Certificate of Conformity

Certification Body:

CMI CERTIFICATION
ABN: 81 663 250 815
JAS-ANZ Accreditation No. Z4450210AK
PO Box 273,
Palmwoods Qld 4555
Australia
P: +61 7 5445 2199
www.cmicert.com.au
office@cmicert.com.au

Certificate Holder:

NASAHI building smarter
AAC Building Products Pty Ltd T/A NASAHI
ABN: 74621069207
1331 Stud Road
Rowville, Victoria 3178
Australia
Ph: 1300 26 27 24
www.nasahi.net.au

Certificate number: CM40327

THIS IS TO CERTIFY THAT

NASAHI High Rise External Wall Cladding System

Type and/or use of product:

A system for use on High Rise External walls in load-bearing and non-load bearing applications.

Description of product:

High-Rise External Wall comprising several proprietary components including non-load bearing steel reinforced Autoclaved Aerated Concrete (AAC) panels. Refer A2 below.

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

	Volume One		**Volume Two**
Performance Requirement(s):	B1P1(2)(c)	Structural reliability.	Not applicable
	F1P4	Rising damp – Subject to *Limitation and Condition 1.*	
	F3P1	Weatherproofing – Subject to *Limitation and Condition 4.*	
Deemed-to-Satisfy Provision(s):	C2D2(2)	Fire Resistance and Stability – FRL varies, dependant of the configuration of the wall. Refer *Limitation and Condition 6.*	Not applicable
	C2D10	Non-combustible building elements – Refer A3.	
	C2D11(1)(g) & (i)	Fire hazard properties – Subject to *Limitation and Condition* 7 & 8.	
	F8D3	Condensation Management – Subject to *limitation and condition 9.*	
	G5D3	Construction in bushfire prone areas – Subject to *limitation and condition 10.*	
	J4D6	Energy Efficiency – External Walls. Must be used in conjunction with other building elements to achieve a Total R Value.	
State or territory variation(s):	F1P4 (SA), G5D3 (NSW), J4D6 (NSW)		Not applicable

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

Limitations and conditions:

Building classification/s:

Richard Donarski – CMI

Don Grehan – Unrestricted Building Certifier

Date of issue: 03/02/2025

Date of expiry: 04/02/2028

1.	Construction shall be in strict accordance with the Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: January 2024. Refer A5.	Class 2,3,4,5,6,7,8 & 9
2.	In all cases, it is a requirement that the Nasahi High-Rise External Wall System incorporates; a. A cold-formed steel frame constructed in accordance with AS/NZS 4600; or b. Framework compliant with the above minimum requirements and other standards, and the Building Code of Australia as applicable. The structural support members are designed and engineered separately as per project requirements by building designers and engineers.	
3.	The Nasahi High-Rise External Wall 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.	
4.	To satisfy F3P1 and H2P1 via the Verification Method provided in the NCC, the relevant design is required to meet the criteria of F3V1 to the satisfaction of the Appropriate Authority as defined by the NCC. The site specific building must; (a)(i) have a risk score of 20 or less, when the sum of all risk factors are determined in accordance with Table F3V1a; and (a)(ii) not be subjected to an ultimate limit state wind pressure of more than 2.5kPa; and (a)(iii) include only windows that comply with AS 2047. For Waterproofing applications that exceed 2.5kPa ultimate limit state wind pressure, and do not exceed 4.0kPa ultimate limit state wind pressure, refer to A3.	
5.	Where the NCC requires building elements and/or ancillary elements to be non-combustible or achieve specific fire resisting performance requirements, the NASAHI High Rise External Wall Cladding System must be constructed to satisfy such requirements as relevant to the determined building class(es).	
6.	Compliance with FRL is dependent on the system components being as specified in A3. Any deviation from the tested specimen does not form part of this certificate of conformity.	
7.	Nasahi High-Rise External Wall Cladding System must only incorporate sarking-type materials that comply with the requirements of AS/NZS 4200.1:2017, including an AS 1530.2-1993 Flammability Index not greater than 5. Sarking type material that meets this specification complies with Table S7C7 requirement to have a Flammability Index not exceeding 5.	
8.	Where required, Nasahi High-Rise External Wall Cladding System must only incorporate insulation materials that conform with the requirements of AS/NZS 1530.3:1999, with a Spread of Flame Index not greater than 9, and Smoke Development Index not greater than 8 if the Spread of Flame is more than 5. Where required to be non-combustible; the insulation must comply with AS 1530.1-2005.	
9.	Compliance for Part F8D3 of Vol 1 of the 2022 BCA for Condensation management requires a pliable building membrane complying with AS/NZS 4200.1:2017 must be installed in accordance with AS/NZS 4200.2:2017 to separate the wall cladding panels from any water sensitive materials. Refer A5 Installation requirements.	
10.	The NASAHI High Rise External Wall Cladding System is suitable for use in BAL 12.5 – BAL FZ. Refer A3.	
11.	Compliance with BAL should be reviewed with the respective BAL requirements of AS 3959 by Building Designers & Authorities having jurisdiction as each building may require specific design or construction requirements outside of the specific wall material.	
12.	Compliance with BAL-FZ is limited to the requirements of Section 9.1 of AS 3959:2018 and requires a minimum distance of 10m from the edge of any classified vegetation. This product is not suitable to be installed where the 10m setback distance between the building and the edge of the classified vegetation cannot be achieved and/or maintained in perpetuity. In order to maintain compliance with BAL, it is the responsibility of the Building Designer to ensure compliance is achieved in accordance with AS 3959:2018.	
13.	In order to comply with the NSW provisions of G5D3, a site-specific performance solution is to be prepared in line with the Planning for Bush Fire Protection 2019 guidance document.	
14.	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.

Certificate of Conformity

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

Nasahi High-Rise External Wall System is an aerated autoclaved concrete (AAC) lightweight precast panel, non-loadbearing ventilated cavity system suitable for use between floors of multi-storey buildings. Installed horizontally and mechanically fixed directly to the outer face of suitable wall framing by others, the system consists of 50mm, 62mm or 75mm Nasahi AAC panels laid horizontally in a stretcher bond pattern that are screw fixed through steel battens into a steel stud frame. The frame is lined with a wall wrap on the cavity side and typically has plasterboard on the inside face and bulk insulation between the studs. Once installed, a durable weatherproof coating system is applied to the external face of the Nasahi AAC panels.

Panel Thickness	50mm	62mm	75mm
Working Panel Weight (590kg/m3) at 12.4% moisture content	39kg	48kg	58kg

A3 Product specification

Fixing Requirements

Fixing details and Design Serviceability Limit State Wind Pressures, calculated in accordance with AS/NZS 1170.2 Structural Design Actions Part 2, are limited to a maximum of ±1.65 kPa (on the basis of tested weatherproofing performance) as detailed in Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: January 2024, Table 3 page 13. Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: January 2024

Non-combustibility

Test for Combustibility for Materials in accordance with AS 1530.1:1994 for Nasahi 50mm Autoclaved Aerated Concrete (AAC) Dry Density 503.16kg/m³. The material is NOT deemed combustible - Limited to the panel only.
***Source**: Exova Warringtonfire, Test Report No. 365312-00.1 dated 25/08/2015.*

Compliance with C2D10 is limited to the AAC panel as tested in accordance with AS 1530.1-1994 and other elements of the Nasahi High-Rise External Wall Cladding System including:

- gaskets, caulking, sealants, damp-proof courses, that are addressed in C2D10(4) are not required to be non-combustible; and,
- plasterboard, and sarking-type materials that do not exceed 1mm in thickness and have a flammability index of not greater than 5, that are addressed in C2D10(6) may be used wherever a non-combustible material is required.
- Installation of coating systems to the external face of an external wall must be in accordance with Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: January 2024.

Bushfire performance

The Nasahi High-Rise External Wall Cladding System using the 50mm AAC panel achieves a minimum FRL of 30/30/30 as part of an external wall to achieve a bushfire resistance performance of BAL – FZ. Installation for bushfire resistance must be in accordance with the FRL constructions outlined in the Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: January 2024.

Fire resistance and stability – Nasahi® External Wall – FRL from outside

Exposed side cladding	Batten*	Wall Framing	Unexposed side cladding	FRL	Imposed Fire Design Load (AS 1170.0 Clause 4.2.4)
Min 50mm thick Nasahi Panel	Steel batten	Min. 76mm deep steel stud	10mm thick or greater standard grade plasterboard	120/120/120	4.94kN/stud

Fire resistance and stability – Nasahi® External Wall – FRL from both sides

External components	FRL from outside	Internal Lining*	FRL from inside
- Nasahi Panel (50mm, 62mm or 75mm) - Steel battens - Min 76mm deep steel stud wall framing	120/120/120	10mm standard plasterboard	--/--/--
		1 x 13mm Boral Firestop plasterboard	30/30/30
		1 x 16mm Boral Firestop plasterboard	60/60/60
		2 x 13mm Boral Firestop plasterboard	90/90/90
		3 x 13mm Boral Firestop plasterboard	120/120/120
		Internal Nasahi Panel (50mm, 62mm or 75mm)	120/120/120

*Note: For construction of the framing and installation requirements of the internal linings as per manufactures and engineering specifications.

Source: *Exova Warringtonfire Fire Assessment Report 38259000 Revision 6.4 dated 22/08/2023.*

Weatherproofing

For buildings with a serviceability limit state wind load of up to ±1.65 kPa.

Nasahi® High-rise External Wall system is suitable to be used for buildings with a serviceability limit state wind load of up to ±1.65 kPa.

Testing was conducted in accordance with AS/NZS 4284:2008 and Verification Methods FV1 and V2.2.1 for Nasahi 50mm External Wall System.

Test Type	Criteria			Results
Static Pressure Wind Load	Positive and negative serviceability limit state pressures were applied to the external face of the specimen for periods of 1minute each.			Pass The loads were sustained and there was no visible evidence of any cracking in the cladding.
Statis Pressure Water Test	Static @ 30%	490Pa	Duration 15 Minutes	Pass No leakage though the cladding was observed during the test.
Cyclic Pressure Water Test	Cyclic @ 15-30%	245 – 490 Pa	Duration 5 Minutes.	Pass No leakage through the cladding system was observed during the test.
	Cyclic @ 20-40%	325 – 650 Pa	Duration 5 Minutes.	
	Cyclic @ 30 – 60%	490 – 980 Pa	Duration 5 Minutes.	
Cyclic Pressure Water Test with 6mm Holes in cladding	Cyclic @ 15-30%	245 – 490 Pa	Duration 5 Minutes.	Pass No leakage through the cladding system was observed during the test.
	Cyclic @ 20-40%	325 – 650 Pa	Duration 5 Minutes.	
	Cyclic @ 30 – 60%	490 – 980 Pa	Duration 5 Minutes.	
Static Pressure Water Test with Lining Removed.	Static @ 30%	490Pa	Duration 15 Minutes	Pass No leakage through the cladding system was observed during the test.

Source: *Ian Bennie & Associates Pty Ltd report 2015-102-S1 Dated 22/01/2016.*

For buildings with designs of more than ±2.5kPa up to ±4.0kPa.

The weatherproofing performance of Nasahi Hi-Rise External Wall System installed in applications where an external wall;

(i) has a risk score of 20 or less, when the sum of all risk factor scores are determined in accordance with Table F3V1a (Volume One); and
(ii) is subjected to an absolute ultimate limit state wind pressure of more than 2.5 kPa but not more than ±4.0kPa (Refer ACA report 210208 dated 22/12/2021 for the specific configuration requirements applicable to this case); and
(iii) includes only windows that comply with AS 2047;

has been verified by a combination of prototype testing in accordance with the requirements of AS/NZS 4284, wind strength testing of the Nasahi Hi-Rise External Wall System and other documentary evidence.

In all cases, applications are limited to maximum design serviceability limit state wind pressures equal to the tested values of ± 1.65 kPa. Based on these results, the Nasahi Hi-Rise External Wall System applications on vertical steel battens on-stud are limited to maximum Design Serviceability Limit State Wind Pressures of ±1.65 kPa and maximum Design Ultimate Limit State wind pressures of ± 4.0 kPa calculated in accordance with AS/NZS 1170.2 Structural Design Actions Part 2: Wind Actions.

Source: *Acronem Consulting Australia Pty Ltd, Report No: ACA – 210208; Nasahi High-Rise External Wall System NCC 2022, Volume One – External Walls; Dated 30/01/2024.*

Energy Efficiency

System Description	Bulk Insulation	All Wall (Bridged)			
		Total R, $M^2.K/W$		Total U, $M^2.K/W$	
		Winter	Summer	Winter	Summer
Bare 50mm NASAHI® Panel (4% M.C.) System	None	R0.39	R0.39	-	-
50mm NASAHI® Panel (4% M.C.) System	None	R1.39*	R1.35*	U0.72*	U0.74*
16mm batten cavity	R2.00	R2.24	R2.13	U0.45	U0.47
Steel Studs @ 600 Centres	R2.50	R2.48	R2.38	U0.40	U0.42
10mm plasterboard internal lining	R3.00	R2.69	R2.61	U0.37	U0.38
Bare 62mm NASAHI® Panel (4% M.C.) System	None	R0.48	R0.48	-	-
62mm NASAHI® Panel (4% M.C.) System	None	R1.49*	R1.46*	U0.67*	U0.68*
16mm batten cavity	R2.00	R2.38	R2.26	U0.42	U0.44
Steel Studs @ 600 Centres	R2.50	R2.63	R2.52	U0.38	U0.40
10mm plasterboard internal lining	R3.00	R2.85	R2.77	U0.35	U0.36
Bare 75mm NASAHI® Panel (4% M.C.) System	None	R0.59	R0.59	-	-
75mm NASAHI® Panel (4% M.C.) System	None	R1.59*	R1.56*	U0.63*	U0.64*
16mm batten cavity	R2.00	R2.51	R2.39	U0.40	U0.42
Steel Studs @ 600 Centres	R2.50	R2.78	R2.61	U0.36	U0.38
10mm plasterboard internal lining	R3.00	R3.02	R2.93	U0.33	U0.34
Note:* Reflective air space internal stud frame					

Source: *James M Fricker Report No. i499_Dmx dated 25/04/2020.*

A4 Manufacturer and manufacturing plant(s)

This field is optional. Contact Certificate Holder for details.

A5 Installation requirements

Only to be installed in accordance with Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: January 2024.

Damp Rising

The damp-proofing performance of the Nasahi High-Rise External Wall System to prevent unhealthy or dangerous conditions, or loss of amenity and undue dampness or deterioration of building elements is primarily achieved based on detailing that requires the Nasahi High-Rise External Wall System to be installed with a minimum **75mm** clearance to well drained open ground or finished ground level (Ref: AS 5146.3, Fig. 4.4.3(S)).

In addition, a damp proof course beneath the bottom of the panel “Damp-Proof Courses must comply with AS 2904 and be installed in accordance with NCC requirements.”, and ”Damp proof course min. height 150mm.”, see Nasahi High-Rise External Wall System, Horizontal Design and Installation Guide, 50mm, 62mm, 75mm, Edition: Apr 2021.

Source: *Acronem Consulting Australia Pty Ltd, Report No: ACA – 210208; Nasahi High-Rise External Wall System NCC 2022, Volume One – External Walls; Dated 30/01/2024.*

A6 Other relevant technical data

C2D13 Fire-Protected Timber

Where Timber framing is required to be Fire-Protected, two layers of 13 mm thick, fire-protective grade plasterboard on the internal side, is compliant in a building with a height less than 25m and is provided with a sprinkler system. Timber framing is acceptable when installed as per the Nasahi external wall installation guide, and in accordance with the NCC C1.13 fire protected timber concession.

Source: *TC Fire Engineering Report TCFE0011 revision 4 dated 07/07/2021.*

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)&(e). Reports from Accredited Testing Laboratories and a professional engineer.
3. Thermal Provisions A55G3(1)(e). Reports from a professional engineer.
4. Weatherproofing Provision A5G3(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.

B2 Reports

1. Acronem Consulting Australia Pty Ltd, Report No: ACA – 210208; Nasahi High-Rise External Wall System NCC 2022, Volume One – External Walls; Dated 30/01/2024. The report provides compliance towards the following clauses: B1P1, F1P4, F3P1, C2D2(2),C2D10,C2D11(1)(g)(i), F8D3, G5D3 & J4D6.
2. Ian Bennie & Associates Pty Ltd; NATA Accreditation No. 2371; Report 2015-102-S1; Nasahi 50mm Wall System – NCC 2015 Verification Methods FV1 & V2.2.1; Dated 22/01/2016. This report provides compliance with F3P1.
3. James M Fricker Pty Ltd; Report No. i449cm; Thermal calculations of NASAHI® residential external wall systems; Dated 25/04/2020. This report provides compliance with J4D6.
4. Exova Warringtonfire Aus Pty Ltd; Nata Accreditation No. 3277; Report No. 365312-00.1; Testing in accordance with AS1530.1-1994; Dated 25/08/2015. This report provides compliance with C2D10.
5. Exova Warringtonfire Aus Pty Ltd; Nata Accreditation No. 3277; Report No. EWFA 3825900 Revision 6.4; Fire Assessment Report – Determination of FRL in accordance with AS 1530.4-2014; Dated 22/08/2023. This report provides compliance with C2D2 & G5D3.
6. TC Fire Engineering; Report No. TCFE0011, Revision 4; NASAHI External Wall System Fire Safety Report; Dated 07/07/2021. This report provides compliance with C2D2 & G5D3.
7. Fabric First Hygrothermal Assessment FF0101 dated 20/11/2020. This report provides compliance with F8D3.

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