



THE BUILDING AGENCY LIMITED – AS/NZS 4284

Shelby Wright Test Report

Report Writer:
 Bernard Farrington

Report Date:
 10 September 2024

SWTL Reference:
 J-24008

Client Information	
Client Name and Address	The Building Agency Limited 14 Link Drive, Wairau, Auckland.
Report Administered to	The Building Agency Limited
Test Report Number	SWTL - R0061
Testing	
Test Location	Shelby Wright Test Labs – 515 Rosebank Road, Avondale Auckland 1026
Test Date	19 th August 2024
Report Date	10 th September 2024
Project Name	The Building Agency Limited – AS/NZS 4284
Test Procedure	SWTM-1.0 AS_NZS 4284 2008 Test Procedure v2
Testing Officer	Bernard Farrington
Observers	Vaughan Brown, Josh Cals, Francisco Lobos (The Building Agency Limited)
Sample	
Sample	Aliclad V085 & Aliclad S085 vertical weatherboard cladding
Manufacturer	The Building Agency Limited
Specifier	The Building Agency Limited
Sample Designer	The Building Agency Limited
Sample Installer	The Building Agency Limited
IANZ	
IANZ Accredited KTP	Bernard Farrington
IANZ Accreditation No	1438

REVISION CONTROL

Revision number	Date published	Reviewed by
1	08 September 2024	
2	10 September 2024 – Issued as Final	SM

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Report Writer Bernard Farrington
 Authorised by Shawn Mclsaac



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Shelby Wright Test Labs
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Report Number: SWTL R0067
Report Date: 10 September 2024

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1 EXECUTIVE SUMMARY

Testing of The Building Agency Limited's Aliclad V085 & S085 vertical weatherboard cladding system was carried out at Shelby Wright Test Labs (SWTL) Avondale laboratory. The sample was prepared by the client and installed in the test booth by the client in August 2024.

Testing pressures align with NZS 3604 "Extra High" wind zone.

Table 1 Target Building Pressures

Serviceability Pressure
+ 1515 Pa.
- 1515 Pa

The test sample was found to have the following results for AS/NZS 4284:2008 compliance with any modifications as noted in this report:

Table 2 Summary of Results

Test Date	AS/NZS 4284:2008 Test	Result
19th August 2024	Clause 8.2 – Preliminary tests	Pass
19th August 2024	Clause 8.3 – Structural test as serviceability limit state	Pass
19th August 2024	Clause 8.4 – Air infiltration test	Pass
19th August 2024	Clause 8.5 – Water penetration by static pressure	Pass
19th August 2024	Clause 8.6 – Water penetration by cyclic pressure	Pass
19th August 2024	Clause 8.8 – Structural test at ultimate limit state	Pass

2 REQUEST FOR TESTING

The Building Agency Limited requested testing of the sample to AS/NZS 4284:2008 with the test sequences as detailed in section 5 of this report.

3 METHOD

The tests were carried out in accordance with SWTL procedures:

SWTM-1.0 AS_NZS 4284 2008 Test Procedure v2

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4 TEST SAMPLE

The test sample is as per the drawings in Appendix B of this report.

4.1 Description

The sample was comprised of an arrangement of vertical Aliclad V085 weatherboards (left hand side of sample as viewed from inside the test booth), & Aliclad S085 weatherboards (right hand side of sample as viewed from inside the test booth).

The Aliclad vertical weatherboard systems were installed over a 45mm x 20mm H3.1 castellated cavity batten fixed to structural timber frame of predominantly 90x45 SG8 H1.2 pine, which was covered with a staple fix building paper.

The sample featured:

- Two windows, (one per weatherboard system)
- Internal corners
- External corners
- A parapet with internal TPO lining and drainage collection to downpipe
- A soffit
- A 200mm pipe penetration,
- A vertical joint in the cladding system.
- An interstory joint in the cladding system.
- Flashing members as detailed in the specification tables and drawings contained within this report.

For the purpose of description in this report:

- Reference to the “Exterior” side of the sample refers to the side of the sample facing inwards to the test booth and would normally represent the external faces of the building.
- Reference to the “Interior” side of the sample refers to the side of the sample facing outwards from the test booth and would normally represent the internal faces of the building.

Client supplied “As Built” drawings are in Appendix B of this report.

Table 3 Test Sample Setup

Photo/Figure Reference	Description
	<p><i>Figure 1 – Overall view of the sample viewed from outside the booth.</i></p> <p><i>Note: perspex inspection ports and two different window types.</i></p>
	<p><i>Figure 2 – Right hand side of sample – Starke 70 UPVC window and flashing system, internal and external corner, and parapet flashing.</i></p>
	<p><i>Figure 3 – Right hand side of sample – inter-storey joint, and bottom of cladding termination flashing.</i></p>

	<p><i>Figure 4 – Left hand side of sample – inter-storey joint, and bottom of cladding termination flashing.</i></p>
	<p><i>Figure 5 – Soffit with vermin strip and dress flashings, internal corner with dress flashing.</i></p>
	<p><i>Figure 6 – Soffit with internal drainage downpipe penetration, vermin strip and dress flashings, soffit to wall dress flashing, vertical joint dress flashing.</i></p> <p><i>Note: the Aliclad weatherboards installed across the soffit.</i></p>
	<p><i>Figure 7 – 200mm pipe penetration.</i></p>

		<p>Figure 8 – Fixing penetration.</p>
		<p>Figure 9 – Parapet internal TPO guttering with welded cap flashing and cladding cavity closure vermin strip.</p>
		<p>Figure 10 – Parapet internal TPO guttering with welded cap flashing and cladding cavity closure vermin strip. (Alternate view)</p>
		<p>Figure 11 – Overview from top of sample</p>



4.2 Client Documentation

Test request and parameters form. Refer to Appendix A

Drawings. Refer to Appendix B

Certificate of Identification. Refer to Appendix E

4.3 Components

The components of the sample are as listed in drawings. Refer to Appendix B

4.4 Modifications of Sample

None.

5 TEST PROCEDURE

The test procedure was carried out following SWTM-1.0 AS_NZS 4284 2008 Test Procedure v2

5.1 Test Sequence

5.2 AS/NZS 4284:2008

- (a) Preliminary tests
- (b) Structural test at serviceability state
- (c) Air infiltration test
- (d) Water penetration test by static pressure followed by cyclic pressure test
- (e) Seismic test at serviceability limit state displacement: Not carried out
- (f) BMU restraint test – Not carried out
- (g) Strength test at ultimate limit state
- (h) Seismic test at ultimate limit state displacement
- (i) Seal degradation test: Not carried out

5.3 Deviation, variation, or exclusion to the test procedure

None.



6 TESTING EQUIPMENT

Table 4 Testing Equipment

Item	Description	ID	Calibration
Manometer	DG 1000	SWTL - 064 (Serial No: 11036)	Date of next calibration: 07 May 2025
Anemometer	FLSchmidt	SWTL - 050 (Serial No: 000011234)	Date of next calibration: 17 January 2025
Anemometer	FLSchmidt	SWTL - 017 (Serial No: 000008907)	Date of next calibration: 26 December 2025
LDS	Bojke BLG- 250N-485	SWTL - 113 (Serial No: SWTL-113)	Date of next calibration: 26 February 2025
LDS	Bojke BLG- 250N-485	SWTL - 112 (Serial No: SWTL-112)	Date of next calibration: 26 February 2025
LDS	Bojke BLG- 250N-485	SWTL - 111 (Serial No: SWTL-111)	Date of next calibration: 26 February 2025

7 ENVIRONMENTAL CONDITIONS

Table 5 Environmental Conditions

19th August 2024			
Temperature °C	Barometric Pressure hPa	Humidity	Calm / Windy
8.0	1001	82%	Breezy / Showers

8 TEST RESULTS

8.1 Results

8.2 AS/NZS 4284:2008

(a) Preliminary tests:

Clause	Test Date	Applied Pressure	Result
8.2	19th August 2024	+/- 1515 Pa	Pass

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Comments	No damage noted.	
Test	Applied Pressure	Result
Static Pressure	455 Pa	PASS
Cyclic Pressure	227-455 Pa	PASS
Cyclic Pressure	303-606 Pa	PASS
Cyclic Pressure	455-909 Pa	PASS

(b) Structural test at serviceability state:

Clause	Test Date	Applied Pressure	Deflection/Span Result	Successive Member Displacement Result
8.3	19th August 2024	+/- 1515 Pa	Pass	Pass
Criteria	Clause 8.3.5, no framing members shall deflect by an amount greater than span/250 mm.			
Comments	No damage noted.			

(c) Air infiltration test:

Clause	Test Date	Applied Pressure	Allowable Leakage l/s	Leakage l/s	Leakage l/s/m ²	Result
8.4	19th August 2024	+/- 150 Pa	20.40	3.79	0.30	Pass
Criteria	Clause 9.3 Air infiltration for airconditioned buildings shall not exceed 1.6 L/m ² s.					
Comments	Air leakage area and result values are the combination of both samples.					

(d) Water penetration test by static pressure followed by cyclic pressure test:

Clause	Test Date	Applied Pressure	Result
8.5 / 8.6	19th August 2024	See table below	See table below
Criteria	Clause 9.4, Under static and cyclic pressures there shall be no leaks. For both the static and cyclic water tests, a leak is considered to occur when one or more of the following occur: (a) Water appears on any inside surface of the facade and is visible from an occupied space. (b) Uncontrolled water appears on any inside surface of the facade. (c) Water appears that is likely to wet insulation, fixtures and finishes.		

	(d) Water appears in other locations specified as unacceptable by the Specifier.
Comments	No leaks evident.

Test	Applied Pressure	Result
Static Pressure	455 Pa	PASS
Cyclic Pressure	227-455 Pa	PASS
Cyclic Pressure	303-606 Pa	PASS
Cyclic Pressure	455-909 Pa	PASS

(e) Seismic test at serviceability limit state displacement: Not carried out.

(f) BMU restraint test: Not carried out.

(g) Strength test at ultimate limit state:




Clause	Test Date	Applied Pressure	Duration	Result
8.8	19th August 2024	+/- 2500 Pa	10 sec.	Pass
Criteria	Clause 9.7 Under structural test at ultimate limit state there shall be no collapse of the test sample. Collapse shall mean any one or any combination of the following: <ul style="list-style-type: none"> (a) Disengagement or partial disengagement of any framing member, facade panel or any part thereof. (b) Failure of any fixings that connect the façade to the building structure. (c) Failure of any stop, locking device, fastener or support which could allow an opening light to come open. (d) Repeated breakage of glass resulting in loss of chamber pressure. Glass may only be replaced once before the sample is deemed to have collapsed. (e) Repeated cracking of glass which does not result in loss of chamber pressure. Glass may only be replaced twice before the sample is deemed to have collapsed. 			
Comments	The horizontal inter-storey joint snap-fit cover strip flashing was partially dislodged due to movement of the cladding boards underneath the right hand side window as viewed from inside the test booth after negative ULS pressure application.			

(h) Seismic test at ultimate limit state displacement: Not carried out.

(i) Seal degradation test: Not carried out.

8.3 Observations

Table 6 Observations

Obs. No:	Test	Observation	Photo
1	Water testing – All	No leaking or water penetration evident.	
2	Water testing – All	No leaking or water penetration evident.	
3	Post Structural ULS Negative Pressure	Partial dislodgement of the horizontal inter-storey flashing.	

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9 DISCLOSURE/QUALIFICATIONS

On instruction of The Building Agency Limited:

- The Building Agency Limited Drawings attached to this report have been provided by the client and SWTL accepts no liability with regards to the accuracy of the drawings.
- SWTL has not be provided with any other test reports from the manufacturer or manufacturing instructions.
- This report has been prepared solely for the party of who it was addressed within the terms of the brief provided to this company. This report may not be used for any other context or for any other purpose without prior agreement.
- This report may not be read or reproduced other than a complete document.

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Report Number: SWTL R0067
Report Date: 10 September 2024



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10 IANZ ACCREDITATION

This testing has been produced under IANZ accreditation number: **1438**

11 TESTING OFFICERS

Name: Bernard Farrington

Date: 10 September 24

Signature: 

Name: Mark Ashforth

Date: 10 September 24

Signature: 

12 REPORT WRITER

Name: Bernard Farrington


Date: 10 September 24

Signature: 

13 PEER REVIEWED BY

Name: Shawn Mclsaac

Date: 10 September 24

Signature: 



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14 Appendix A – Test Request Form

Mandatory	Section	Test Name	Clause	Required Parameters
Y	a	Preliminary test SLS pressure	8.2.1 8.2.2/8.3	SLS (+) = 1515 Pa SLS (-) = 1515 kPa Static water test pressure = 405 Pa Cyclic test pressure Stage 1 = 405 Pa Cyclic test pressure Stage 2 = 406 Pa Cyclic test pressure Stage 3 = 909 Pa
Y	b	Structural test at SLS	8.2.3/8.6 8.2.3/8.6 8.2.3/8.6	Location of transducers noted on drawings? Y/N Pressure stage? As per 4284 Max. Displacement? mm Deflection/span limit ratio $\sqrt{280}$ (1766/2800 = 7.60mm)
N	c	Members or panels		
N		Air infiltration test	Test pressure	(+) = 150 Pa (-) = 150 Pa
Y	d	Water test (static and cyclic) Static Cyclic 1 Cyclic 2 Cyclic 3	Air infiltration limit = Pressure (Pa)	Duration (mins) Static water test pressure = 405 Pa Cyclic test pressure Stage 1 = 405 Pa Cyclic test pressure Stage 2 = 406 Pa Cyclic test pressure Stage 3 = 909 Pa Duration and spray intensity 15 min, 0.05 l/m ² /s 5 min, 0.05 l/m ² /s 5 min, 0.05 l/m ² /s 5 min, 0.05 l/m ² /s
N	e	Additional water penetration requirements? Seismic at SLS Support beam movement allowed = Number of cycles = Frequency of movement = BMU restraint	No mm mm Hz	(Water test repeated after)
Y	f	Strength at ULS	Test pressure	Test load across face of sample = kN Test load perpendicular to sample = kN SLS (+) = 2500 Pa SLS (-) = 2500 Pa
N	g	Seismic at ULS Support beam movement allowed = Number of cycles = Frequency of movement = Seal degradation	mm mm Hz	10% air seal removal Y/N
N	h	Describe seals to be altered		

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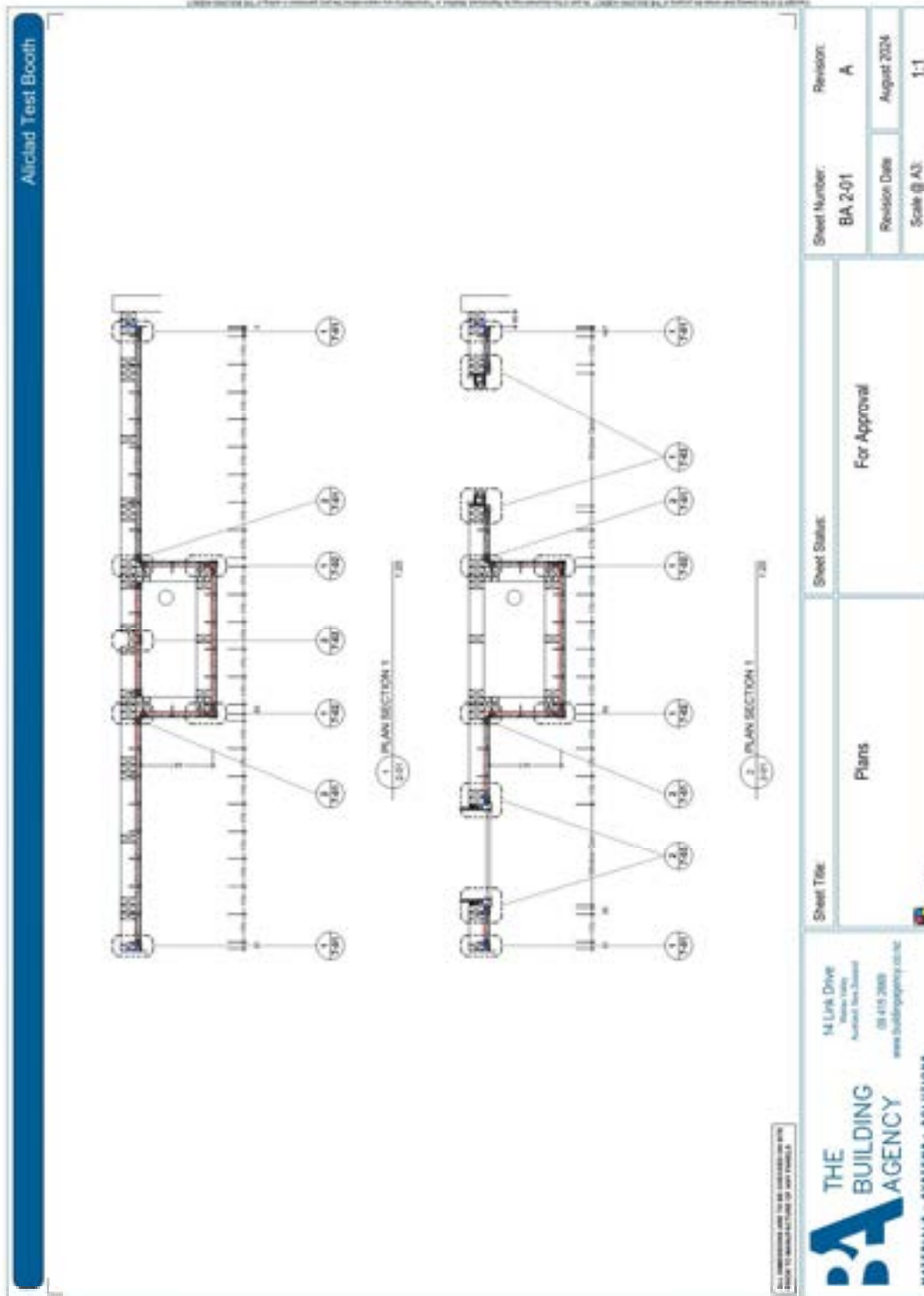


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15 Appendix B – Drawings



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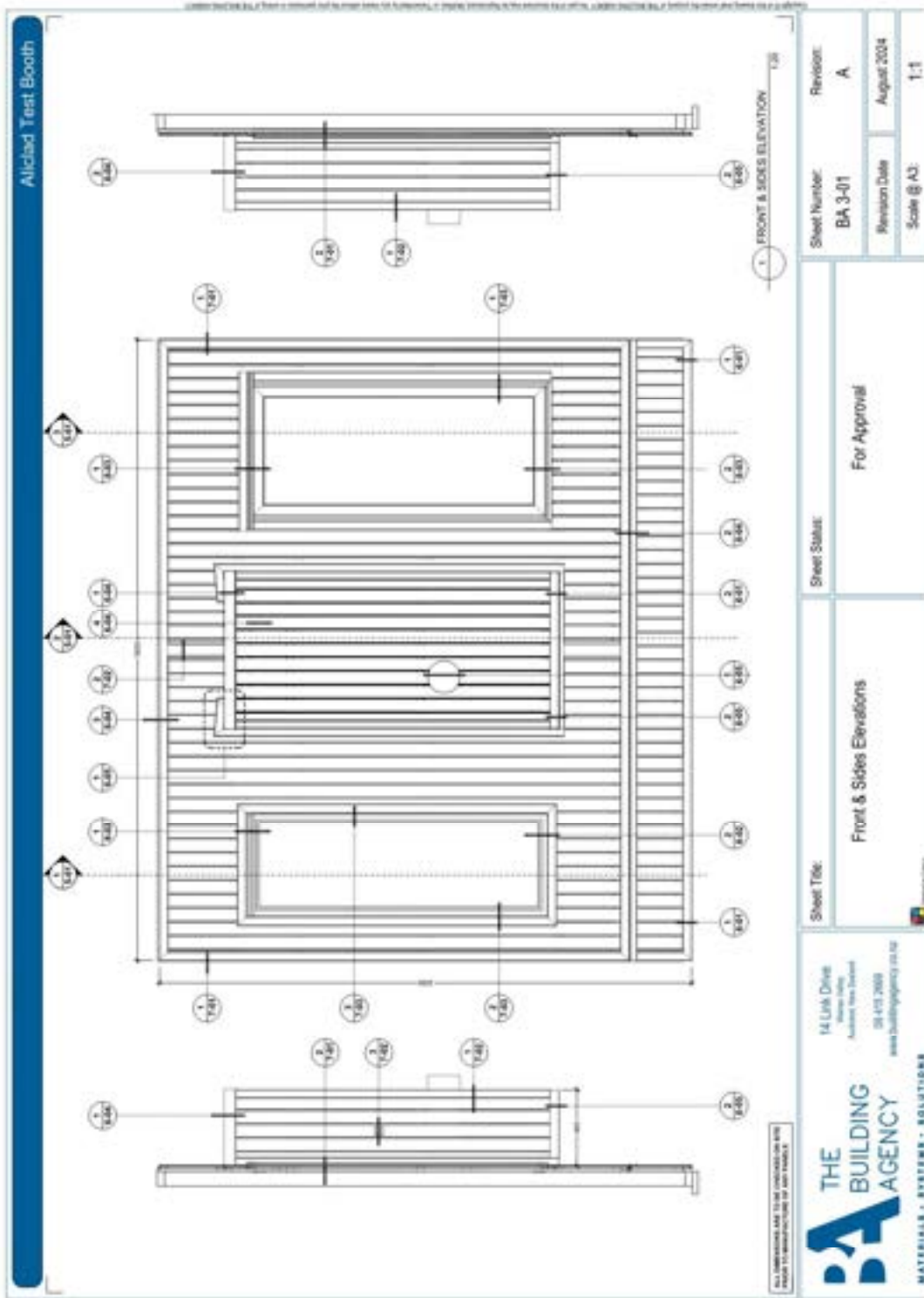
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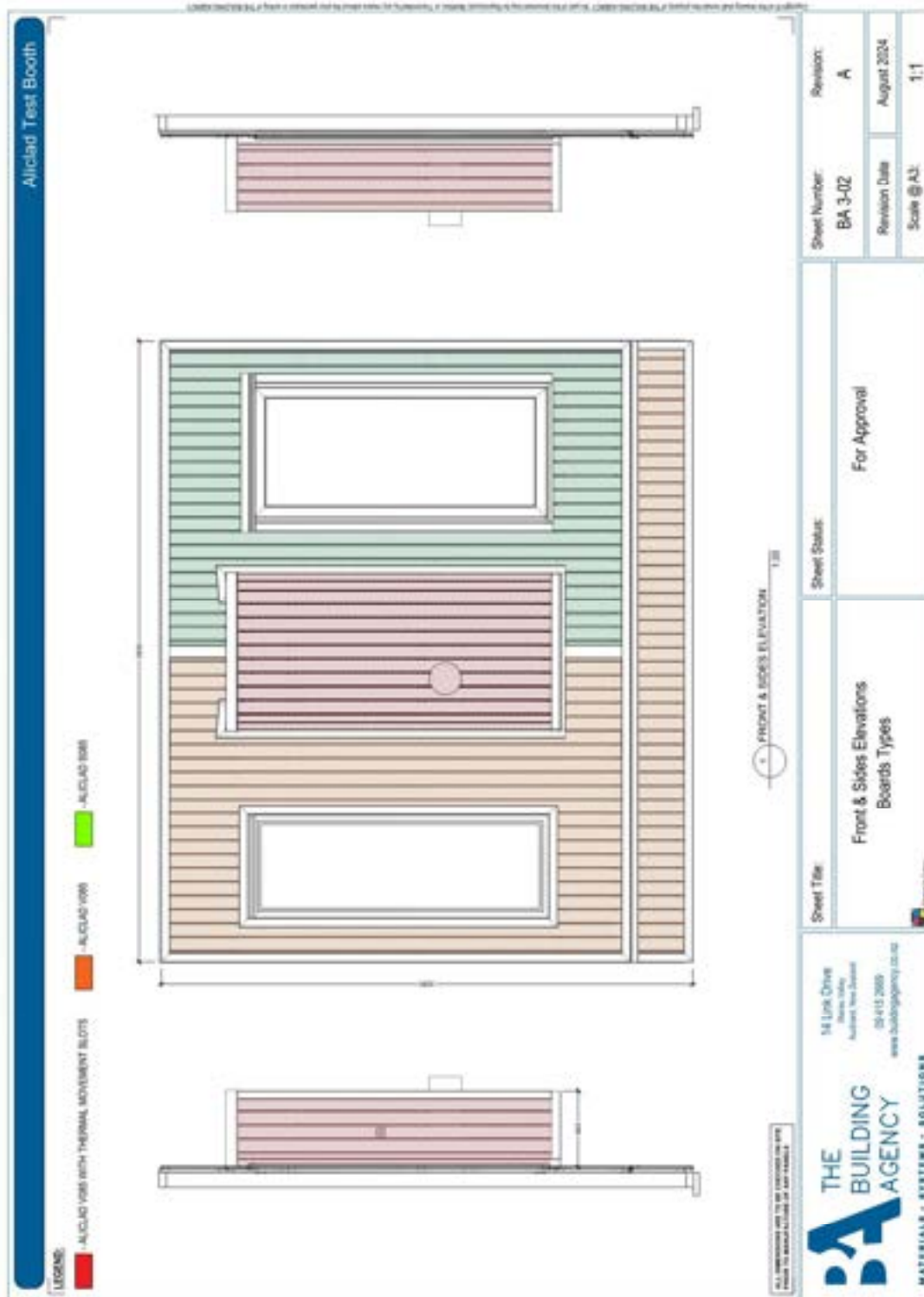
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Revision Date August 2024	Scale @ A3 1:1
For Approval	
Sheet Title: Front & Sides Elevations	Sheet Status:
14 Link Drive Avondale Auckland, New Zealand 09 475 2088 www.thebuildingagency.co.nz	
 THE BUILDING AGENCY MATERIALS • SYSTEMS • SOLUTIONS	



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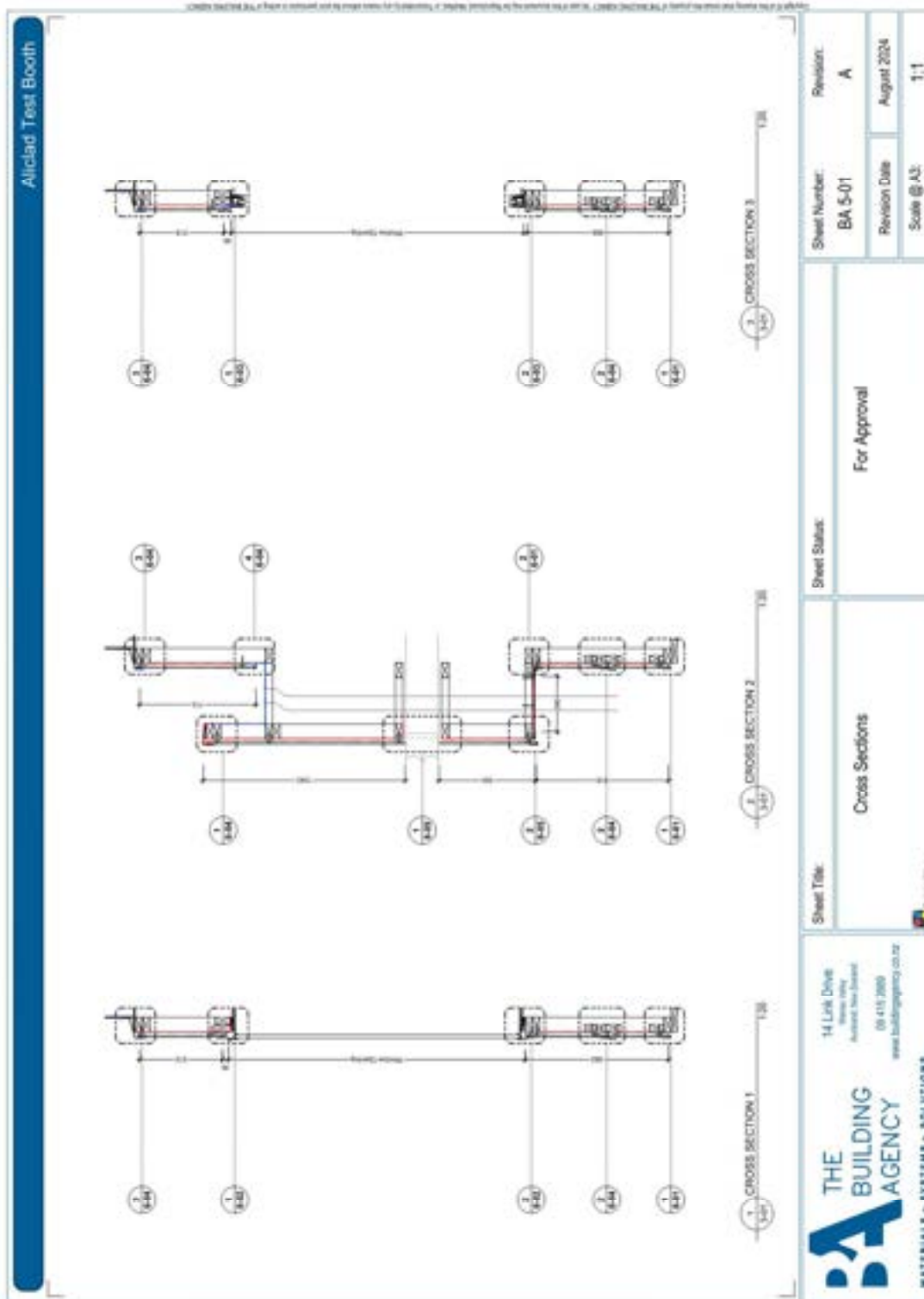
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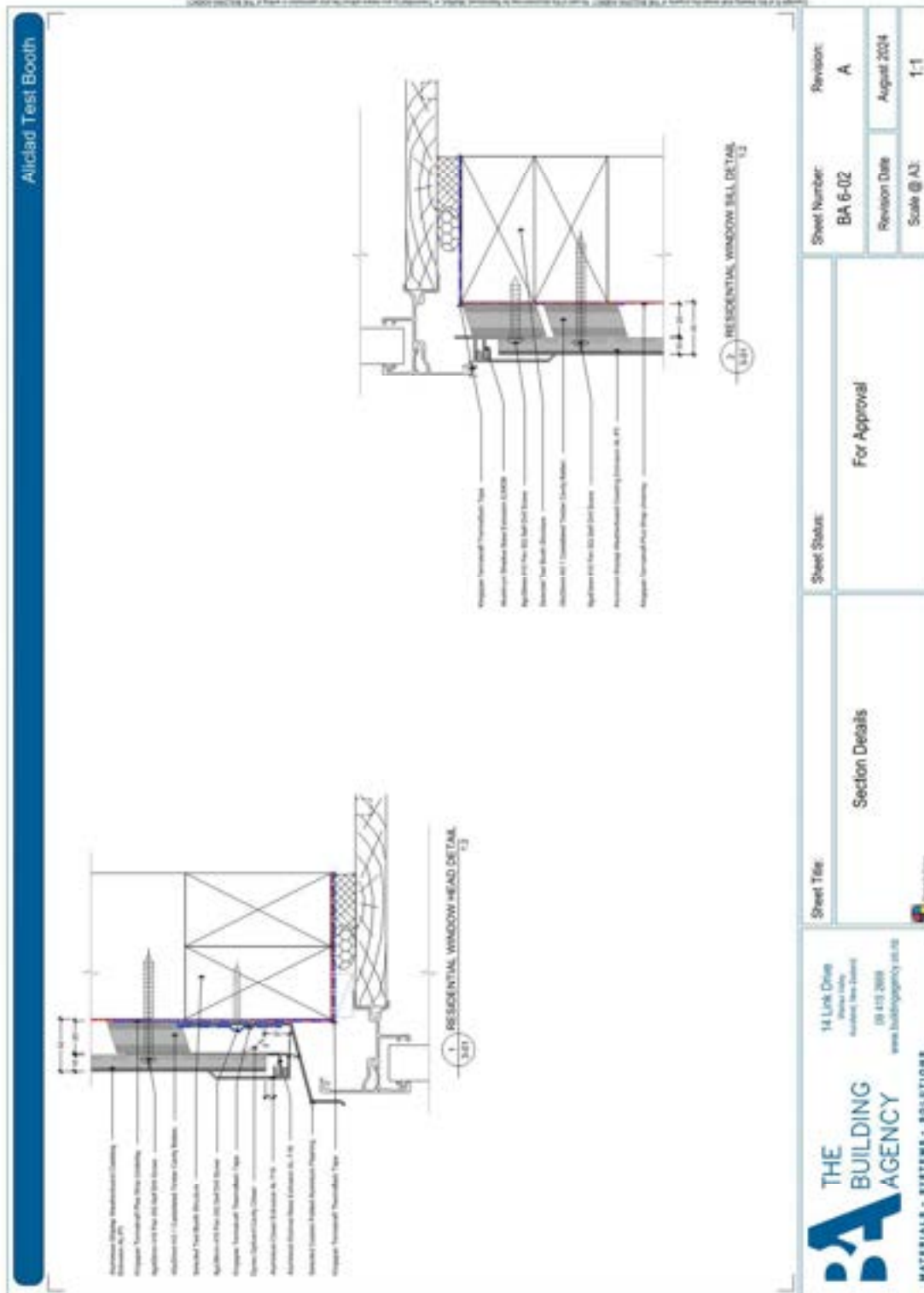
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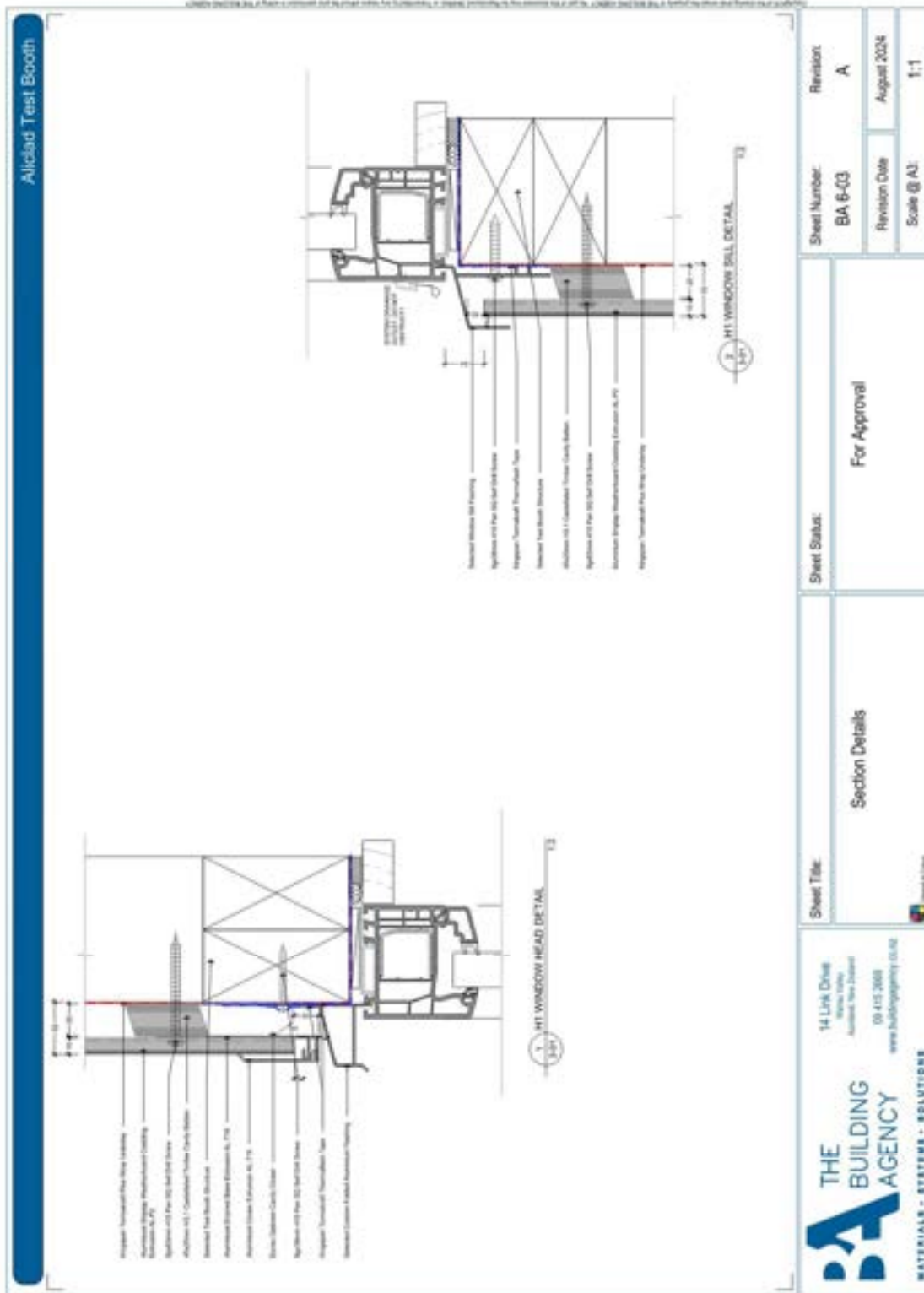
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Aliclad Test Booth

1 MODULE FLASHING SEQUENCE

<p>Sheet Title:</p> <p>14 Lark Drive Newmarket Auckland, New Zealand 09 413 2888 www.thebuildingagency.co.nz</p> <p>THE BUILDING AGENCY MATERIALS • SYSTEMS • SOLUTIONS</p>	<p>Section Details</p> <p style="text-align: center; font-weight: bold;">For Approval</p>	<p>Sheet Number: BA 6-06</p> <p>Revision: A</p> <p>Revision Date: August 2024</p> <p>Scale @ A3: 1:1</p>
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Aliclad Test Booth			Sheet Number: BA 6-07	Revision: A
			Revision Date August 2024	Scale @ A3: 1:1
Section Details			For Approval	
RESIDENTIAL WINDOW SEQUENCE LEFT SIDE				
			Sheet Title: Section Details	
			14 Lark Drive Newmarket Auckland, New Zealand 09 413 2888 www.thebuildingagency.co.nz	
			MATERIALS • SYSTEMS • SOLUTIONS	



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SECTION DETAIL OF ALICLAD WINDOW BOOTH

Aliclad Test Booth

RESIDENTIAL WINDOW SEQUENCE RIGHT SIDE

Sheet Number:	Revision:	
BA 6-08	A	
Revision Date:	Scale @ A3:	
August 2024	1:1	

For Approval

Section Details

Sheet Title: Residential Window Sequence Right Side

14 Lark Drive
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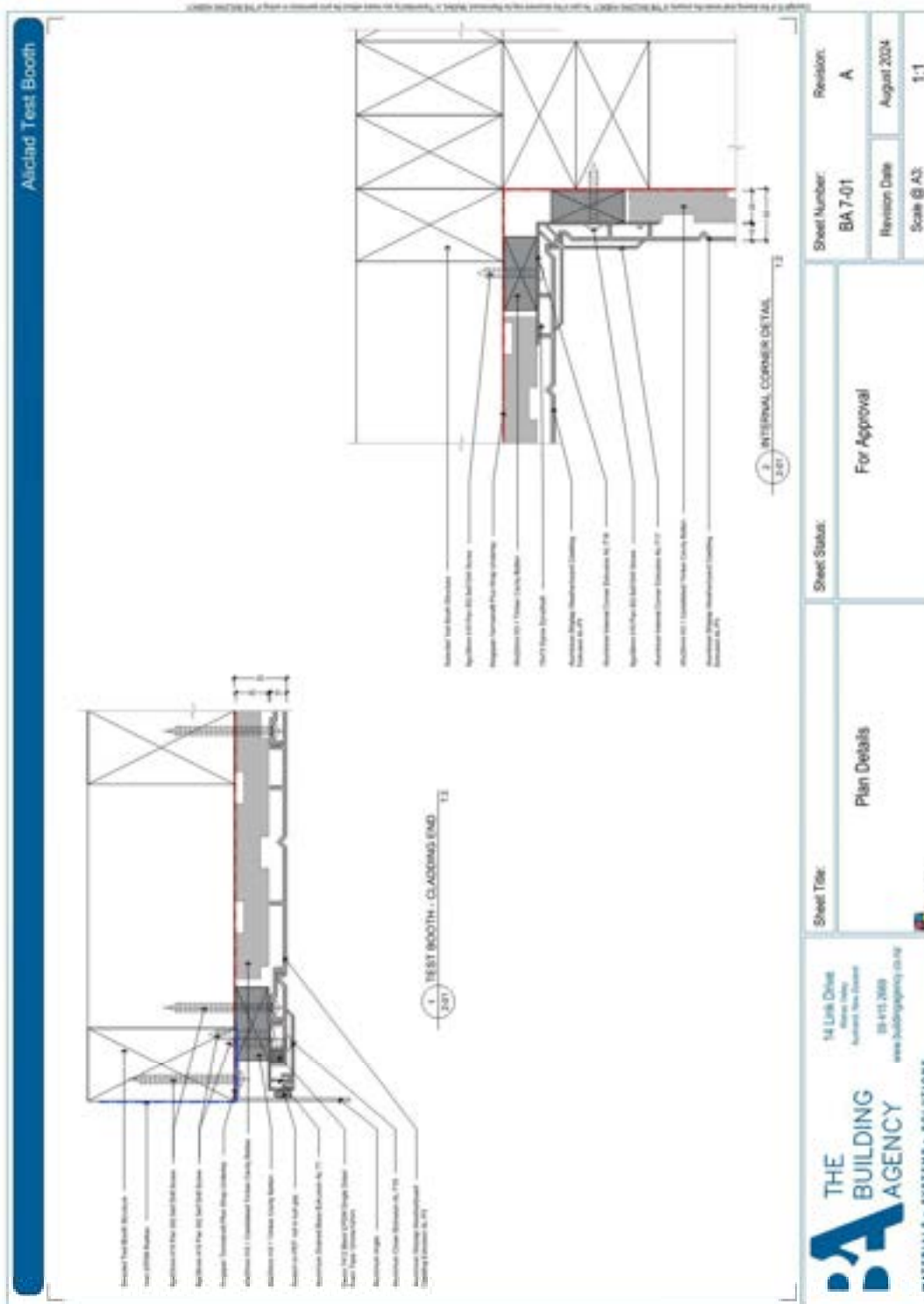
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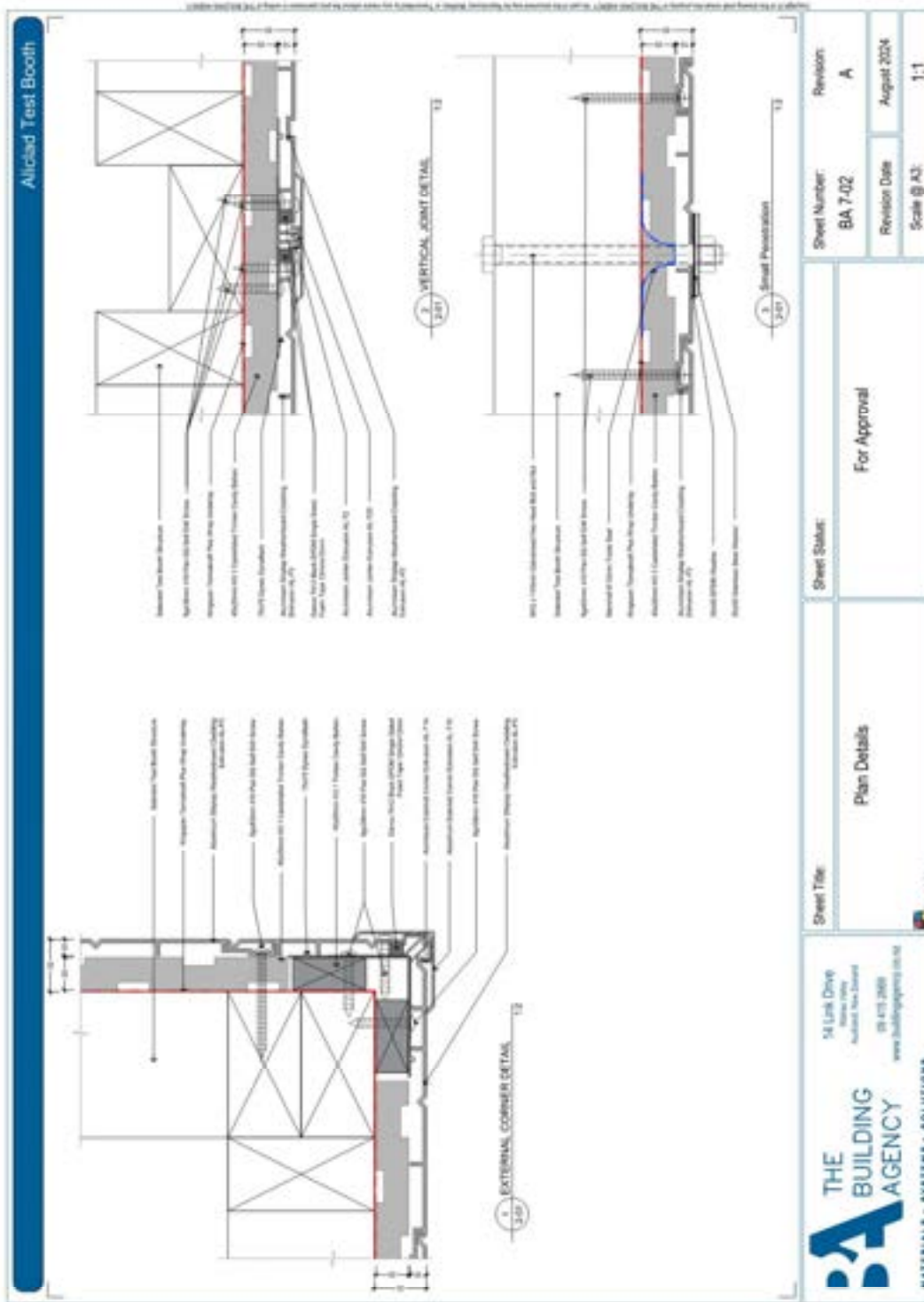


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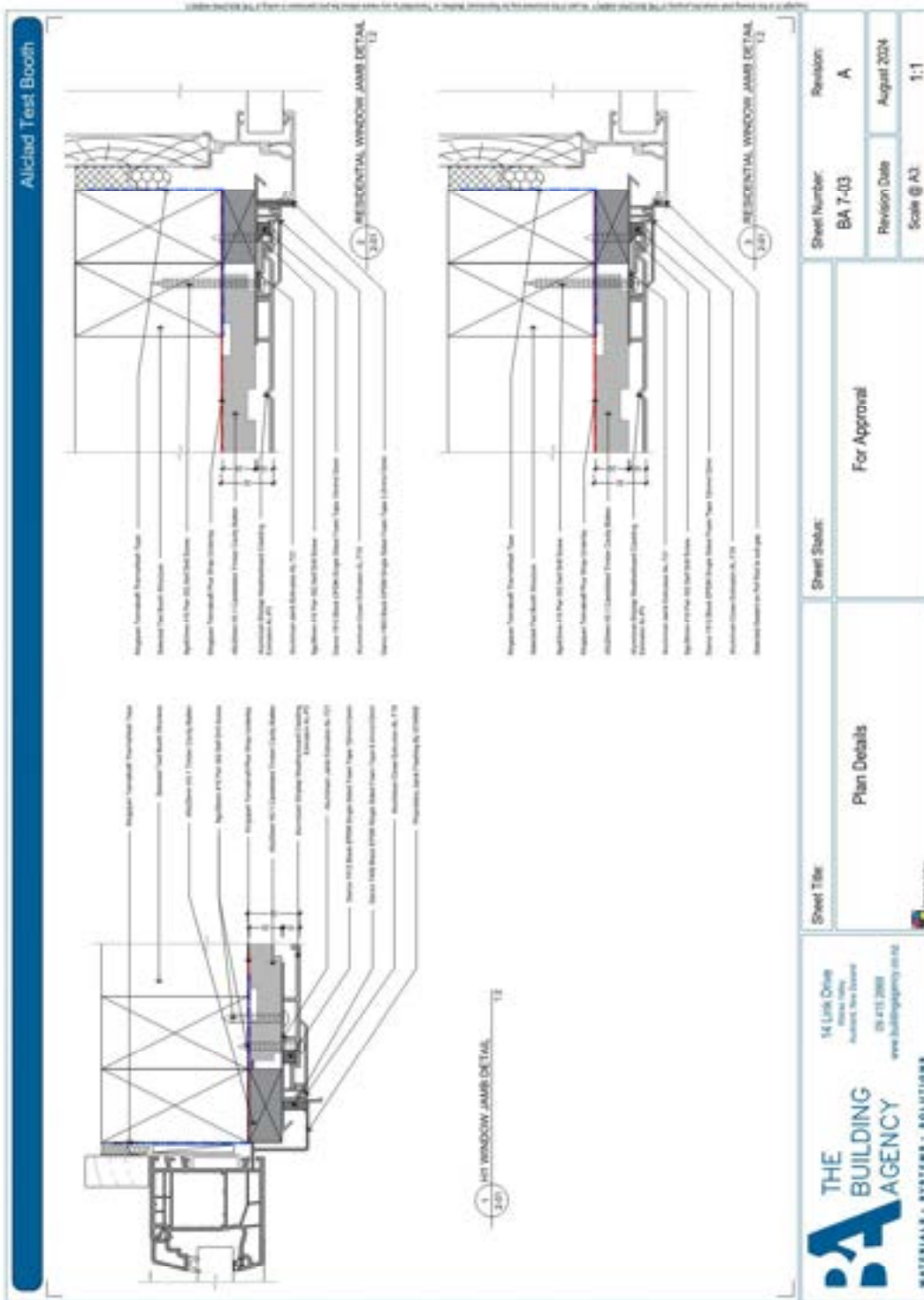


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16 Appendix C – Worksheets

SWTM-1.1 AS_NZS4284 Worksheet Preliminary Testing v2

C:\Shared drives\Shelby Wright Test Labs\Technical Records\2.0 Testing Procedures, Worksheets and Logs\Test Methods Worksheets

Version	2	TEST No: SWTL T-	225
Date Created	4-Apr-24 BF	Sheet #	1
Date Checked	23-Apr-24 BF	of sheets	6

SERVICEABILITY LIMIT	+	1515 Pa	10 sec	Comments
STATE TEST PRESSURE	-	1515 Pa	10 sec	Comments

STATIC PRESSURE TEST AS/NZS 4284:2008

Specified Test Pressure: 455 Pa or
 Test Pressure: 0.3 x SLS Pressure: 455 Pa

Pressure	Time	Comments
0 Pa	5 min.	No leaks evident
455 Pa	15 min.	No leaks evident
0 Pa	5 min.	No leaks evident

CYCLIC PRESSURE TEST AS/NZS 4284:2008

5 MINS @ 0.15 - 0.30 +ve SLS Test Pressure Pa	Based on minimum +ve SLS of 1000 Pa. 2 minutes zero pressure between each stage.
5 MINS @ 0.20 - 0.40 +ve SLS Test Pressure Pa	
5 MINS @ 0.30 - 0.60 +ve SLS Test Pressure Pa	

Note: If Cyclic test is more than 30 minutes after Static test, then water must be turned on for 5 minutes prior to cyclic pressure.

Pressure	Water On/Off	Time	Comments
227.25 - 454.5 Pa	On	5 min.	No leaks evident
0 Pa	On	2 min.	No leaks evident
303 - 606 Pa	On	5 min.	No leaks evident
0 Pa	On	2 min.	No leaks evident
454.5 - 909 Pa	On	5 min.	No leaks evident
0 Pa	Off	5 min.	No leaks evident



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SWTM-1.2.1 AS_NZS4284 Worksheet Deflection Measurements v2

© Standard Directivity Right Test | also Technical Record 2.1 Testing Procedures, Worksheets and Log/ Test Methods Worksheets

Version: 2 TEST No: SWTL T- 226
 Date Created: 4 Apr 24 BF Sheet #: 2
 Date Checked: 23 Apr 24 BF of sheets: 6

Note: This worksheet is for use with laser distance measurement

CLIENT: The Building Agency 19 August 2024
 TEST OPERATOR: Bernard Farrington
 DESCRIPTION OF SAMPLE: Alclad V085 & S085 Vertical Weatherboard System
 CLIENT DRAWING REF(S): BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01, BA 6-05, BA 7-01, BA 7-03 (All Revision A)
 MEMBER TESTED:

SERVICEABILITY LIMIT	+ 1515 Pa	Overall length	1760 mm
STATE TEST PRESSURE	- 1515 Pa	Gauge length	1760 mm
*Specified maximum deflection ratio		Max defl. (1')	250 mm
		Max defl. Specified	7.64 mm
		Max defl. Default	7.64 mm
INZ TS 4284 default = spav/250			
Atmospheric Conditions		Temperature	8 °C
		Barometric Pressure	1001 hPa
		Relative Humidity	82 %
		Bottom Middle Top	
		Gauge #	111 112 113

POSITIVE PRESSURE											
SLS test pressure				Net centre deflection mm	Default Ratio Check	Specified Ratio Check	Successive Number	Displacement			
Stage	Time	%	Pa	Input Values (Direct Displacement)			Mode	Value	Limit & Check		
0 min	0%	0	0	164.76	163.69	166.56					
2 min	100%	1515	153.96	150.47	155.62	-3.56					
21	2 min	0%	0	164.22	163.15	165.81	3.455	↔ Zero Ref			
1 min	20%	303	162.58	160.45	163.93	-0.84	-13%	-13%	Mode 1		
1 min	40%	606	160.48	158.35	161.84	-0.945	-13%	-13%			
1 min	60%	909	158.21	156.42	159.68	-1.06	-24%	-24%			
1 min	80%	1212	156.82	152.78	157.46	-1.995	-28%	-28%			
1 min	100%	1515	153.61	150.15	155.37	-2.475	-26%	-26%			
22	2 min	0%	0	164.13	162.90	165.80	-0.1	-1%	-1%	Mode 1	
1 min	100%	1515	153.69	150.26	155.45	-2.445	-26%	-26%			
1 min	80%	1212	155.25	152.01	156.88	-2.18	-21%	-21%			
1 min	60%	909	156.10	153.97	158.32	-1.875	-20%	-20%			
1 min	40%	606	159.01	156.52	160.41	-1.335	-19%	-19%			
1 min	20%	303	161.38	158.85	162.59	-1.27	-18%	-18%	Mode 1		
23	2 min	0%	0	163.99	162.77	165.45	-0.685	-1%		-1%	
NEGATIVE PRESSURE											
24	2 min	-100%	-1515	178.2	183.8	186.1	3.275	47%		47%	Mode 2
2 min	0%	0	166.94	167.68	170.82	0.75	↔ Zero Ref				
1 min	-20%	-303	168.83	170.29	173.43	0.33	5%	5%			
1 min	-40%	-606	171.12	174.20	176.88	3.4	20%	20%			
1 min	-60%	-909	173.58	177.45	180.00	1.81	20%	20%			
1 min	-80%	-1212	176.08	180.72	183.21	2.275	32%	32%	Mode 2		
1 min	-100%	-1515	178.31	183.71	186.28	3.619	37%	37%			
25	2 min	0%	0	167.28	168.25	171.54	0.04	1%		1%	
1 min	-100%	-1515	178.36	183.84	186.42	3.64	38%	38%			
1 min	-80%	-1212	176.81	181.85	184.49	3.4	34%	34%			
1 min	-60%	-909	178.13	179.53	182.36	1.88	28%	28%	Mode 2		
1 min	-40%	-606	172.64	176.53	179.52	1.85	22%	22%			
1 min	-20%	-303	170.51	173.25	176.71	0.94	12%	12%			
26	2 min	0%	0	167.81	168.78	172.58	0.085	1%		1%	
POSITIVE PRESSURE											
27	2 min	100%	1515	153.87	150.38	155.49	-2.435	-30%	-30%	Mode 3	
2 min	0%	0	164.40	163.59	166.54	0.235	2%	2%			

Result: Checked:

Tested By Bernard Farrington Report Writer Bernard Farrington
 Authorised by Shawn McIsaac



SWTM-1.3 AS_NZS4284 Worksheet Air Infiltration Measurements v4

G:\Shared drives\Shelby Wright Test Labs\Technical Records\2.0 Testing Procedures, Worksheets and Logs\Test Methods Worksheets

Version	4	TEST No: SWTL T-	227
Date Created	4-Apr-24 BF	Sheet #	3
Date Checked	23-Apr-24 BF	of sheets	6

CLIENT: The Building Agency 19 August 2024

TEST OPERATOR: Bernard Farrington

DESCRIPTION OF SAMPLE: Aliclad V085 & S085 Vertical Weatherboard System

CLIENT DRAWING REF(S): BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)

Sample Width	3.935 m	Sample Perimeter Length	30.55 m
Sample Height	3.24 m		
Sample Area	12.75 m ²		

AS/NZS 4284:2008 Maximum permitted air flow, l/s at	150 Pa booth pressure
Overall Sample Area x 1.6	= 20.40 l/s
Sample Perimeter Length x 0.6	= 18.33 l/s

Atmospheric Conditions	Temperature	8 °C
	Barometric Pressure	1001 hPa
	Relative Humidity	82 %

POSITIVE PRESSURE						
	Sample Unsealed			Sample Sealed		
	Δ P, Pa	Flow, m ³ /hr	Flow l/s	Δ P, Pa	Flow, m ³ /hr	Flow l/s
Reading 1	150	13.05	3.63	150		0
Reading 2		14.54	4.04			0
Reading 3		13.39	3.72			0
Average Air Flow			3.79			0
Net Air Leakage			3.79 l/s			

NEGATIVE PRESSURE						
	Sample Unsealed			Sample Sealed		
	Δ P, Pa	Flow, m ³ /hr	Flow l/s	Δ P, Pa	Flow, m ³ /hr	Flow l/s
Reading 1	150	11.96	3.32	150		0
Reading 2		12.67	3.52			0
Reading 3		13.83	3.84			0
Average Air Flow			3.56			0
Net Air Leakage			3.56 l/s			



All tests reported herein
 have been performed in
 accordance with the
 laboratory's scope of
 accreditation



SWTM-1.4.1 AS_NZS4284 Static Water Penetration v1

G:\Shared drives\Shelby Wright Test Labs\Technical Records\2.0 Testing Procedures, Worksheets and Logs\Test
 Methods Worksheets

Version	1	TEST No: SWTL T-	228
Date Created	4-Apr-24 BF	Sheet #	4
Date Checked	23-Apr-24 BF	of sheets	6

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Aliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)

STATIC PRESSURE TEST AS/NZS 4284:2008

Specified Test Pressure 455 Pa or
 Test Pressure: 0.3 x SLS Press 455 Pa

Pressure	Time	Comments
0 Pa	5 min.	No leaks evident
455 Pa	15 min.	No leaks evident
0 Pa	5 min.	No leaks evident

Result Checked



Report Number: SWTL R0067
 Report Date: 10 September 2024

SWTM-1.4.2 AS_NZS4284 Cyclic Water Penetration v1

G:\Shared drives\Shelby Wright Test Labs\Technical Records\2.0 Testing Procedures, Worksheets and Logs\Test Methods Worksheets

Version	1	TEST No: SWTL T-	229
Date Created	4-Apr-24 BF	Sheet #	5
Date Checked	23-Apr-24 BF	of sheets	6

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Aliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)

CYCLIC PRESSURE TEST AS/NZS 4284:2008

5 MINS @ 0.15 - 0.30 +ve SLS Test Pressure Pa	Based on minimum +ve SLS of 1000 Pa. 2 minutes zero pressure between each stage.
5 MINS @ 0.20 - 0.40 +ve SLS Test Pressure Pa	
5 MINS @ 0.30 - 0.60 +ve SLS Test Pressure Pa	

Note: If Cyclic test is more than 30 minutes after Static test, then water must be turned on for 5 minutes prior to cyclic pressure.

Pressure	Water On/Off	Time	Comments
227 455 Pa	On	5 min.	No leaks evident
0 Pa	On	2 min.	No leaks evident
303 606 Pa	On	5 min.	No leaks evident
0 Pa	On	2 min.	No leaks evident
455 909 Pa	On	5 min.	No leaks evident
0 Pa	Off	5 min.	No leaks evident
227 455	Result	Pass	Checked BF
303 606	Result	Pass	Checked BF
455 909	Result	Pass	Checked BF



SWTM-1.2.1 AS_NZS4284 Worksheet Deflection Measurements v2

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Version	2	TEST No: SWTL T-	230
Date Created	4-Apr-24 BF	Sheet #	6
Date Checked	23-Apr-24 BF	of sheets	6

Note: This worksheet is for use with laser distance measurement

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Aliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	

ULTIMATE LIMIT STATE TEST PRESSURE	+	2500 Pa
	-	2500 Pa
Atmospheric Conditions	Temperature	11.9 °C
	Barometric Pressure	1002 hPa
	Relative Humidity	79 %

Result Checked

Note: Minor dislodgement of the horizontal inter-storey clip on flashing strip

17 Appendix D – Uncertainty of Measurement

SWTM-16.0 V1 Uncertainty of Measurement - Air Infiltration
 Date Created: 4-Dec-23 BF
 Date Checked: 12-Dec-23 BF
 G:\Shared drives\Shelby Wright Test Labs\Technical Records\12. Error Budget

Client	The Building Agency
Test Sample	Aliclad V085 & S085 Vertical Weatherboard System
Date	19-Aug-24
Operator	Bernard Farrington

FLOW COMPENSATION FOR ATMOSPHERIC PRESSURE AND TEMPERATURE

PARAMETER	UNITS	INPUTS	RESULTS
Flow Reading	m ³ /h	13.24	Flow Compensated 281 100100 m ³ /h 13.448
Temperature Actual	Degrees Celcius	8	
Pressure Actual (Metservice)	Hectapascals	1001	Actual Flow per m ² l/m ² /s 0.293
Air Infiltration Pressure	Pascals	150	
Specimen Dimensions	Width (m)	3.935	
	Height (m)	3.24	
	Area (m ²)	12.749	

UNCERTAINTY OF SAMPLE SIZE

Dimension (mm)	X-X (U _A)	Dimension measured in (m)	Type Calibration UoM (%)	Reading Accuracy +/- 0.001 m	UoM of Sample Size %
Dimension (mm)	X-X (U _A)	3.935	0.5%	0.001 U _A	1.942%
Dimension (mm)	Y-Y (U _B)	3.24	0.5%	0.001 U _B	1.589%

$$U_{m^2} = \sqrt{\left[\frac{U(A)}{A}\right]^2 + \left[\frac{U(B)}{B}\right]^2}$$

0.007 %

UNCERTAINTY OF AIR INFILTRATION FLOW RATE

Daaks Certificate UoM for Schmidt SS.20.260 **1.3%**

$$U^2 [Flow] = \left[\frac{L}{S}\right]^2 U^2 m^2 + [m^2]^2 U^2 \left[\frac{L}{S}\right]$$

3.036%

UoM Air Infiltration 17.425%

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W: www.swtl.co.nz

Report Number: SWTL R0067
Report Date: 10 September 2024



All tests reported herein
have been performed in
accordance with the
laboratory's scope of
accreditation



Shelby Wright Test Labs
515 Rosebank Road
Avondale, Auckland
New Zealand, 1026

18 Appendix E – Certificate of Identification

Tested By Bernard Farrington

Report Writer Bernard Farrington
Authorised by Shawn Mclsaac