# Certificate of Conformity

**Certification Body:**

CMI CERTIFICATION
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**Certificate Holder:**

LIMINAL
Liminal Wall Systems Pty Ltd
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**Certificate number: CM40399**

THIS IS TO CERTIFY THAT

## Liminal Wall Systems for External Cladding for Housing and Low Rise

**Type and/or use of product:**

External cladding in Class 2 – 9 buildings and Class 1 & 10.

**Description of product:**

External cladding System incorporating 35 & 50mm Panels and proprietary components providing Structural, non-combustibility acoustic and thermal performance.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) **BCA 2022**

| | Volume One | | Volume Two | |
|---|---|---|---|---|
| **Performance Requirement(s):** | B1P1(1),(2)(a),(b),(c),(k) & (l) | Structural reliability | H1P1(1),(2)(a),(b),(c),(k) & (l) | Structural stability and resistance |
| **Deemed-to-Satisfy Provision(s):** | C2D10 | Non-combustible building elements – Limited to Liminal panel only | H6D2(1)(b)(i) | Contributes towards Total R-Value |
| | G5D3 | Construction in Bushfire prone areas (BAL-19) | H7D3 | Construction in Bushfire prone areas (BAL-19) |
| | J4D6 | Contributes towards Total R-Value | | |

**State or territory variation(s):**

SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

**Limitations and conditions:**

1. The Liminal Housing & Low Rise Multi Residential Technical & Installation Manual Version 3 to be used as a guide and read in conjunction with site specific requirements prepared to the satisfaction of the Authority having Jurisdiction.
2. The Liminal external cladding system has not been tested against AS 1530.4 and does not achieve a FRL, however has been not deemed combustible.
3. The structural claims on this certification are limited to the design specifications, and installation guidelines outlined within the Documents, however the span tables, design & installation is to be reviewed on a case-by-case basis on every individual project and its site parameters by an appropriately qualified engineer.
4. The scope of certification is restricted to be used as an external cladding, not as the entire wall system.
5. The Liminal Wall cladding system has not been tested and certified for impact loading from windborne debris in Region C and D as denoted in AS 1170.2:2021. The building designer should take into consideration internal pressure resulting from dominant openings.
6. No testing for weatherproofing has been undertaken for this system and sits outside of the scope of certification.

**Building classification/s:**

Class 1,2,3,4,5,6,7,8,9 & 10

**Richard Donarski – CMI**

**Don Grehan – Unrestricted Building Certifier**

**Date of issue:** 20/06/2024

**Date of expiry:** 20/06/2027

ABCB

JAS-ANZ

7. In all installations the minimum clearance between the underside of Liminal panel and the adjoining ground surface level below must comply with the specifications in Part 7.5.7 of the ABCB Housing Provisions.
8. A site-specific performance solution is required to address condensation and water vapour management to the satisfaction of the appropriate authority.
9. The use of the certified product/system is subject to these Limitations and Conditions and must be read in conjunction with the Scope of Certification below.

**Scope of certification:** The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the Certificate Holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Only criteria as identified within this Certificate of Conformity can be used for CodeMark certification claims. Where other claims are made in a client's Installation Manual, Website or other documents that are outside the criteria on this Certificate of Conformity, such criteria cannot be used or claimed to meet the requirements of this CodeMark certification.

The NCC defines a Performance Solution as one that complies with the Performance Requirements by means other than a Deemed-to-Satisfy Solution. A Building Solution that relies on a CodeMark Certificate of Conformity that certifies a product against the Performance Requirements cannot be considered as Deemed-to-Satisfy Solution.

This Certificate of Conformity may only relate to a part of a Performance Solution. In these circumstances other evidence of suitability is needed to demonstrate that the relevant Performance Requirements have been met. The relevant provisions of the Governing Requirements in Part A of the NCC will also need to be satisfied.

This Certificate of Conformity is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Certificate of Conformity is outside of this document's scope and the installation of the certified product will not be covered by this Certificate of Conformity.

**Disclaimer:** The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

When using the CodeMark logo in relation to or on the product/system, the Certificate Holder makes a declaration of compliance with the Scope of Certification and confirms that the product is identical to the product certified herein. In issuing this Certificate of Conformity, CMI Certification Pty Ltd (CMI) has relied on the experience and expertise of external bodies (laboratories and technical experts).

Nothing in this document should be construed as a warranty or guarantee by CMI, and the only applicable warranties will be those provided by the Certificate Holder.

## APPENDIX A – PRODUCT TECHNICAL DATA

**A1 Type and intended use of product**

As per page 1

**A2 Description of product**

Liminal Wall panels are available in two thickness of 35mm and 50mm depending on application and incorporate the following:

1. 35mm or 50mm Liminal recessed panel
2. Liminal Wall Panel
3. Rondo PEX10V30 Control Joint
4. Selleys Fireblock PB
5. Wunderfixx Rapid Set
6. Metal Top Hat
7. Screws*

| Fixing locations | Screw type |
|---|---|
| Top hat to timber stud | 12 - 11 x 35mm type 17 Hex head |
| Top hat to steel stud | 10 - 16 x 16mm self-drilling Hex head |
| 35mm Panel to top hat | 10 - 16 x 55mm countersunk wing tipped drill point |
| 50mm Panel to top hat | 10 - 16 x 75mm countersunk wing tipped drill point |
| Fixing fixtures to panel | 10 - 16 x 30mm Wafer head self-drilling screw |

**Panel Properties:**

| | Liminal Smooth and Liminal Express | | | | | | | | Liminal Groove | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Panel Thickness** | **35mm** | | | | **50mm** | | | | **50mm** | | | | |
| **Panel Width (mm)** | 592 | 592 | 592 | 592 | 592 | 592 | 592 | 592 | 500 | 500 | 500 | 500 | 500 |
| **Panel Length (mm)** | 2550 | 2700 | 2800 | 3000 | 2800 | 3200 | 3500 | 4000 | 2400 | 2550 | 2700 | 2800 | 3000 |
| **Panel $m^2$** | 1.51 | 1.6 | 1.66 | 1.78 | 1.66 | 1.89 | 2.07 | 2.37 | 1.20 | 1.28 | 1.35 | 1.40 | 1.5 |
| **Nominal Panel Mass @ 10% MC in KG / $m^2$** | 39 | 39 | 39 | 39 | 51 | 51 | 51 | 51 | 49 | 49 | 49 | 49 | 49 |
| **Weight of Panel (kg)** | 58.89 | 62.40 | 64.74 | 69.42 | 84.66 | 96.39 | 105.57 | 120.87 | 58.80 | 62.72 | 66.15 | 68.60 | 73.50 |

**A3 Product specification**

**Non-combustibility**

The certificate holder has provided the Certificate of Test for Combustibility for Materials in accordance with AS 1530.1:1994 for Liminal 35mm Byucksan Autoclaved Cement Extrusion (BACE) panel.

The material is **NOT deemed combustible** - Limited to the panel only.

***Source**: Exova Warringtonfire, Test Report No. RTF220134 dated 31/05/2022.*

**Construction in Bushfire Prone Areas**

The Liminal panel has been tested to AS 1530.1 and is NOT deemed combustible, therefore meets the requirements of Section 6.4.1(c)(i) of AS 3959:2018 for **BAL-19** walls and below.

**Calculated Thermal results**

Calculated Thermal ratings of Liminal Low Rise External Wall system:

| | |
|---|---|
| Panel Thickness | 35 mm |
| Thermal Conductivity | 0.25 w/Km |
| Calculated R Value | 0.14 ($m^2K$)/W |

**Source:** *Residential Energy Assessments Pty Ltd, Report: 24367 Dated 05/06/2024*

**A4 Manufacturer and manufacturing plant(s)**

This field is optional. Contact the Certificate Holder for details.

**A5 Installation requirements**

Refer to the following guide to be read in conjunction with site specific requirements prepared to the satisfaction of the Authority having Jurisdiction - Liminal Housing & Low Rise Multi Residential Technical & Installation Manual Version 3.

**A6 Other relevant technical data**

**Sound transmission through walls including in residential care buildings**

Tested acoustic ratings of internal (inter-tenancy) wall systems:

| Party Wall System | Wall Structure | $R_W$ | $C_{tr}$ |
|---|---|---|---|
| Option 1 | • 35 mm Autoclaved cement extrusion panel (37.7kg/$m^2$) | 29 | -2 |

***Source:** Resolute Testing Laboratories, NATA Accreditation No. 20089, Report Nos. AC-PR162A-SA-01.*

**Additional Thermal data:**

Calculated Thermal Values for Wall system configurations:

| 25mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking | | | | |
|---|---|---|---|---|
| **Layer** | **Material** | **Thickness (mm)** | **Thermal Conductivity (w/Km)** | **R Value (m²K)/W** |
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | 70mm Air Gap | 70 | n/a | 0.585 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **1.468** |

| 35mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking | | | | |
|---|---|---|---|---|
| **Layer** | **Material** | **Thickness (mm)** | **Thermal Conductivity (w/Km)** | **R Value (m²K)/W** |
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | 70mm Air Gap | 70 | n/a | 0.585 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **1.466** |

| 25mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking, R1.5 Bulk | | | | |
|---|---|---|---|---|
| **Layer** | **Material** | **Thickness (mm)** | **Thermal Conductivity (w/Km)** | **R Value (m²K)/W** |
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 1.5 Bulk | 70 | n/a | 1.500 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **2.383** |

| 35mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking, R1.5 Bulk | | | | |
|---|---|---|---|---|
| **Layer** | **Material** | **Thickness (mm)** | **Thermal Conductivity (w/Km)** | **R Value (m²K)/W** |
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 1.5 Bulk | 70 | n/a | 1.500 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **2.381** |

| 25mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking, R2.0 Bulk | | | | |
|---|---|---|---|---|
| **Layer** | **Material** | **Thickness (mm)** | **Thermal Conductivity (w/Km)** | **R Value (m²K)/W** |
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.0 Bulk | 70 | n/a | 2.000 |

| 35mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking, R2.0 Bulk | | | | |
|---|---|---|---|---|
| **Layer** | **Material** | **Thickness (mm)** | **Thermal Conductivity (w/Km)** | **R Value (m²K)/W** |
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.0 Bulk | 70 | n/a | 2.000 |

| | | | | |
|---|---|---|---|---|
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **2.883** |

| | | | | |
|---|---|---|---|---|
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **2.881** |

**25mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | 90mm Air Gap | 90 | n/a | 0.628 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **1.511** |

**35mm Top Hat Battens, 70mm Timber Frame, Reflective Foil Sarking**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | 90mm Air Gap | 90 | n/a | 0.628 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **1.509** |

**25mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.0 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.0 Bulk | 90 | n/a | 2.000 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **2.883** |

**35mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.0 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.0 Bulk | 90 | n/a | 2.000 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **2.881** |

**25mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.2 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |

**35mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.2 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |

| | | | | |
|---|---|---|---|---|
| Layer 6 | R 2.2 Bulk | 90 | n/a | 2.200 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **3.083** |

| | | | | |
|---|---|---|---|---|
| Layer 6 | R 2.2 Bulk | 90 | n/a | 2.200 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **3.081** |

**25mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.5 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.5 Bulk | 90 | n/a | 2.500 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **3.383** |

**35mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.5 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.5 Bulk | 90 | n/a | 2.500 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **3.381** |

**25mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.7 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 25mm Top Hat (Air Gap) | 25 | n/a | 0.534 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.7 Bulk | 90 | n/a | 2.700 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **3.583** |

**35mm Top Hat Battens, 90mm Timber Frame, Reflective Foil Sarking, R2.7 Bulk**

| Layer | Material | Thickness (mm) | Thermal Conductivity (w/Km) | R Value (m²K)/W |
|---|---|---|---|---|
| Layer 1 | Outside Air Film (3-7m/s) | n/a | n/a | 0.030 |
| Layer 2 | 6mm Cement Render (1:4) | 0 | 0.53 | 0.000 |
| Layer 3 | 35mm liminal Panel | 35 | 0.25 | 0.140 |
| Layer 4 | 35mm Top Hat (Air Gap) | 25 | n/a | 0.532 |
| Layer 5 | Sisilation | <1mm | 0 | 0.000 |
| Layer 6 | R 2.7 Bulk | 90 | n/a | 2.700 |
| Layer 7 | 10mm Plasterboard | 10 | 0.17 | 0.059 |
| Layer 8 | Internal Air Film (still air) | n/a | n/a | 0.120 |
| | **Total Calculated R Value** | | | **3.581** |

***Source:*** *4. Residential Energy Assessments Pty Ltd, Report: 24367 Dated 05/06/2024*

## APPENDIX B – EVALUATION STATEMENTS

**B1 Evaluation methods**

1. Structural Provisions A5G3(1)(e). Reports from a professional engineer.
2. Fire Safety Provisions A5G3(1)(d). Reports from Accredited Testing Laboratories.
3. Acoustic Provisions A5G3(1)(d). Reports from Accredited Testing Laboratories.
4. Thermal Provisions A5G3(1)(e). Reports from a professional engineer.

**B2 Reports**

1. Macstructure Pty Ltd, Report Number 200803 dated 24/05/2022. This document contributes compliance for B1P1(1),(2)(a), (b),(c),(k) & (l) & H1P1(1),(2)(a), (b),(c),(k) & (l)
2. WarringtonFire Australia Pty Ltd, NATA Accreditation No. 3277, Report Number RTF220134 dated 31/05/2022. This document provide compliance for C2D10.
3. Resolute Testing Laboratories, NATA Accreditation No. 20089, Report Number AC-PR162A-SA-01 dated 20/6/2022. This document provides the acoustic value of the Liminal Wall panel.
4. Residential Energy Assessments Pty Ltd, Report: 24367 Dated 05/06/2024. This document contributes towards compliance for J4D6 & H6D2(1)(b)(i)

The Certificate Holder has chosen not to make the above evidence of compliance publicly available, due to the documents being considered commercial in confidence.