



Regulatory information report




Glazed louvre windows in accordance with AS 1530.8.1 for BAL-40 exposure

Sponsor: Breezway Australia Pty Ltd

Report number: FAS200470 Revision: RIR1.2

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Quality management

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RIR1.2	Issue: 23/09/2021	Reason for issue	Initial issue.		
	Expiry: 31/07/2026	Name Signature	Prepared by	Reviewed by	Authorised by
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Note: RIR1.0 and RIR 1.1 was skipped to match the report to match the version of the assessment report.					

Executive summary

This report contains the minimum information required for regulatory compliance and refers to the referenced assessment report FAS200470 R1.2.

The analysis conducted in the referenced assessment report documents the findings of the assessment undertaken to determine the expected fire performance in a simulated bushfire attack – radiant heat and small flaming sources test on Breezway® Australia Pty Ltd Altair® louvres and the Altair® IGLU® louvres in an Easyscreen™ window system if tested in accordance with clauses 14 and 16 of AS 1530.8.1:2018.

The analysis in sections 5 to 7 of the referenced assessment found that the proposed systems, together with the described variations, are expected to achieve BAL— AA40 as shown in Table 1, if tested in accordance with AS 1530.8.1:2018.

Table 1 Variations and assessment outcome

Item	Reference test	Description	Variations	BAL rating
Modular arrangement of louvers	FRT200407	The tested system consisted of a combination window system which included the Breezway® Australia Pty Ltd Altair® louvre in an Easyscreen™ window system and the Altair® IGLU® louvre in an Easyscreen™ window system.	It is proposed to assess the following arrangement of louvers instead of the arrangement in the tested system: <ul style="list-style-type: none"> Up to three modules of Breezway® Altair® Louvre in an Easyscreen™ window System Up to three modules of Breezway® Altair® IGLU® Louvre in an Easyscreen™ window System 	BAL— AA40
Metal screen	FRT200407	The tested system consisted of a combination window system where both systems incorporated the Invisi-Gard screen on the exposed side.	It is proposed to assess the use of alternative metals screens that are capable of achieving BAL— AA40 when tested in accordance with AS 1530.8.1:2018, instead of Invisi-Gard screen as per the tested systems.	
Mullions instead of frame couples	FRT200407	The tested system consisted of a combination window system where the window modules were joined using frame couplers.	It is proposed to allow for the use of mullions instead of frame couples between window modules and assess the following arrangement of louvers instead of the arrangement in the tested system: <ul style="list-style-type: none"> Up to six modules of Breezway® Altair® Louvre in an Easyscreen™ Window System Up to six modules of Breezway® Altair® IGLU® Louvre in an Easyscreen™ Window System 	

The variations and outcome of the referenced assessment report are subject to the limitations and requirements described in sections 2, 3 and 6 of this report. The results of this report are valid until 31 July 2026.

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1. Introduction

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The referenced assessment was carried out at the request of Breezway Australia Pty Ltd.

The sponsor details are included in Table 2.

Table 2 Sponsor details

Sponsor	Address
Breezway® Australia Pty Ltd	35 Cambridge Street Coorparoo QLD 4151 Australia

2. Framework for the assessment

2.1 Assessment approach

An assessment is an opinion about the expected performance of a component or element of structure if it was subject to a fire test.

No specific framework, methodology, standard or guidance documents exists in Australia for doing these assessments. We have therefore followed the 'Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence' prepared by the Passive Fire Protection Forum (PFPF) in the UK in 2019².

This guide provides a framework for undertaking assessments in the absence of specific fire test results. Some areas where assessments may be offered are:

- Where a modification is made to a construction which has already been tested
- The interpolation or extrapolation of results of a series of fire resistance tests, or utilisation of a series of fire test results to evaluate a range of variables in a construction design or a product
- Where, for various reasons – eg size or configuration – it is not possible to subject a construction or a product to a fire test.

Assessments will vary from relatively simple judgements on small changes to a product or construction through to detailed and often complex engineering assessments of large or sophisticated constructions.

The referenced assessment uses established empirical methods and our experience of fire testing similar products to extend the scope of application by determining the limits for the design based on the tested constructions and performances obtained. The assessment is an evaluation of the potential fire hazard properties if the elements were to be tested in accordance with AS 1530.8.1:2018.

The referenced assessment has been written using appropriate test evidence generated at accredited laboratories to the relevant test standard. The supporting test evidence has been deemed appropriate to support the manufacturer's stated design.

¹ AS 1530.8.1:2018: Standards Australia 2014, Methods for fire tests on building materials, components, and structures – Part 8.1: Tests on elements of construction for buildings exposed to simulated bushfire attack – Radiant heat and small flaming sources, AS 1530.8.1:2018, Standards Australia, NSW

² Passive Fire Protection Forum (PFPF), 2019, Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence, Passive Fire Protection Forum (PFPF), UK.

2.2 Compliance with the National Construction Code

The referenced assessment report has been prepared to meet the evidence of suitability requirements of the National Construction Code Volumes One and Two – Building Code of Australia (NCC) 2019 including amendments³ under A5.2 (1) (d).

The referenced assessment has been written in accordance with the general principles outlined in EN 15725:2010⁴ for extended application reports on the fire performance of construction products and building elements.

The referenced assessment report may also be used to demonstrate compliance with the requirements for evidence of suitability under NCC 2016 including amendments⁵.

2.3 Declaration

The 'Guide to undertaking technical assessments of the fire performance of construction products based on fire test evidence' prepared by the PFPF in the UK requires a declaration from the client. By accepting our fee proposal on 5 May 2021, Breezway Australia Pty Ltd confirmed that:

- To their knowledge the component or element of structure, which is the subject of the referenced assessment, has not been subjected to a fire test to the standard against which the referenced assessment is being made.
- They agree to withdraw the referenced assessment from circulation if the component or element of structure is the subject of a fire test by a test authority in accordance with the standard against which the referenced assessment is being made and the results are not in agreement with the referenced assessment.
- They are not aware of any information that could adversely affect the conclusions of the referenced assessment and – if they subsequently become aware of any such information – they agree to ask the assessing authority to withdraw the assessment.

3. Limitations of the referenced assessment

- The scope of the referenced assessment report is limited to an assessment of the variations to the tested systems described in section 4.3.
- The referenced assessment report details the methods of construction, test conditions and assessed results that are expected if the systems were tested in accordance with AS 1530.8.1:2018.
- The assessed systems within the referenced assessment report satisfy the test criteria to be used instead of applicable requirements of Clauses 8.2 to 8.8 of AS 3959:2018.
- The referenced assessment is applicable to glazed vertical elements exposed to fire from one side in accordance with the requirements of AS 1530.8.1:2018 where vertical elements must be exposed to heat from the direction required to resist fire exposure. Other variations permitted under the field of direct application have been outlined in Appendix C of the referenced report.
- The referenced assessment report is only valid for the assessed system/s and must not be used for any other purpose. Any changes with respect to size, construction details, loads, stresses, edge or end conditions – other than those identified in the referenced assessment report – may invalidate the findings of the referenced assessment. If there are changes to the system, a reassessment will need to be done by an Accredited Testing Laboratory (ATL).
- The documentation that forms the basis for the referenced assessment report is listed in Appendix A of the referenced report.

³ National Construction Code Volumes One and Two - Building Code of Australia 2019 including Amendments, Australian Building Codes Board, Australia

⁴ European Committee for Standardization, 2010, Extended application reports on the fire performance of construction products and building elements, EN 15725:2010, European Committee for Standardization, Brussels, Belgium.

⁵ National Construction Code Volumes One and Two - Building Code of Australia 2016 including Amendments, Australian Building Codes Board, Australia

- The referenced assessment report has been prepared based on information provided by others. Warringtonfire has not verified the accuracy and/or completeness of that information and will not be responsible for any errors or omissions that may be incorporated into the referenced assessment report as a result.
- The referenced assessment is based on the proposed systems being constructed under comprehensive quality control practices and following appropriate industry regulations and Australian Standards on quality of materials, design of structures, guidance on workmanship and the expert handling, placing and finishing of the products on site. These variables are beyond the control and consideration of the referenced assessment report.

4. Description of the specimen and variations

4.1 System description

The tested system in FRT200407 consisted of a 90 × 45 timber stud frame that was clad with 9 mm thick fibre cement board on the exposed side and 10 mm thick regular plasterboard on the unexposed side. In this separating element, a combination window system was installed which included the Breezway® Australia Pty Ltd Altair® louvre in an Easyscreen™ window system and the Altair® IGLU® louvre in an Easyscreen™ window system. Both systems incorporated the Invisi-Gard screen on the exposed side.

4.2 Referenced test data

The assessment of the variation to the tested system and the determination of the expected performance is based on the results of the fire test documented in the reports summarised in Table 3.

Table 3 Referenced test data

Report number	Test sponsor	Test date	Testing authority
FRT200407	Breezway® Australia Pty Ltd	13 April 2021	Warringtonfire Australia

4.3 Variations to the tested system

An identical system has not been subject to a standard fire test. We have therefore assessed the system using baseline test information for similar system. The variations to the tested system – together with the referenced standard fire tests – are described in Table 4.

Table 4 Variations to tested system

Item	Reference test	Description	Variations
Modular arrangement of louvers	FRT200407	The tested system consisted of a combination window system which included the Breezway® Australia Pty Ltd Altair® louvre in an Easyscreen™ window system and the Altair® IGLU® louvre in an Easyscreen™ window system.	It is proposed to assess the following arrangement of louvers instead of the arrangement in the tested system: <ul style="list-style-type: none"> • Up to three modules of Breezway® Altair® Louvre in an Easyscreen™ Window System • Up to three modules of Breezway® Altair® IGLU® Louvre in an Easyscreen™ Window System
Metal screen	FRT200407	The tested system consisted of a combination window system where both systems incorporated the Invisi-Gard screen on the exposed side.	It is proposed to assess the use of alternative metals screens that are capable of achieving BAL— AA40 when tested in accordance with AS 1530.8.1:2018, instead of Invisi-Gard screen as per the tested systems.

Item	Reference test	Description	Variations
Mullions instead of frame couples	FRT200407	The tested system consisted of a combination window system where the window modules were joined using frame couplers.	<p>It is proposed to allow for the use of mullions instead of frame couples between window modules and assess the following arrangement of louvers instead of the arrangement in the tested system:</p> <ul style="list-style-type: none"> Up to six modules of Breezway® Altair® Louvre in an Easyscreen™ Window System Up to six modules of Breezway® Altair® IGLU® Louvre in an Easyscreen™ Window System

4.4 Assessment standard

Section 14 of AS 1530.8.1:2018 sets out the general test procedure for determining the BAL of building materials, components and structures.

Section 16 of AS 1530.8.1:2018 sets out the specific procedure for determining the BAL of glazed vertical elements.

The purpose of the test is to assess the performance of the external construction elements when exposed to radiant heat, burning embers and burning debris.

4.5 Schedule of components

Table 5 outlines the schedule of components for the assessed systems subject to a fire test, as referenced in section 4.2.

Table 5 Schedule of components of assessed systems

Item	Description	
Separating element		
1.	Item name	Framing
	Product name	90 × 45 MGP10 Radiata pine
	Density	489 kg/m ³ (measured)
	Location	Located around the perimeter of the specimen and the wall system. Noggings must be located at nominal 1000 mm centres to the sides of the specimen. Jack studs must be located at nominal 300 mm centres above and below the specimen.
2.	Item name	Unexposed cladding
	Product name	10 mm thick regular plasterboard
	Density	566 kg/m ³ (measured)
	Location	Fixed directly to the timber framing on the unexposed face of the specimen.
	Fixings	6g × 32 mm bugle head plasterboard screws at approximately 300 mm centres through the timber framing.
3.	Item name	Exposed cladding
	Product name	9 mm thick CSR Cemintel® CeminSeal® Wallboard fibre cement board
	Density	1625 kg/m ³ (nominal)
	Location	Fixed directly to the timber framing on the exposed face of the specimen.
	Fixings	6g × 32 mm bugle head plasterboard screws at approximately 200 mm centres through the timber framing.

Item	Description	
4.	Item name	Eaves sheet lining
	Product name	6 mm thick CSR Cemintel® CeminSeal® Wallboard fibre cement board
	Density	1625 kg/m ³ (nominal)
	Location	Fixed directly to the exposed side of the timber framing along the eaves.
	fixings	6g × 32 mm bugle head plasterboard screws at approximately 200 mm centres through the timber framing.
5.	Item name	Sill cladding
	Product name	13 mm thick GYPROCK® Fyrchek™ plasterboard
	Density	833 kg/m ³ (nominal)
	Location	Fixed directly to the timber framing at the sill
	Fixing	6g × 32 mm bugle head plasterboard screws at approximately 200 mm centres through the timber framing.
6.	Item name	Sill cladding
	Product name	6 mm thick CSR Cemintel® CeminSeal® Wallboard fibre cement board
	Density	1625 kg/m ³ (nominal)
	Location	Above the plasterboard (item 5) and fixed through to the timber framing at the sill.
	Fixing	6g × 32 mm bugle head plasterboard screws at approximately 200 mm centres through to the timber framing.
Note	References to the specimen are from the unexposed face unless stated. North references are to the right and south references are to the left.	
System	Breezway® Altair® Louvre in an Easyscreen™ Window system Breezway® Altair® Louvre IGLU® in an Easyscreen™ Window system	
Glazing		
Option 1: Up to 3 or 6 × Altair® 152 mm louvre window		
7.	Material	6 mm Grade A clear toughened glass
	Size	Overall pane size up to nominal 2471 mm high × 1127 mm wide Visible pane size up to nominal 2471 mm high × 1085 mm wide
Option 2: Up to 3 × Altair® IGLU® louvre window		
8.	Material	5 mm low emissivity glass / 12 mm argon gas space / 5 mm low emissivity glass (5LE/12AR/5LE IGU) with an overall thickness of 22 mm.
	Size	Overall pane size up to nominal 140 mm high × 1127 mm wide Visible pane size up to nominal 140 mm high × 1085 mm wide
Framing		
Overall Window Frame		
9.	Size	Altair® 152 mm louvre window (option 1): overall frame dimensions <ul style="list-style-type: none"> • 3 modules: 2509 mm high × 3657 mm wide • 6 modules: 2471 mm high × 7205 mm wide Altair® IGLU® louvre window (option 2): overall frame dimensions <ul style="list-style-type: none"> • 3 modules: 2514 mm high × 3666 mm wide • 6 modules: 2476 mm high × 7223 mm wide
	Material	Extruded Aluminium

Item	Description	
Altair® 152 mm louvre window		
10.	Size	Overall frame dimensions of 2471 mm high × 1173 mm wide
	Material	Extruded Aluminium
a.	Head	Head frame
		Overall size: 131 mm deep × 95 mm high, various thicknesses, 1.2 mm nominal
b.	Sill	Sill frame
		Overall size: 131 mm deep × 83 mm high, various thicknesses, 1.2 mm nominal
c.	Jamb	Jamb
		Overall size: 131 mm deep × 32 mm wide, various thicknesses, 1.2 mm nominal
d.	Coupler	Frame coupler
		Overall size: 131 mm deep × 66 mm wide, various thicknesses, 1.4 mm nominal Note: Frame couplers can be used for up to a maximum of three window modules.
e.	Mullion	Extruded Aluminium mullion
		Overall size: 131 mm deep × 66 mm wide, various thicknesses, 1.4 mm nominal Note: Mullions can be used for up to a maximum of six window modules.
Altair® IGLU® louvre window		
11.	Size	Overall frame dimensions of 2476 mm high × 1176 mm wide
	Material	Extruded Aluminium
a.	Jamb	Jamb
		Overall size: 131 mm deep × 32 mm wide, various thicknesses, 1.2 mm nominal
b.	Head	Head frame
		Overall size: 131 mm deep × 68 mm high, various thicknesses, 1.4 mm nominal
c.	Sill	Sill frame
		Overall size: 131 mm deep × 83 mm high, various thicknesses, 1.4 mm nominal
d.	Coupler	Frame coupler
		Overall size: 131 mm deep × 66 mm wide, various thicknesses, 1.4 mm nominal Note: Frame couplers can be used for up to a maximum of three window modules.
e.	Mullion	Extruded Aluminium mullion
		Overall size: 131 mm deep × 66 mm wide, various thicknesses, 1.4 mm nominal Note: Mullions can be used for up to a maximum of six window modules.

Item	Description	
Hardware		
Altair® 152 mm louvre window		
12.	Item name	Altair® gallery handle
	Material	Polypropylene (PP)
	Location	On the unexposed side of the south side jamb
Altair® IGLU® louvre window		
13.	Item name	Altair® gallery handle
	Material	Polypropylene (PP)
	Location	On the unexposed side of the south side jamb
Gaskets, seals and miscellaneous components		
Altair® 152 mm louvre window		
14.	Name	Pine reveal
	Material	19 mm high × 116 mm deep radiata pine
	Location	Around the external perimeter of the outer frame.
15.	Name	Altair® gallery
	Material	Polypropylene (PP) and Polyoxymethylene (POM)
	Location	At the jambs on either side of each piece of glazing.
16.	Name	Weatherseal
	Material	Santoprene (TPV) / Polypropylene (PP) co extrusion
	Location	Head and sill inserts (jamb to jamb)
17.	Name	Invisi-Gard security screen or alternative screen achieving BAL— AA40 when tested in accordance with AS 1530.8.1:2018
	Material	#316 stainless-steel, steel or bronze
	Location	On the exposed side of the louvre window system
Altair® IGLU® louvre window		
18.	Name	Pine reveal
	Material	19 mm high × 116 mm deep radiata pine
	Location	Around the external perimeter of the outer frame.
19.	Name	Altair® gallery
	Material	Polypropylene (PP) and Polyoxymethylene (POM)
	Location	At the jambs on either side of each piece of louvre glazing.
20.	Name	Weather seal
	Material	Acrylonitrile Styrene (ASA) / Arprene
	Location	On the top and bottom of each piece of louvre glazing, and at the head and sill inserts (jamb to jamb)
21.	Name	Invisi-Gard security screen or alternative screen achieving BAL— AA40 when tested in accordance with AS 1530.8.1:2018
	Material	#316 stainless-steel, steel or bronze
	Location	On the exposed side of the louvre window system

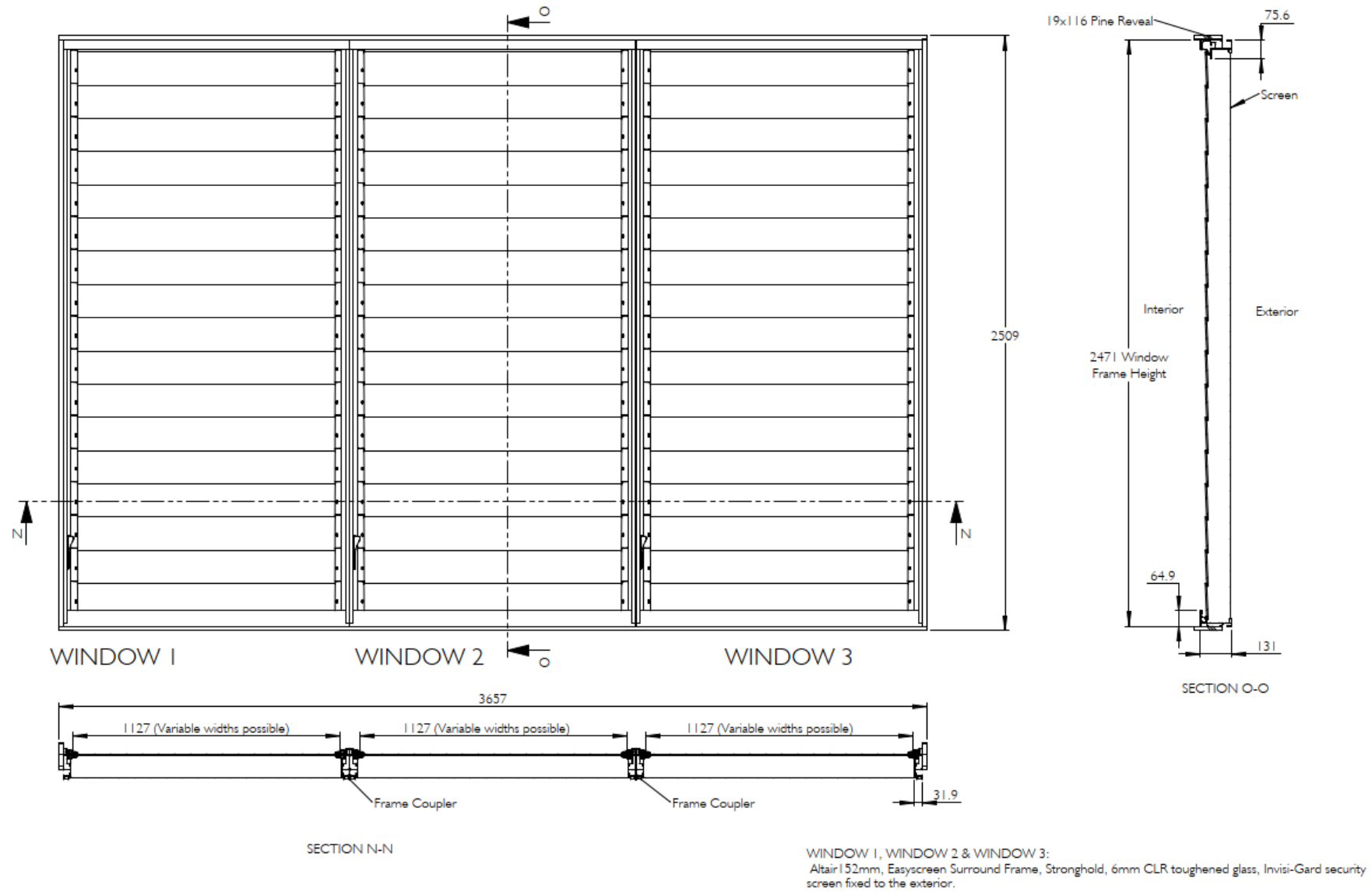


Figure 1 Details of assessed system with Altair® louvre window (option 1) – up to three modules with mullions

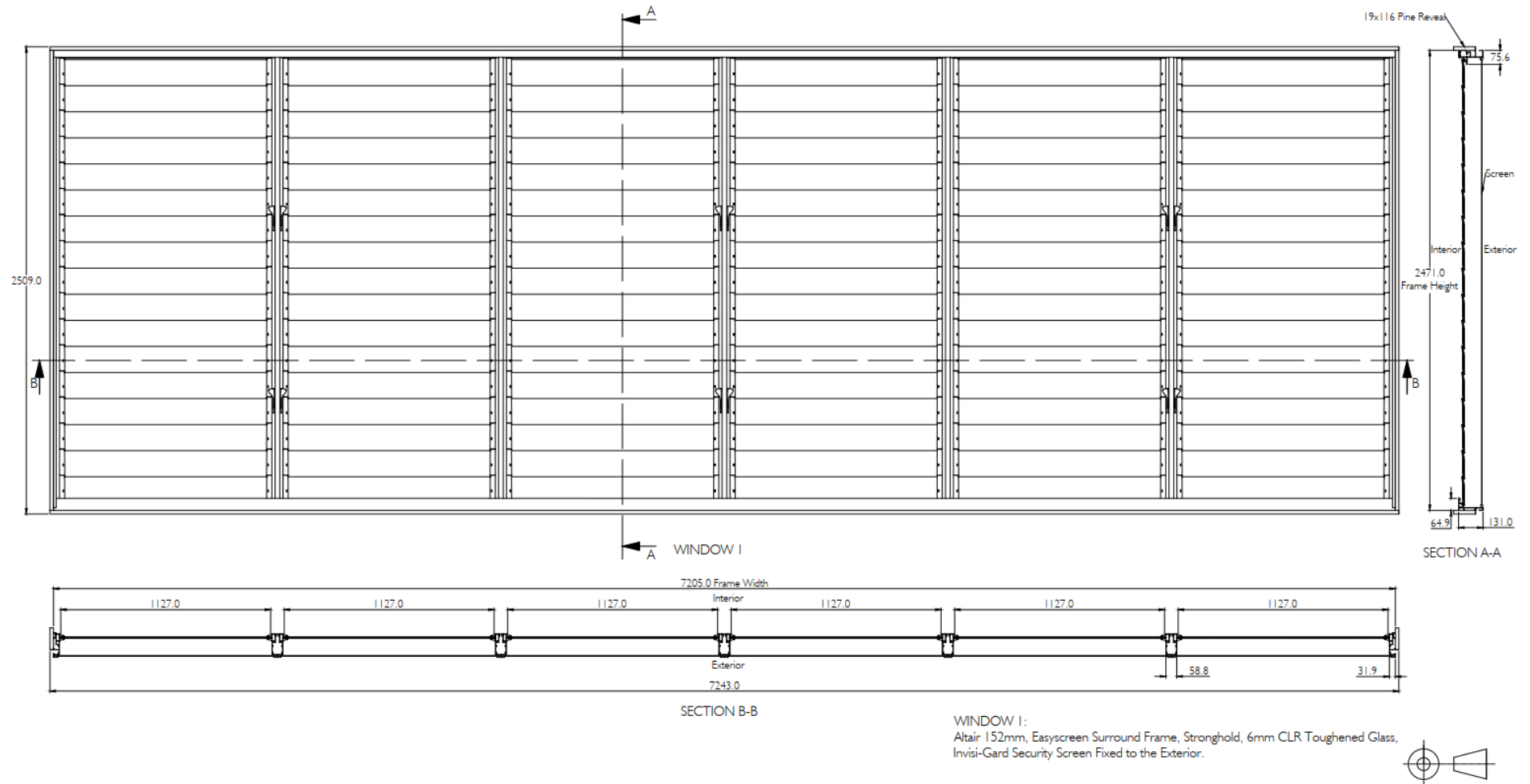


Figure 2 Details of assessed system with Altair® louvre window (option 1) – up to six modules with mullions

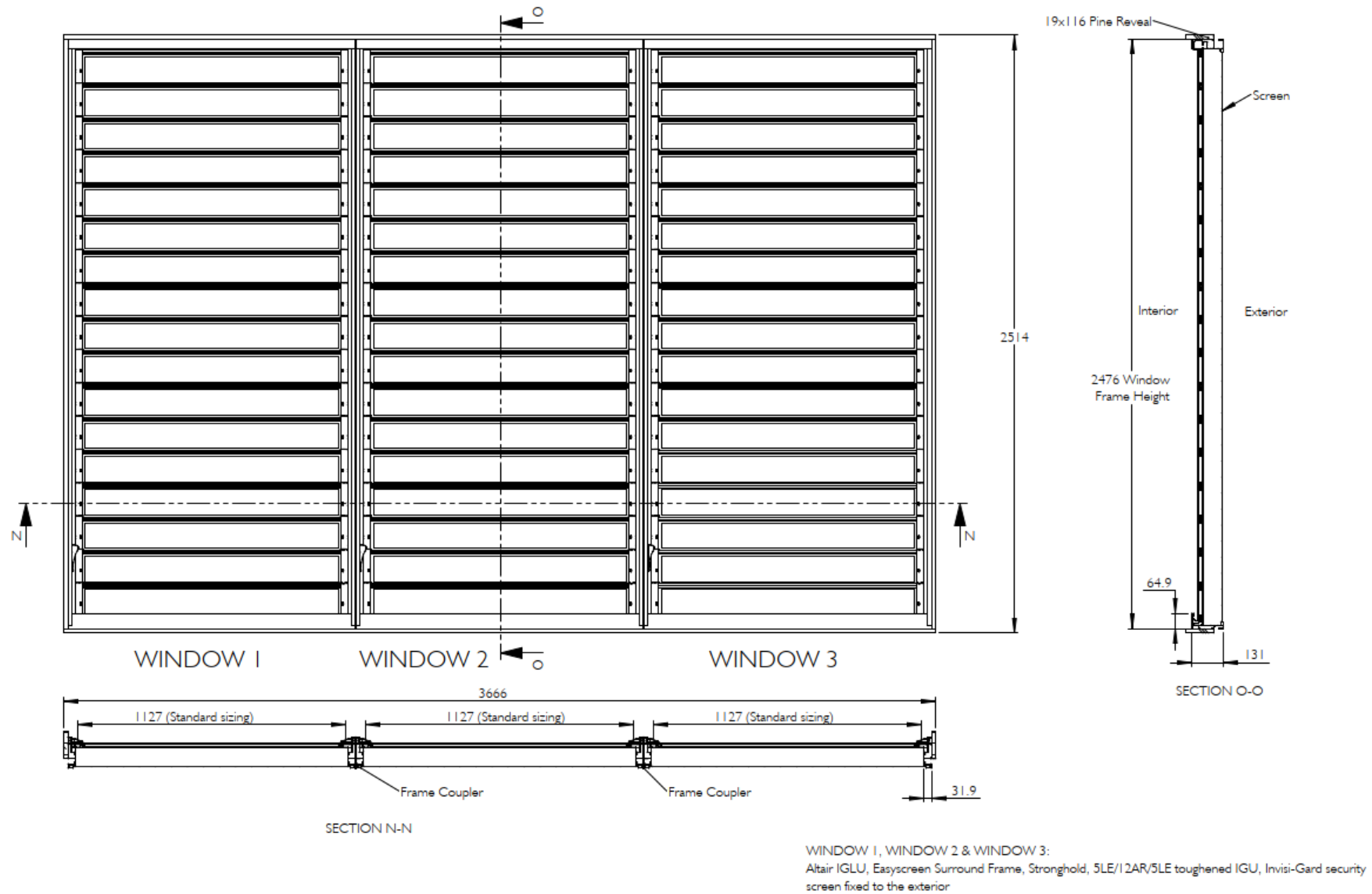


Figure 3 Details of assessed system with Altair® IGLU® louvre window (option 2) – up to three modules with frame couplers

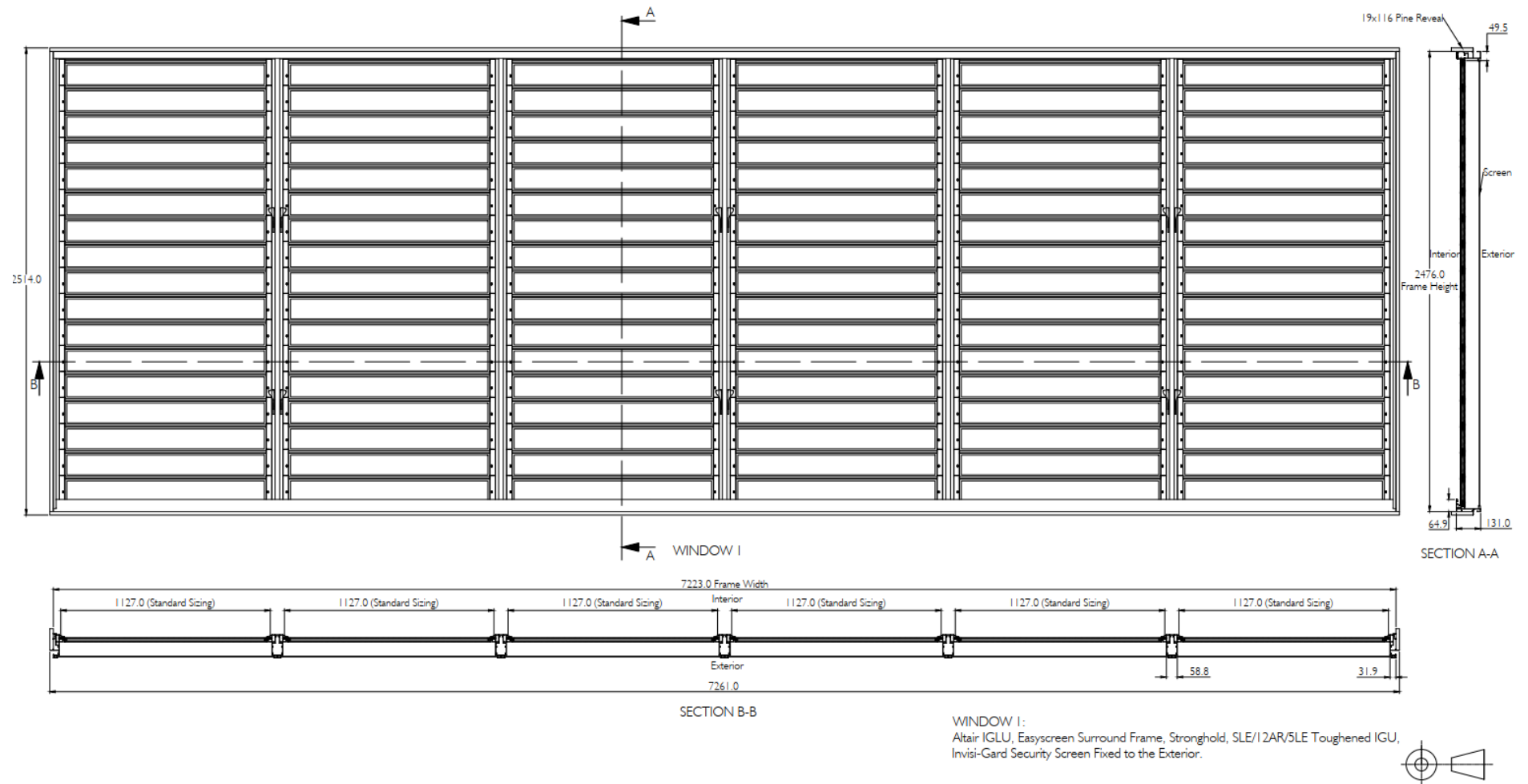


Figure 4 Details of assessed system with Altair® IGLU® louvre window (option 2) – up to six modules with mullions

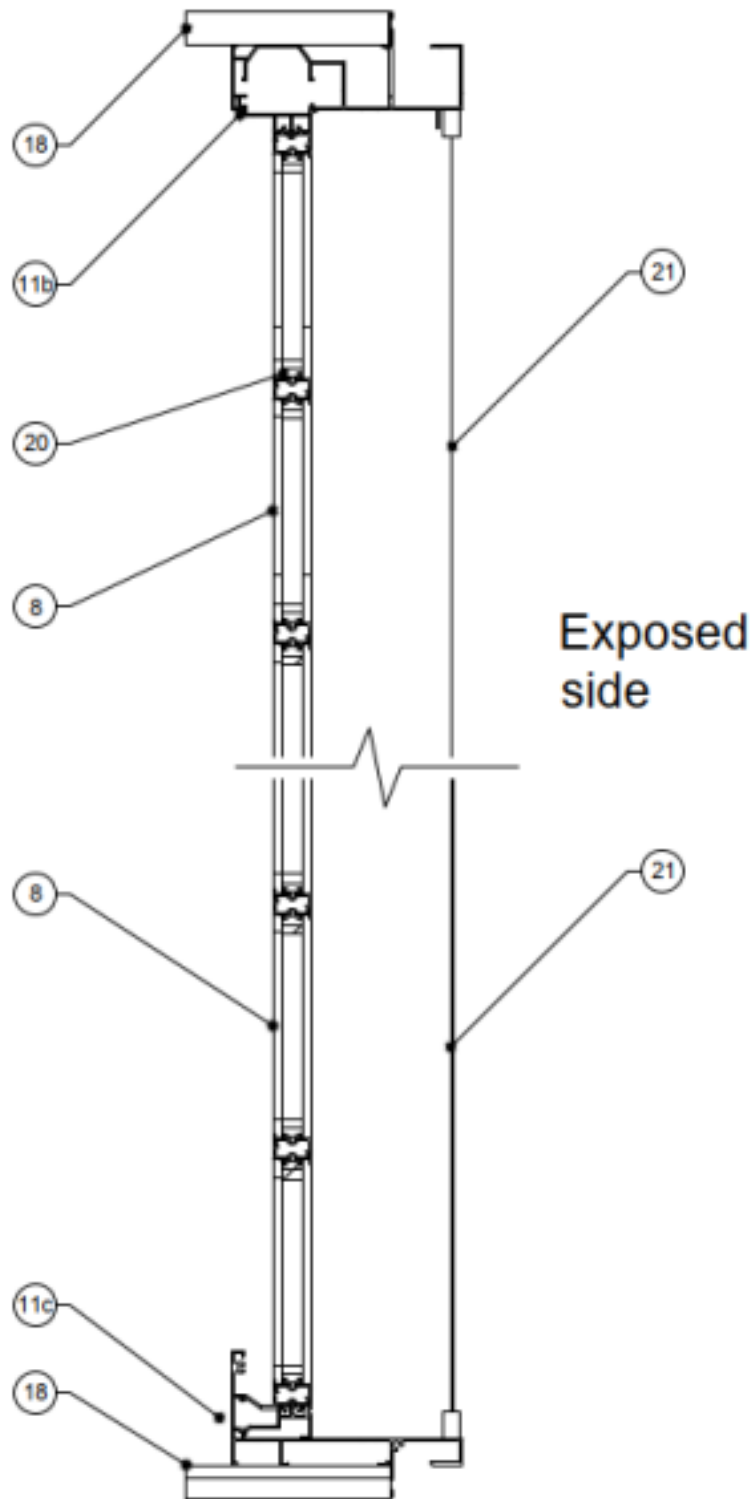


Figure 5 Vertical cross section of Altair® IGLU® louvre window

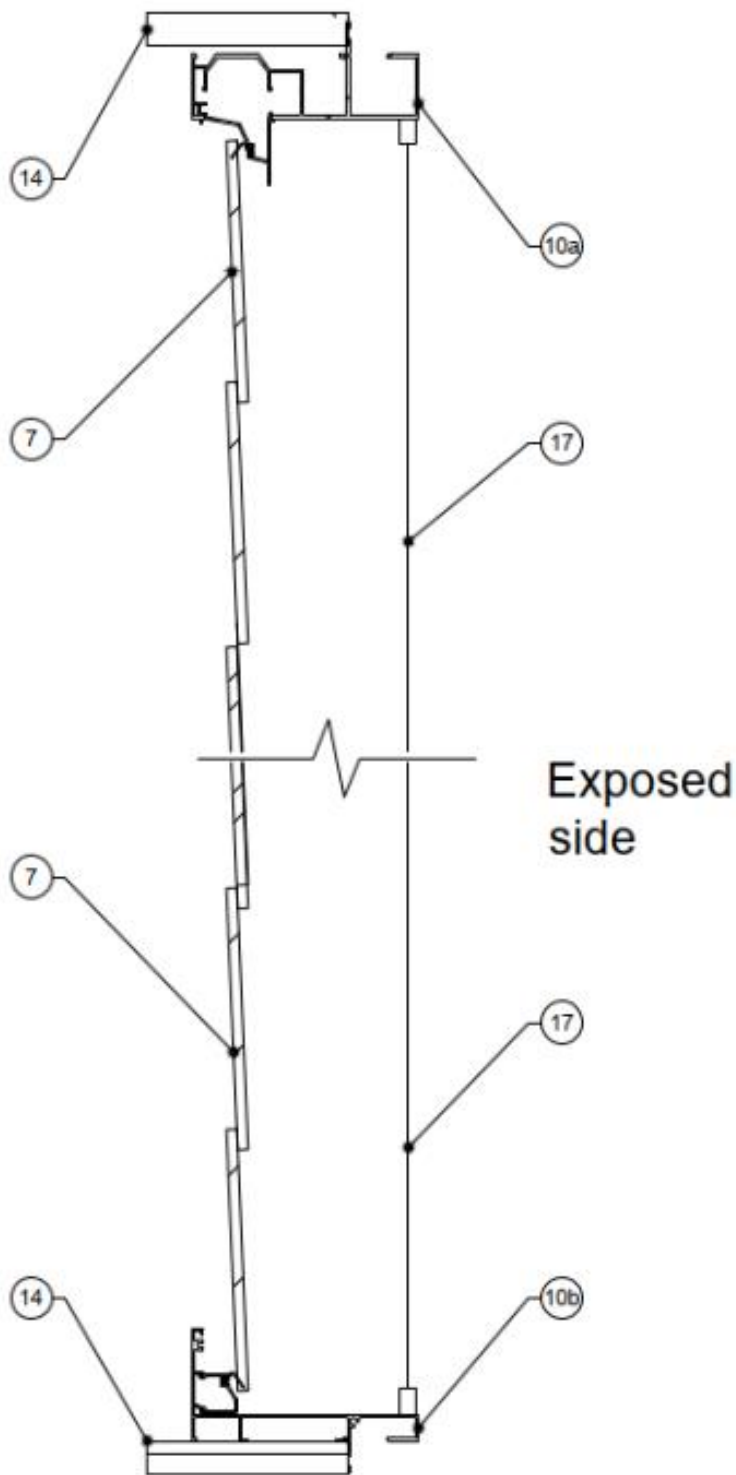


Figure 6 Vertical cross section of Altair® louvre window

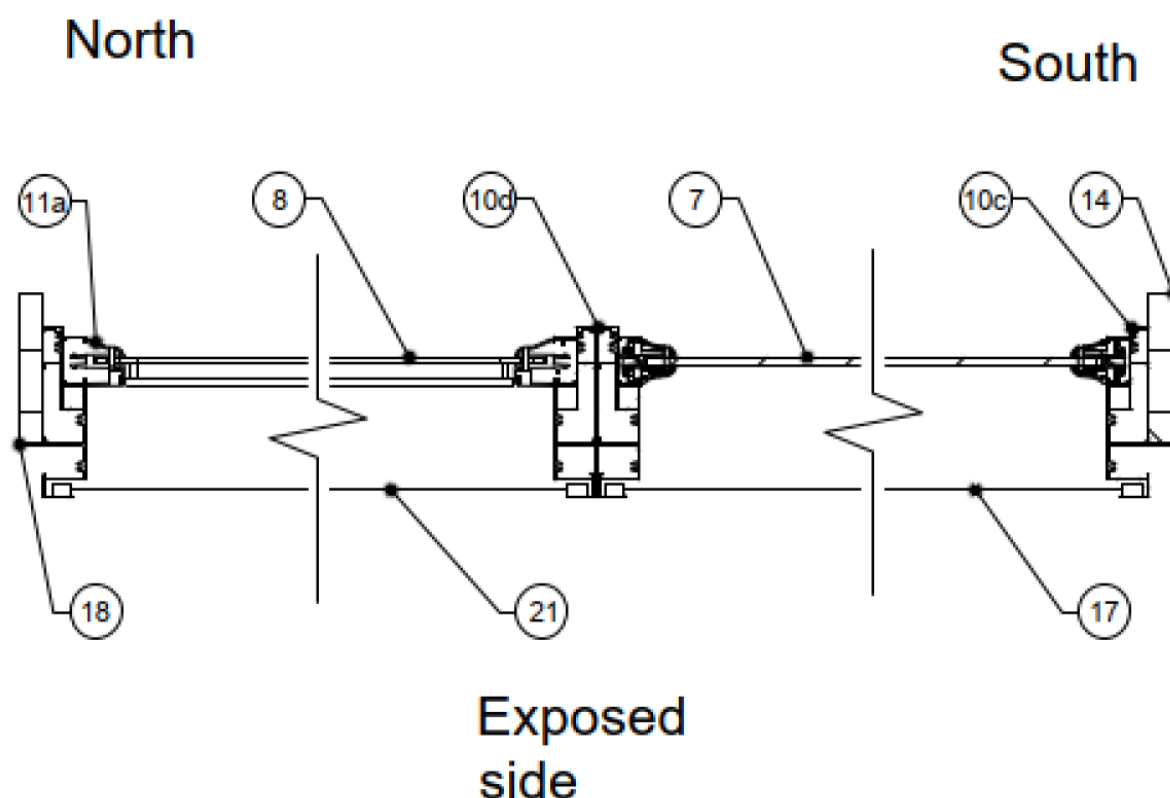


Figure 7 Horizontal cross section of Altair® louvre window (south) and Altair® IGLU® louvre window (north)

5. Conclusion

Details of the assessment and discussion are only available in the referenced main assessment report. A summary of the assessment outcome is outlined in Table 6.

The referenced assessment demonstrates that the proposed systems, together with the described variations, are expected to achieve a BAL rating of 40 as shown in Table 6, if tested in accordance with AS 1530.8.1:2018.

Table 6 Variations and assessment outcome

Item	Reference test	Description	Variations	BAL rating
Modular arrangement of louvers	FRT200407	The tested system consisted of a combination window system which included the Breezway® Australia Pty Ltd Altair® louvre in an Easyscreen™ window system and the Altair® IGLU® louvre in an Easyscreen™ window system.	It is proposed to assess the following arrangement of louvers instead of the arrangement in the tested system: <ul style="list-style-type: none"> Up to three modules of Breezway® Altair® Louvre in an Easyscreen™ window System Up to three modules of Breezway® Altair® IGLU® Louvre in an Easyscreen™ window System 	BAL— AA40
Metal screen	FRT200407	The tested system consisted of a combination window system where both systems incorporated the Invisi-Gard screen on the exposed side.	It is proposed to assess the use of alternative metals screens that are capable of achieving BAL— AA40 when tested in accordance with AS 1530.8.1:2018, instead of Invisi-Gard screen as per the tested systems.	

Item	Reference test	Description	Variations	BAL rating
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6. Validity

Warringtonfire Australia does not endorse the tested or assessed product in any way. The conclusions of the referenced assessment may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.

Due to the nature of fire testing and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

The referenced assessment is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are subject to constant review and improvement. It is therefore recommended that the referenced assessment report be reviewed on, or before, the stated expiry date.

The referenced assessment represents our opinion about the performance of the proposed systems expected to be demonstrated on a test in accordance with AS 1530.8.1:2018, based on the evidence referred to in the referenced assessment report.

The referenced assessment is provided to Breezway Australia Pty Ltd for their own specific purposes. The referenced assessment report may be used as Evidence of Suitability in accordance the requirements of the relevant National Construction Code. Building certifiers and other third parties must determine the suitability of the systems described in the referenced assessment report for a specific installation.

warringtonfire

Proud to be part of  element



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