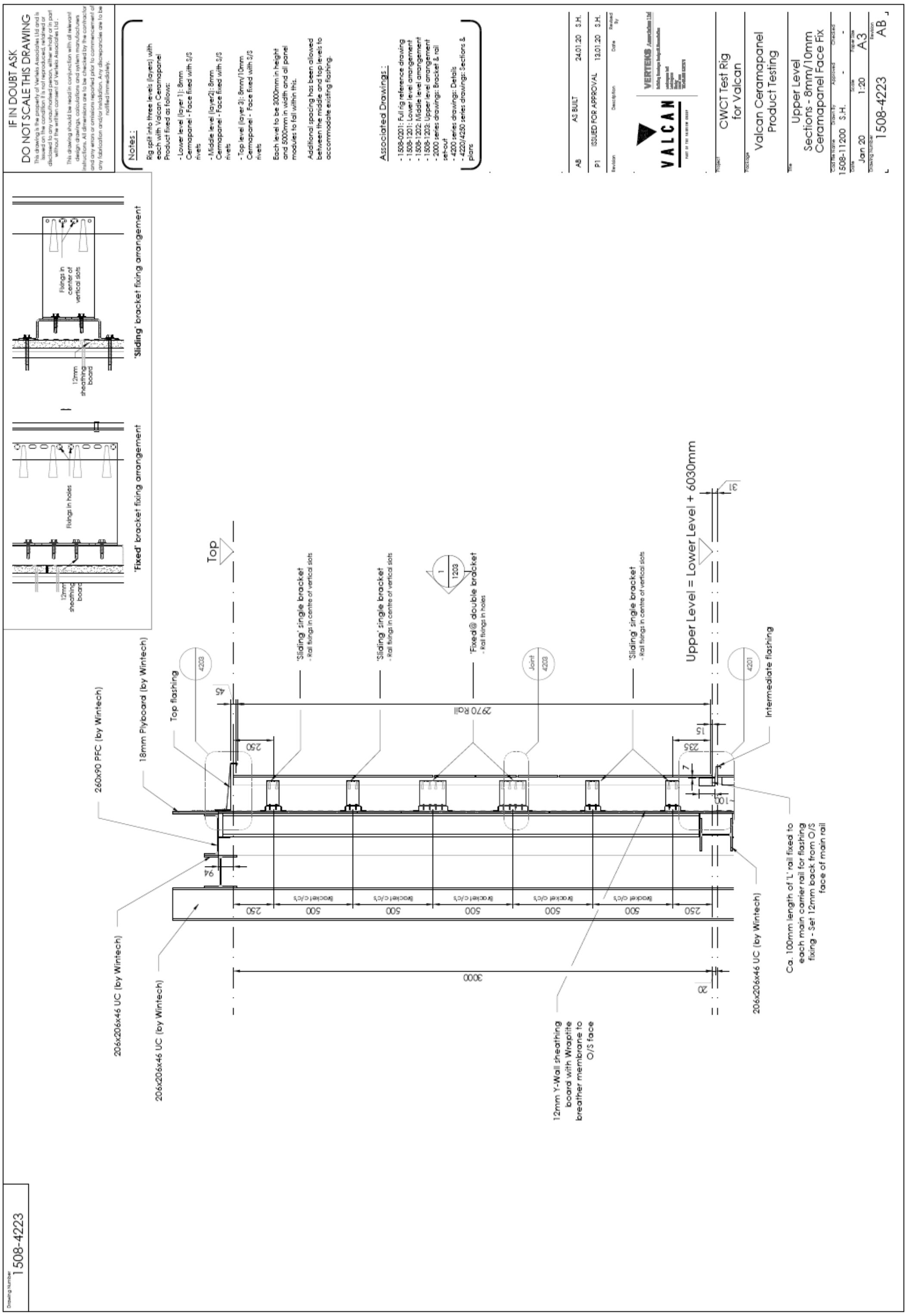
Cad File Name	Drawn by	Approved	Checked
1508-1200	S.H.	-	-

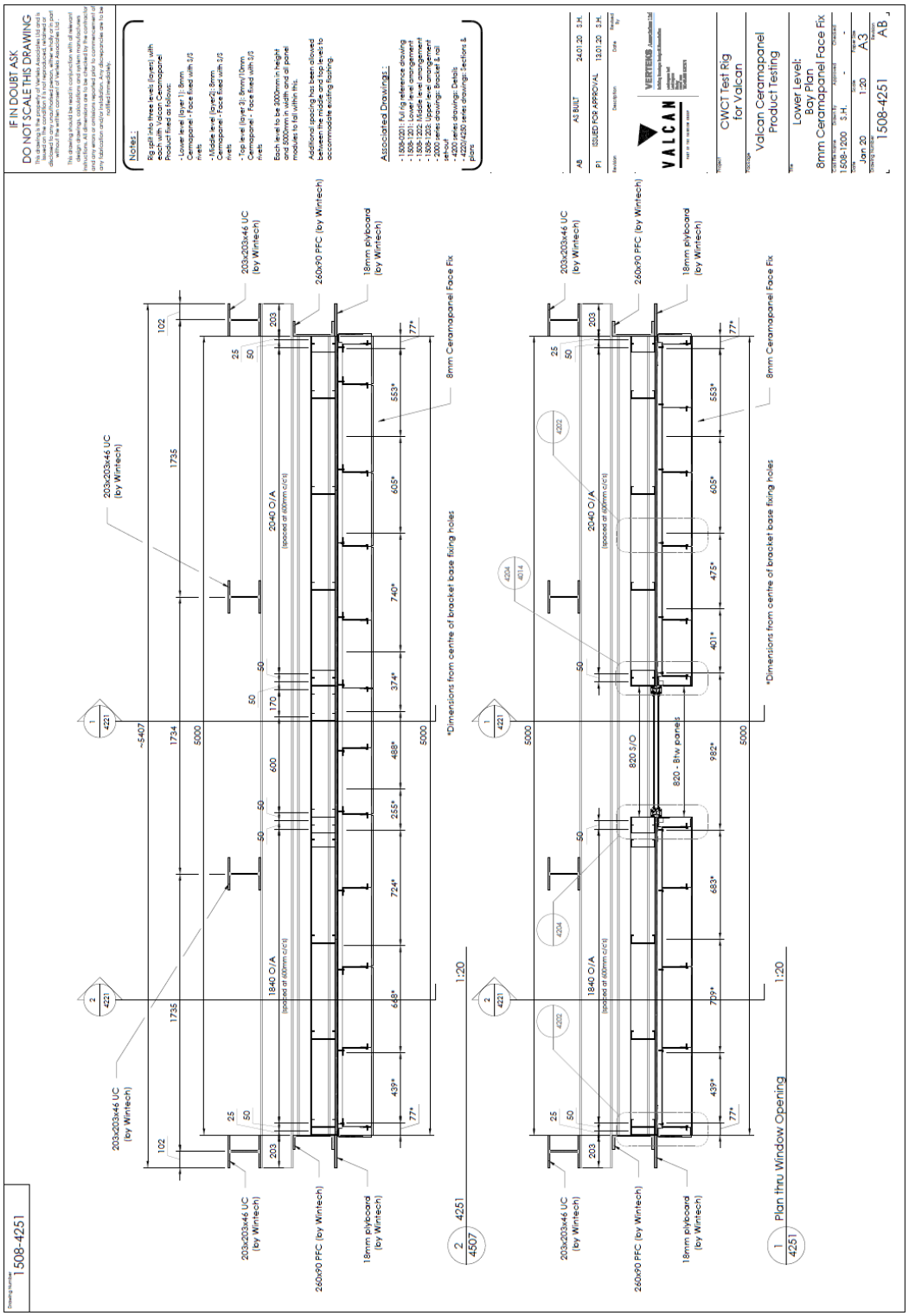
Date	Scale	Paper Size
Jan 20	1:2	A3

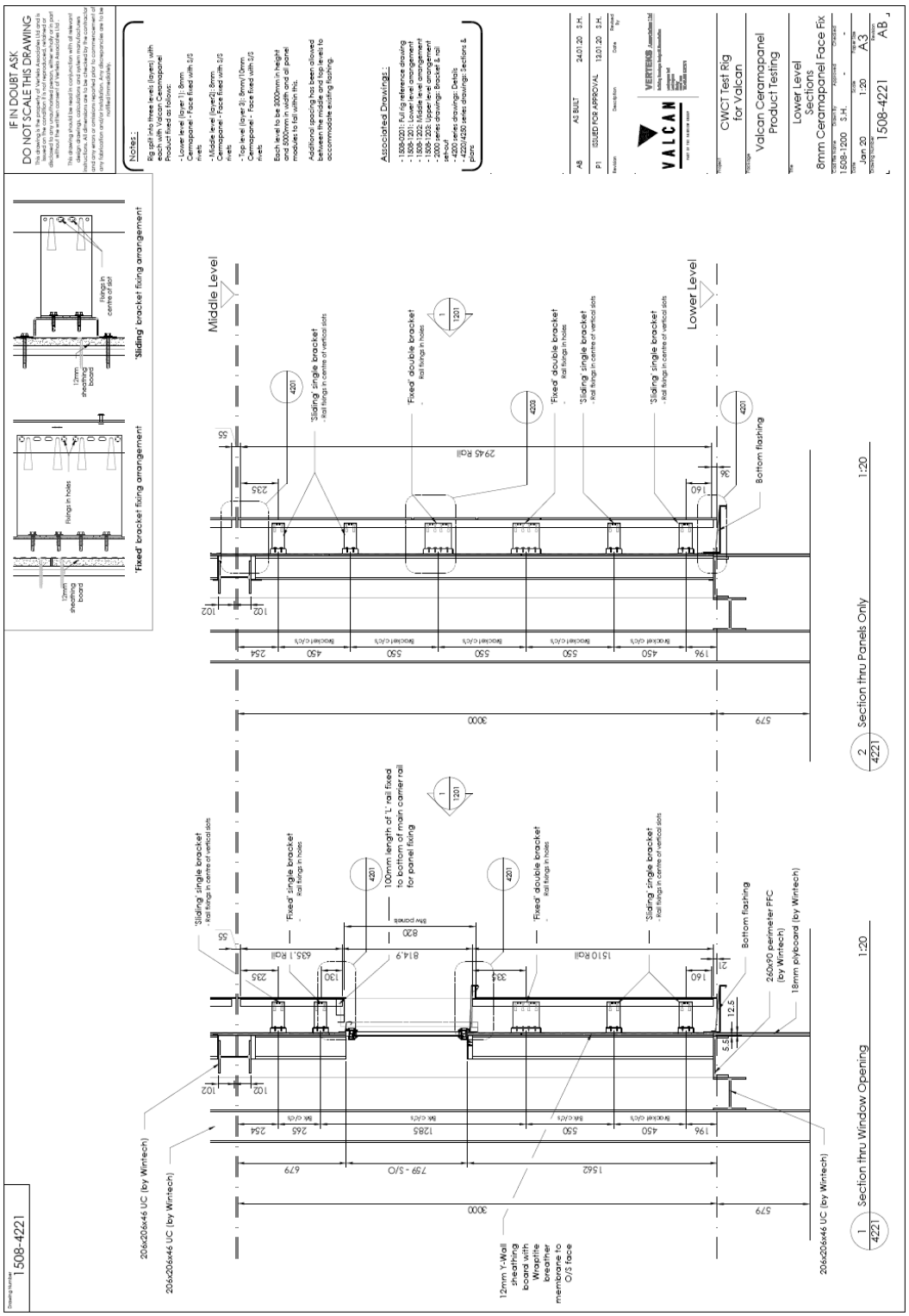
Drawing Number: 1508-4203 Revision: AB

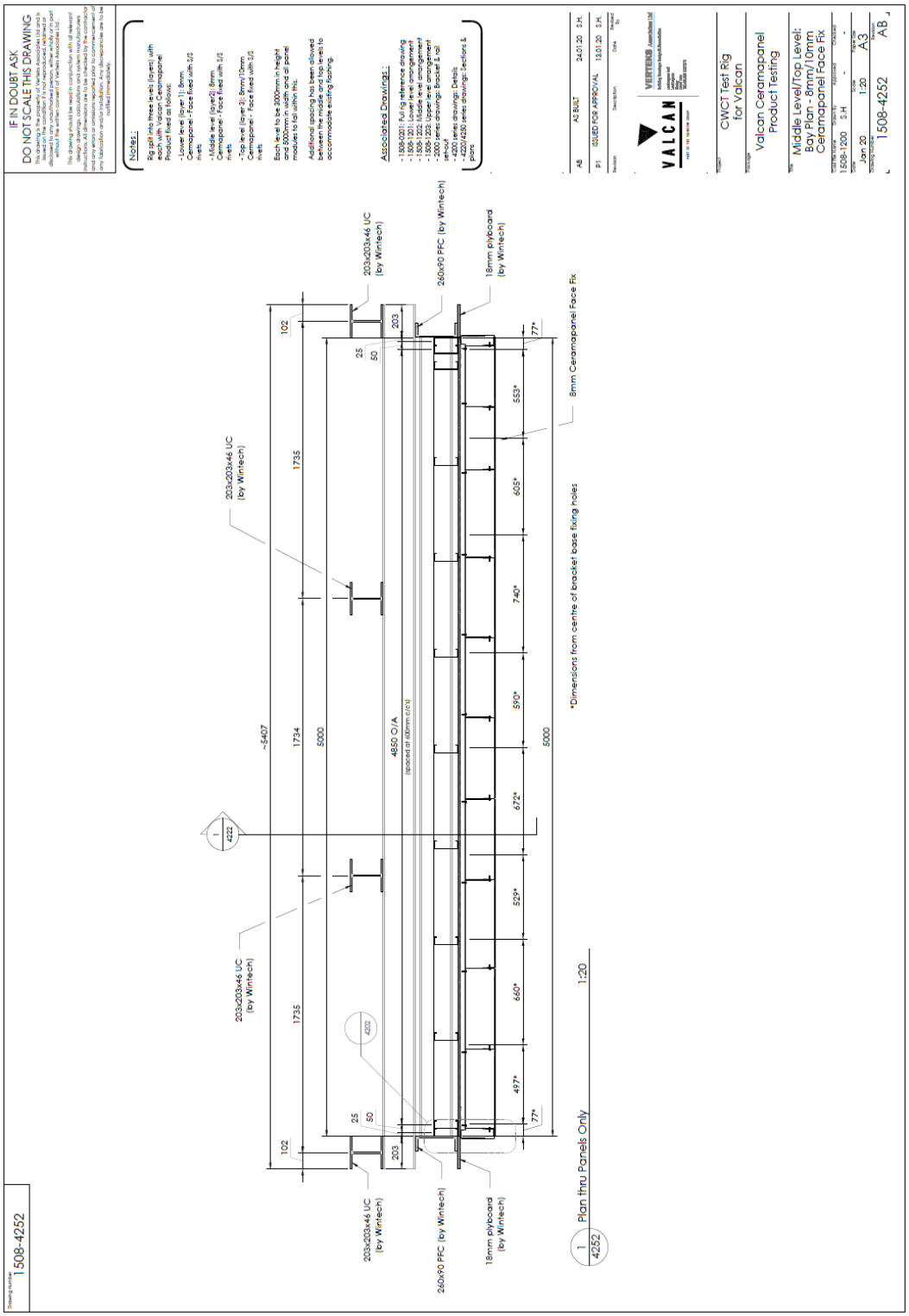

IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
12mm Y-Wall A1 sheathing board with Wraptite (Vapour Permeable, Airtight, Self-Adhesive Membrane) by A.Proctor Group to O/S face
Wraptite
Vitrafix VF2 Top Hat Rail
Vitrafix continuous 'L' rail - See 2000 series drawings for arrangement
8mm Cerampanel Face fix
Cortex 0860 EPDM 16 Surround Window
Window Seal
Window
Rear Flashing Support Jamb2
Jamb5 Window Trim
VFS384.820, Vitrafix Rivet, 4.8x20mm - Fixed at every rail position - Refer to elevation drawing for intermediate fixing c/cs
Wraptite
25
25
32
181
191
CWCT Test Rig for Valcan
Valcan Cerampanel Product Testing
Typical Cerampanel Window Trim Plan Details
1508-4204
AB
1508-4014

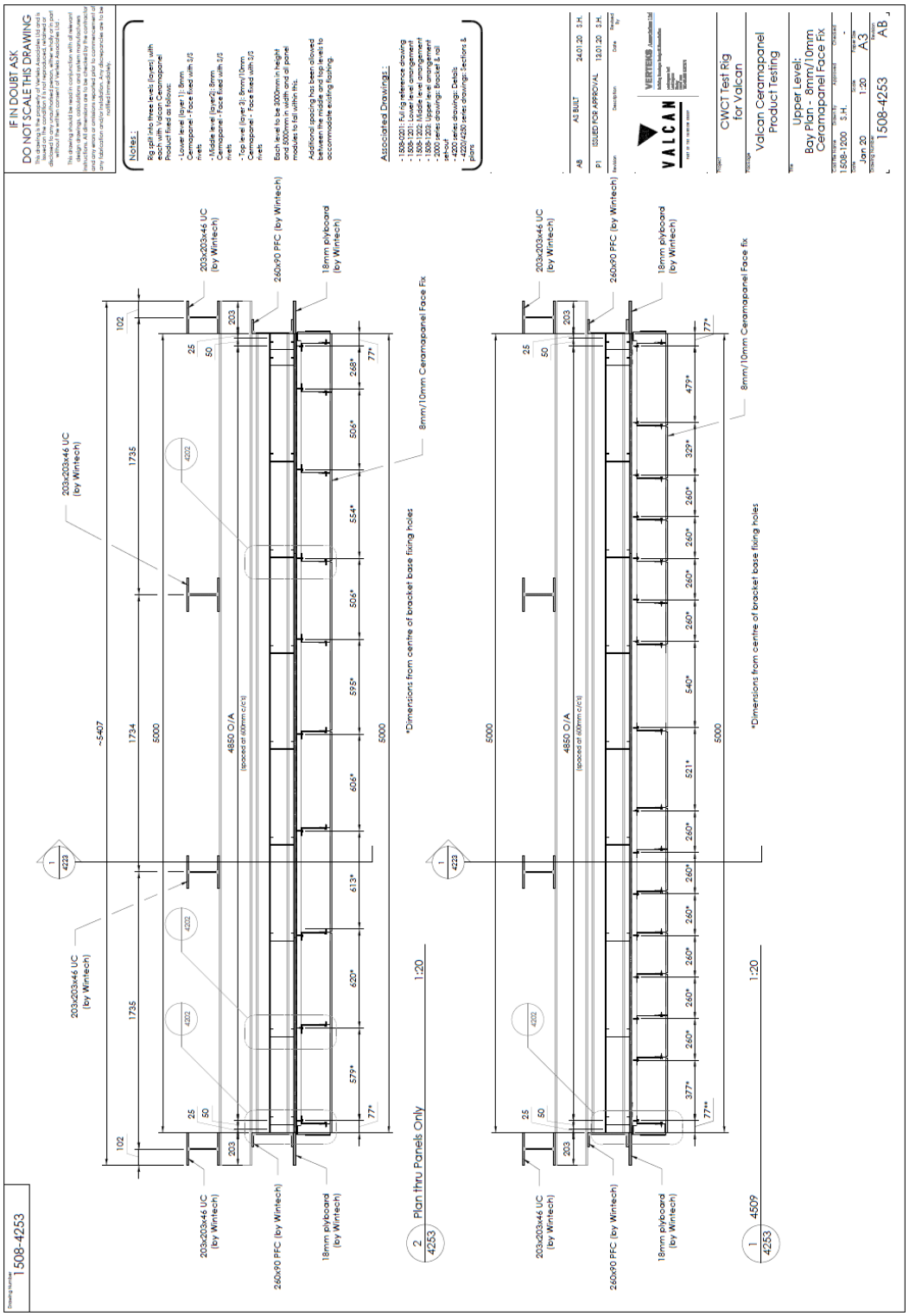

IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
AB AS BUILT 24.01.20 S.H.
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Middle Level Sections 8mm Ceramapanel Face Fix
1508-4222 AB
'Sliding' bracket fixing arrangement
'Fixed' bracket fixing arrangement
Ca. 100mm length of 'L' rail fixed to each main carrier rail for flashing fixing
Upper Level
Middle Level = Lower Level + 3010mm
'Sliding' single bracket - Rail fixings in centre of vertical slots
'Fixed' double bracket - Rail fixings in holes
'Fixed' double bracket - Rail fixings bottom of vertical slots
2945 RSJ
3000
Movement joint in sheathing board
206x206x46 UC (by Wintech)
12mm Y-Wall sheathing board with Wraptite breather membrane to O/S face
Section thru Panels Only
1:20
1508-4222


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
'Fixed' bracket fixing arrangement
'Sliding' bracket fixing arrangement
Top
Upper Level = Lower Level + 6030mm
260x90 PFC (by Wintech)
18mm Plyboard (by Wintech)
Top flashing
Intermediate flashing
206x206x46 UC (by Wintech)
12mm Y-Wall sheathing board with Wraptite breather membrane to O/S face
2970 Rail
3000
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Upper Level Sections - 8mm/10mm Ceramapanel Face Fix
1508-4223

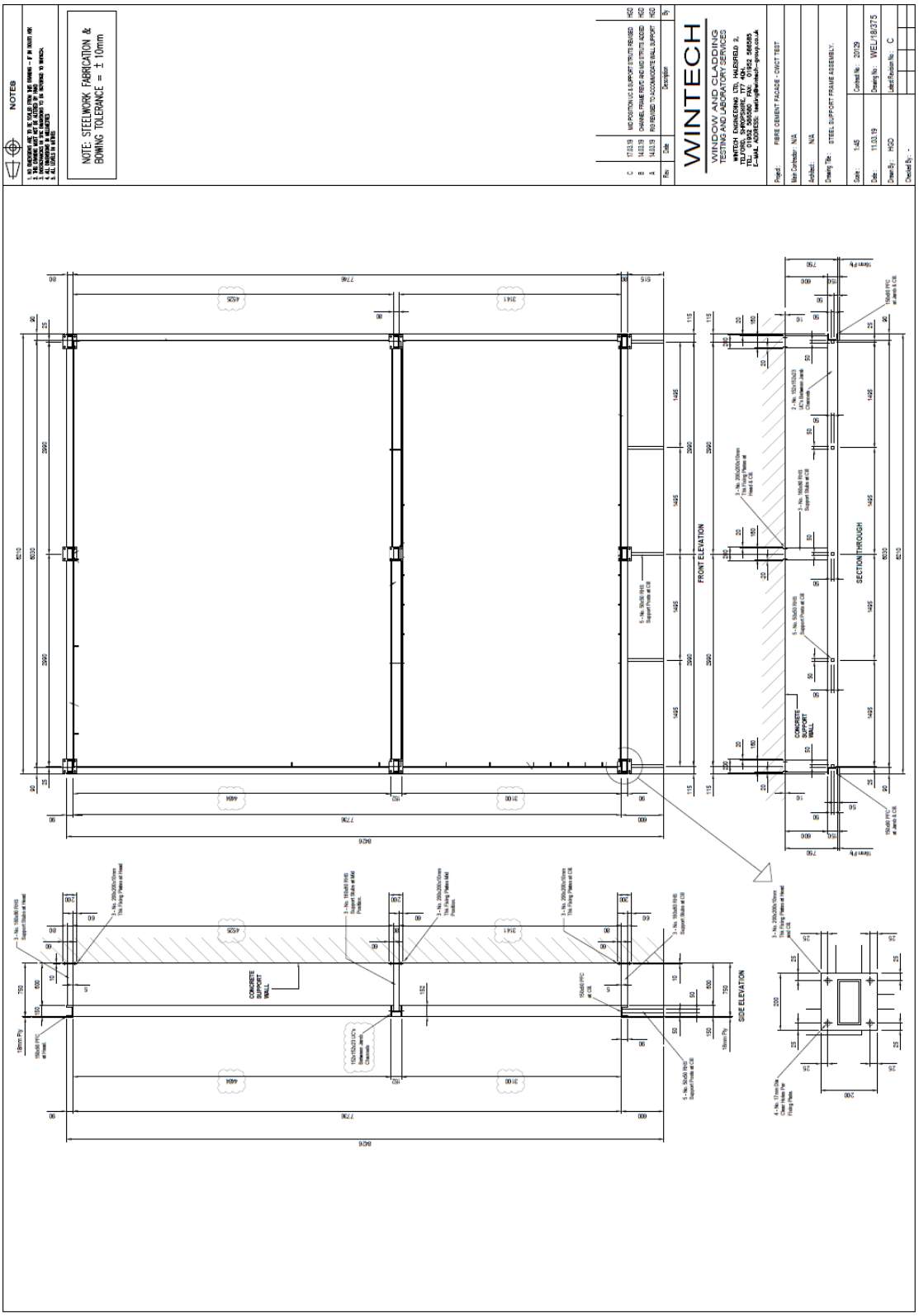

IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
AB AS BUILT 24.01.20 S.H.
P1 ISSUED FOR APPROVAL 13.01.20 S.H.
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Lower Level: Bay Plan 8mm Ceramapanel Face Fix
1508-1200 S.H. - -
Jan 20 1:20 A3
1508-4251 AB
1508-4251
203x203x46 UC (by Wintech)
260x90 PFC (by Wintech)
18mm plyboard (by Wintech)
8mm Ceramapanel Face Fix
*Dimensions from centre of bracket base fixing holes
2040 O/A (spaced at 600mm c/c's)
1840 O/A (spaced at 600mm c/c's)
820 - Btw panels
820 S/O
1 Plan thru Window Opening 1:20
2 4251 4507 1:20


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
VALCAN
CWCT Test Rig
for Valcan
Valcan Ceramapanel
Product Testing
Lower Level
Sections
8mm Ceramapanel Face Fix
1508-4221
'Fixed' bracket fixing arrangement
'Sliding' bracket fixing arrangement
Middle Level
Lower Level
'Sliding' single bracket
- Rail fixings in centre of vertical slots
'Fixed' double bracket
Rail fixings in holes
Bottom flashing
100mm length of 'L' rail fixed to bottom of main carrier rail for panel fixing
260x90 perimeter PFC (by Wintech)
18mm plywood (by Wintech)
206x206x46 UC (by Wintech)
12mm Y-Wall sheathing board with Wraptite breather membrane to O/S face
1 Section thru Window Opening 1:20
2 Section thru Panels Only 1:20


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes :
Associated Drawings :
AS BUILT
ISSUED FOR APPROVAL
VALCAN
CWCT Test Rig
for Valcan
Valcan Ceramapanel
Product Testing
Middle Level/Top Level:
Bay Plan - 8mm/10mm
Ceramapanel Face Fix
1508-4252
AB
203x203x46 UC
(by Wintech)
260x90 PFC (by Wintech)
18mm plywboard
(by Wintech)
8mm Ceramapanel Face Fix
*Dimensions from centre of bracket base fixing holes
4850 O/A
(spaced at 490mm c/c's)
~5407
5000
1735
1734
102
203
25
50
77*
497*
660*
529*
672*
590*
740*
605*
553*
Plan thru Panels Only
1:20


IF IN DOUBT ASK
DO NOT SCALE THIS DRAWING
Notes:
Associated Drawings:
AS BUILT
ISSUED FOR APPROVAL
VALCAN
CWCT Test Rig for Valcan
Valcan Ceramapanel Product Testing
Upper Level: Bay Plan - 8mm/10mm Ceramapanel Face Fix
1508-4253
AB
203x203x46 UC (by Wintech)
260x90 PFC (by Wintech)
18mm plyboard (by Wintech)
8mm/10mm Ceramapanel Face Fix
*Dimensions from centre of bracket base fixing holes
2 Plan thru Panels Only 1:20
1 4509 1:20

8. Support Steelwork Drawing

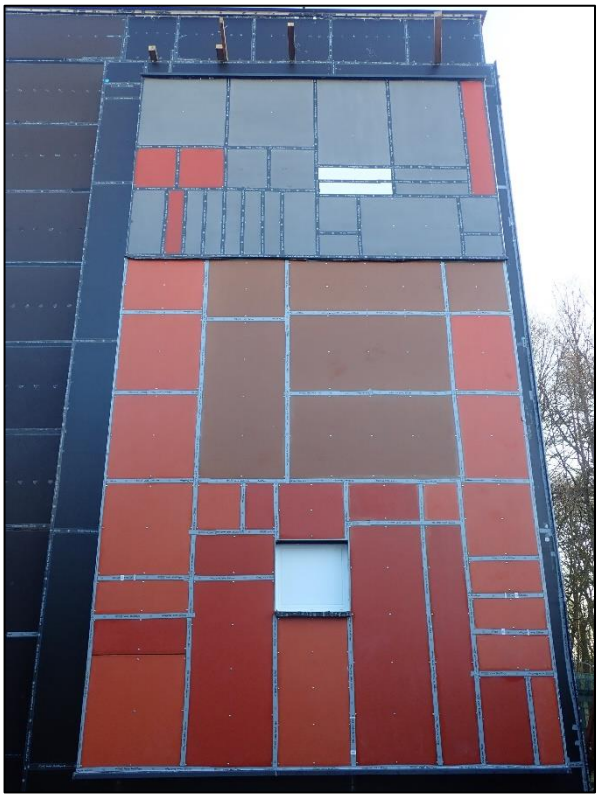


9. Dismantling

The dismantling was conducted on 3rd March 2020 by representatives of Fairview Europe Ltd and was witnessed by representatives of Wintech Engineering Ltd.

There was no water evident in the system in parts designed not to be wetted, and it was found that the system fully complied with the system drawings in Section 7 provided by Fairview Europe Ltd at the time of the dismantle.

Photograph No. 2



Sample prior to dismantle

Photograph No. 3

Internal window pod detail

Photograph No. 4

Internal window pod detail

Photograph No. 5

External window pod detail

Photograph No. 6

Window pod interface detail

Photograph No. 7

Rivet fixing

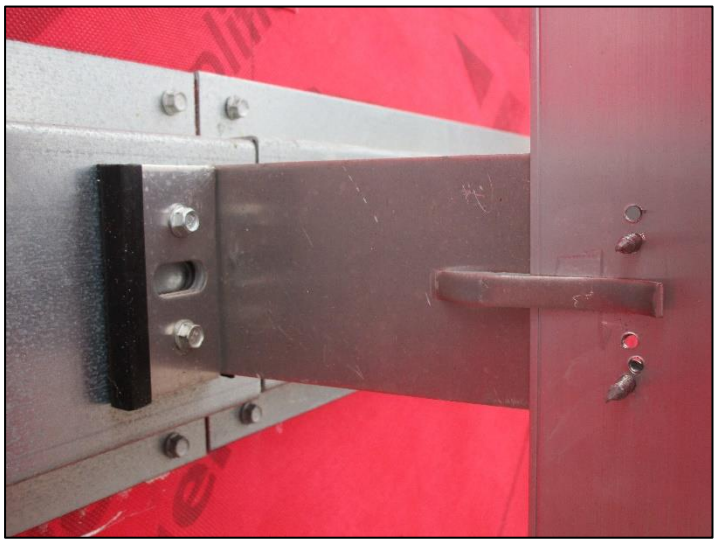
Photograph No. 8

Typical joint between panels

Photograph No. 9

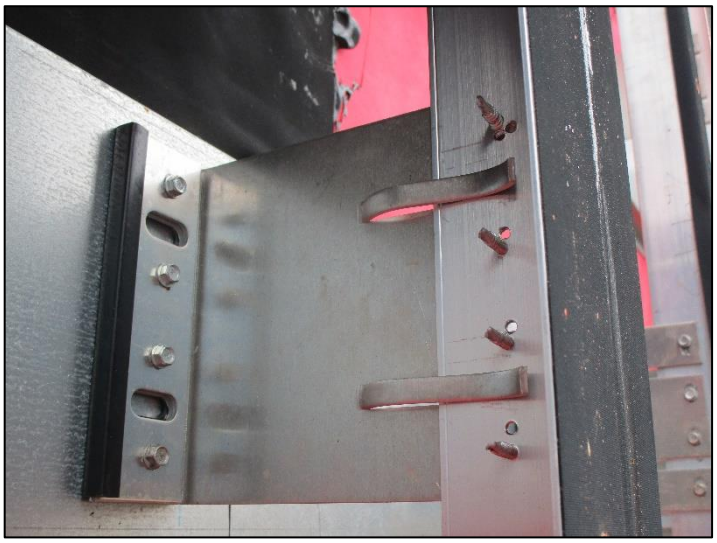
Rail, helping hand and window pod detail

Photograph No. 10



Helping hand and rail detail

Photograph No. 11



Helping hand and rail detail

Photograph No. 12

Rail layout on bottom section of sample

Photograph No. 13

Full rail layout

Photograph No. 14

Backing wall detail

Photograph No. 15

Backing wall and window pod detail, not as per drawings reference 1508-4201 Rev AB, 1508-3001 Rev AB and 1508-4204 Rev AB

Photograph No. 16

Metsec layout

----- END OF REPORT -----

WINTECH

TESTING & CERTIFICATION

Wintech Testing & Certification is an independent UKAS accredited testing laboratory and certification body. We provide a comprehensive range of services to the building and construction industries, either onsite or at our own state-of-the-art test laboratory in Telford, Shropshire, in the heart of industrial England.

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