Certificate of Conformity

Certification Body:

CertMark International
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JAS-ANZ Accreditation
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Certificate Holder:

Nasahi Building
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Australia Pty Ltd
ABN: 93 606 367 873
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Certificate number: CM40172 Rev1

THIS IS TO CERTIFY THAT

Nasahi Panel Wall and Floor Systems

Type and/or use of product:

Floor system; Boundary Wall System and External Wall System (incorporating timber or steel framing) in loadbearing or non-loadbearing applications; and Inter-tenancy Wall System.

Description of product:

Wall and Floor systems incorporating the Nasahi Panel. The Nasahi Panel is a lightweight steel reinforced Autoclaved Aerated Concrete (AAC) panel. Refer A2 below.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) **BCA 2019**

	Volume One		Volume Two	
Performance Requirement(s):	BP1.1(a),(b)(i),(ii)&(iii)	Structural provisions	P2.1.1(a),(b)(i),(ii)&(iii)	Structural stability and resistance
	FP1.4	Damp and weatherproofing	P2.2.2	Weatherproofing
Deemed-to-Satisfy Provision(s):	C1.1(b)	Fire resistance and stability – FRL varies with wall construction – refer A3.	3.7.3.2(a)(i)(A)	Protection from the spread of fire – FRL varies with wall construction – refer A3
	C1.9	Non-combustible building elements – Limited to floor and wall elements.	3.8.6.2(a)(i)	Sound insulation - Can be used in conjunction with other building elements to achieve a total Acoustic value
	F5.2(b) F5.3(a)(ii)	Determination of airborne and impact sound insulation ratings for walls and floors.	3.10.5.0	Bushfire areas - BAL FZ achieved via compliance with FRL
	F5.4	Sound insulation rating of floors	3.12.1.4(b)	Energy efficiency – applicable to walls. Can be used in conjunction with other building elements to achieve a Total R-Value
	F5.5(a)(i),(ii)&(c)	Sound insulation rating of walls (excludes boundary wall system)	3.12.1.5(a)(i)	Energy efficiency – applicable to floors. Can be used in conjunction with other building elements to achieve a Total R-Value
	G5.2	Construction in bushfire prone areas - BAL FZ achieved via compliance with FRL		
	J1.5(d)	Energy efficiency – Walls - can be used in conjunction with other building elements to achieve a Total R-Value		
	J1.6(a)	Energy efficiency – Floors - can be used in conjunction with other building elements to achieve a Total R-Value		

Date of issue: 07/06/2019

Date of expiry: 07/06/2022

John Thorpe - CMI

Don Grehan – Unrestricted Building Certifier

State or territory variation(s): Part F5 (NT); G5.2 (NSW) (G5.1 Application of part QLD, NSW) Part 3.8.6 (NT); 3.10.5.0 (NSW, QLD); Part 3.12 (NSW, NT, QLD, TAS, ACT)

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:**
1. For the bushfire clause for BAL FZ to apply to the use of the Nasahi Panel as a floor panel, the supporting floor system must also comply with AS 3959:2018.	1,2,3,4,5,6,7,8,9 & 10
2. The Thermal R values and Acoustic properties will vary with installation configurations, refer the appropriate installation manual.	
3. When used as a floor system, with an in-slab or in-screed heating or cooling system, it must be insulated around the vertical edge of its perimeter with insulation having an R-Value of not less than 1.0.	
4. For compliance with FRL, construction must be as per the tested specimen – Refer A3.	
5. Condensation management must be provided in accordance with Part 3.8.7 of the BCA.	
6. Acoustic performance for external boundary wall systems does not form part of this certification.	
7. This product is suitable for use in Wind Zones N1 through N6 and C1 through C4.	
8. Installation requirements are outside the scope of this certificate and subject to project specific engineering advice. The Certificate Holder has made available the Nasahi Design and Installation Guide External Wall system. Issue: March 2019, Nasahi Design and Installation Guide Nasahi Flooring System. Issue: March 2019 and the Nasahi Design and Installation Guide Party Wall system. Issue: April 2019.	
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.

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. This may result in the product being classified as a non-conforming building product.

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, CertMark International 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

The Nasahi Panel is a steel reinforced Autoclaved Aerated Concrete (AAC) building panel with a working density of 650kg/m^3.

External Wall System & Boundary Wall System

The Nasahi External Wall System is a non-load-bearing system that is designed to be installed onto a load bearing timber or steel frame. For details of system components, refer to the Nasahi External Wall Install Guide March 2019.

Party Wall System

The Nasahi Party Wall System is a non-loadbearing system that is designed to act as an intertenancy wall installed onto a load-bearing timber or steel frame. For details of system components, refer to the Nasahi Party Wall Install Guide April 2019.

Flooring System

The Nasahi Flooring System consists of panels installed directly onto timber or steel structural joists, For details, refer to the Nasahi Floor Install Guide March 2019.

A3 Product specification

Panel dimensions: 2200mm x 600mm x 50mm, 62mm and 75mm in thickness.

Thermal

Rendered Nasahi Panel with Reflective Sarking and a Cavity (16-35mm) including 10mm Plasterboard.

Size	**50mm**			**62mm**			**75mm**		
Insulation	R2.5	R2.0	None	R2.5	R2.0	None	R2.5	R2.0	None
Winter	3.4	2.9	1.5	3.5	3.0	1.6	3.6	3.1	1.7
Summer	3.2	2.7	1.4	3.3	2.8	1.5	3.4	2.9	1.5

Acoustic – Excluding Boundary Walls

Description	System Thickness (mm)	Acoustic Performance R_W+Ctr
Nasahi 50mm External Wall System with timber frame	170	43

Bushfire

BAL FZ achieved via compliance with AS 3959:2009 – 'Construction of buildings in bushfire prone areas' section 9.4.1 'External Walls' states; 'Walls shall be one of the following' clause 9.4.1(c) 'A system with an FRL of 30/30/30 or -/30/30 when tested from the outside'.

Fire Resistance Level (FRL)

The following systems have achieved FRLs as detailed herein:

Nasahi Party Wall Systems – 50mm

The fire resistance performance of Nasahi Party Wall Systems if tested in accordance with AS 1530.-2014:

Central Membrane	Wall Framing	Max. Wall Height	Max. Vertical Space of Aluminium Bracket	Max. Horizontal Space of Aluminium Bracket	FRL
50mm Nasahi Super50 Panel	Min. 70mm deep timber or steel framing	15m	3m	1100mm	60/60/60
		6.6m	3m	400mm	90/90/90
		10m	3m	250mm	90/90/90
	Min. 70mm deep timber or min. 51mm deep steel framing	3m	3m	1100mm	-/120/90

Refer to the below Schedule of Components:

Item	Description	
Central Membrane	Product	Nasahi Super50 AAC panel (wherever Nasahi Panel is called in the figures it is referring to the Super50 AAC panel)
	Size	2200mm long × 600mm wide × 50mm thick
	Installation	Installed in the horizontal orientation and separated by I-studs. Panel joins are sealed with Nasahi Proprietary Panel adhesive.
I-Stud	Product	51mm I-stud 0.55 BMT
	Size	35.4mm wide × 51mm deep (nominal)
	Installation	Fitted vertically in between Nasahi Super50 panels at 2200mm centres and fixed with Aluminium L-brackets at top and base at 3000mm centres.
	Material	Aluminium L-bracket
	Size	50mm wide × (45mm and 75mm) long × 1.5mm BMT

Central Membrane Bracket	**Installation**	L-bracket shall be fixed between wall framing and central membrane on each side and installed on the peripheral wall studs 100mm below and above the horizontal Nasahi Super50 panel joins. Refer to Table 2 for vertical spacing and horizontal spacing of aluminium bracket.
Wall Framing – Timber	**Material**	Timber
	Size	A minimum of 70mm framing designed in accordance with AS1720.1 or AS1684
Wall Framing – Timber	**Material**	Light gauge steel
	Size	For multi-storey party wall systems: A minimum of 76mm framing designed in accordance with AS/NZS4600 or AS3623.
Wall Linings	**Material**	Minimum 10mm thick Boral Plasterboard Regular
	Installation	Installed horizontally on the wall framing and the sheets are screw fixed to framing at 400m centres and sheet joins are sealed using jointing compound – Boral Basecoat 45 and 50mm USG Boral super-fibretape.
Floor Framing	**Material**	Solid timber, floor truss or composite joists
	Size	Size shall be in accordance with AS1720.1 or AS1684 or designed by others.
	Installation	Flooring shall be parallel or perpendicular to wall and may be installed so that it rests on top of the lower wall framing. The gaps between the joists do not need to be specially treated.
Cavity Insulation	**Product**	Glasswool or Rockwool insulation
	Installation	Installed within the wall frame on both sides.
Ceiling Lining	**Material**	10mm Standard core plasterboard
	Installation	Installed in vertical orientation and fixed to the timber studs by using 6g × 25mm long Bugle Head Needle Point Fine Thread ZY screws at 300mm centres.
Additional Protection	**Product**	16mm thick fire grade plasterboard
	Installation	For 90 minute party wall system: additional layer of 16mm thick fire grade plasterboard lining shall be continuously fixed to one side of Nasahi Panel and I-studs by using 12g × 45mm Type 17 hex head screws at 400mm × 400mm grids where there is a discontinuity in the outer wall lining. Refer to figure 2.
Rockwool Cavity Seal	**Product**	Rockwool or mineral fibre insulation
	Installation	Filled voids within the roof capping and junction of the party wall.

Source: *Exova Warringtonfire Report No: 39410000.7; dated 24 October 2018.*

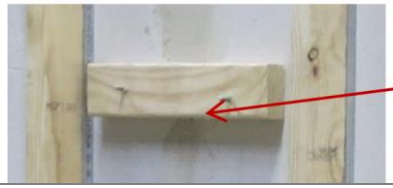
Nasahi External and Boundary Wall Systems – 50mm

The fire resistance performance of Nasahi External and Boundary Wall Systems if tested in accordance with AS 1530.-2014:

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 Super50 Panel	Steel Batten (Item 2)	Min. 70mm deep timber or min. 76mm deep steel stud	10mm thick or greater standard grade plasterboard	120/120/120	4.94kN/stud
	Timber Batten (Item 3)			90/90/90	
	No Batten	Min. 90mm deep timber or min. 92mm deep steel stud		90/90/90	
	Foam PVC or Polystyrene (Item 3)	Min. 70mm deep timber or min. 76mm deep steel stud		60/60/60	

Refer to the below Schedule of Components:

Item	Description		
1	**Name**	Framing	
	Dimension	MGP10 Timber Stud 45mm thick x 90mm wide 35mm thick x 90mm wide 35mm thick x 70mm wide	0.55BMT Galvanised Steel Stud 35mm thick x 76mm wide 35mm thick x 92mm wide
	Spacing	The studs shall be installed at 450m or 600m centres and the noggings were installed at max. 1350mm centres.	
2	**Name**	Wall Batten	
	Material	Galvanised Mild Steel or timber or foam PVC or Polystyrene	
	Size	• The metal batten size shall be one of the following; ○ 36mm wide × 16mm deep ○ 36mm wide × 25mm deep ○ 36mm wide × 35mm deep • The timber batten size shall be one of the following; ○ Maximum 30mm wide × 16mm-45mm deep ○ (eg. standard TP batten is 70x35 70x45 or 90x35 90x45) • The foam PVC or Polystyrene batten size shall be one of the following; ○ Maximum 30mm wide × 16mm-50mm dee	
	Installation	*For timber framing:* Optionally installed vertically over timber studs on the exposed side and screw fixed to the timber framing at 1000mm centres by using Type 17 Class 4, Hex Head and 12g× 25mm long SDS screw. *For steel framing:* Optionally installed vertically over steel studs on the exposed side and screw fixed to the steel framing at 1000mm centres by using SDS Class 4, Hex Head, 10g × 16mm long drill point self-drilling screw.	

2a	**Name**	Cavity Spacer
	Material	The foam PVC or Polystyrene batten size shall be one of the following; Maximum 30mm wide × 20mm-50mm deep
	Installation	Polystyrene battens are used at 2000mm centres (2 battens per panel) to create a gap 20mm - 50mm between two external walls
3	**Name**	Wall Timber Batten
	Material	Timber
	Size	At least 16mm deep
	Installation	Optionally installed vertically over timber studs on the exposed side and screw fixed to the timber framing at 1000mm centres by using 10g × 75mm long, threated pine countersunk head screws.
4	**Name**	NASAHI Super50
	Size	2200mm long x 600mm wide
	Density	674kg/m^3
	Thickness	Minimum 50mm thick and the screw fixing length of different panel thickness refer to Table 2.
	Material	AAC Panels
	Installation	Installed horizontally on the exposed side with joints sealed with adhesive mortar (item 6)and screw fixed to timber framing through battens (if requested) by using 14g × 100, 125 and 150mmlong, SDS TYPE 17Class 4, Bugle Batten Head, SDS timber screws (item 7)or screw fixed to steel framing through battens (if requested) by using SDS Class 4, Hex Head 10g × 65mm, and 14g × 95mm and 115mm long drill point self-drilling screw. Refer to item 7 for the fixing lengths of various batten sizes. Each vertical butt join shall be backed with timber nogging section with the panel screw (item 7) fixed at mid-height of panel for misaligned panels.  Timber nogging or steel batten section at back of vertical butt join for misaligned panels.
5	**Name**	Unexposed Side Cladding
	Product	10mm thick standard plasterboard
	Installation	Installed horizontally on the unexposed side and incorporated a vertical joint. The sheets are screw fixed by using 6g × 25mm long, Bugle head, Fine thread plasterboard screws to timber framing at 300mm centres.
6	**Name**	Adhesive Mortar
	Product	NASAHI Proprietary Panel Adhesive
	Installation	Applied to NASAHI Super50 panel edges and to cover screw heads during construction
7	**Name**	Screw Fixing
	Size	For timber framing, TYPE 17Class 4, Bugle Batten Head, SDS timber screws with a minimum embedment of 30mminto timber framing/timber batten and the required fixing length of various batten sizes are summarised below;

Panel thickness (mm)	Counter Sinking Depth (mm)	Fixing length with steel batten (mm)	Fixing length with timber batten (mm)	Fixing length without batten (mm)

		<table><tr><td colspan="2">Batten Depth (mm)</td><td>16</td><td>25</td><td>35</td><td>35</td><td>-</td></tr><tr><td>50</td><td>5-10</td><td>100</td><td>100</td><td>125</td><td>75</td><td>85</td></tr><tr><td>62</td><td>5-10</td><td>125</td><td>125</td><td>125</td><td>100</td><td>100</td></tr><tr><td>75</td><td>5-10</td><td>125</td><td>125</td><td>150</td><td>100</td><td>125</td></tr></table> For steel framing, SDS Class 4, Hex Head drill point self-drilling screws and the required fixing length of various batten sizes are summarised below; <table><tr><td>Panel thickness (mm)</td><td>Counter Sinking Depth (mm)</td><td colspan="3">Fixing length with steel batten (mm)</td><td>Fixing length with timber batten (mm)</td></tr><tr><td colspan="2">Batten Depth (mm)</td><td>16</td><td>25</td><td>35</td><td>-</td></tr><tr><td>50</td><td>5-10</td><td>95</td><td>95</td><td>115</td><td>65</td></tr><tr><td>62</td><td>5-10</td><td>115</td><td>95</td><td>115</td><td>95</td></tr><tr><td>75</td><td>5-10</td><td>115</td><td>115</td><td>125</td><td>95</td></tr></table>
	Installation	Used to fix NASAHI Super50 panels to timber or steel frame through timber or steel batten (if required)50mm from the edges. The screws are installed such that the screw heads sit nominally5to 10mmbelow the surface. The fixing hole is patched with panel adhesive mortar (item 6).
8	**Name**	Stud Adhesive
	Product	Boral Stud Adhesive
	Installation	Applied on the timber framing before installation of Boral Plasterboard Regular (item 6)
9	**Name**	Jointing Compound
	Product	Boral Total Joint Finish and 50mm UGS Boral super-fibre tape
	Installation	All joints on the Boral plasterboard cladding shall be finished with one coat of joint finish-fibre tape-final coat of joint finish.
10	**Name**	Framing
	Dimension	MGP 10 Timber Stud 45mm thick × 90mm wide 35mm thick × 90mm wide 0.55BMT Galvanised Steel Stud 35mm thick × 92mm wide
	Spacing	The studs shall be installed at 450mm or 600mm centres and the noggings were installed at max. 1350mm centres.

Source: *Exova Warringtonfire Report No: 38259000.4; dated 3 May 2018.*

Nasahi Party Wall Systems – 62mm

The fire resistance performance of Nasahi Party Wall Systems if tested in accordance with AS 1530.-2014:

Nasahi Intertenancy Wall System 1:
comprising Nasahi Panel wall and a metal stud framed wall section (with cavity insulation) separated by 20mm air gap, together with external 10mm plasterboard lining on each side.

Nasahi Intertenancy Wall System 2:
comprising Nasahi Panel wall with external 10mm plasterboard lining mounted via furring channels together with a metal stud framed wall section lined externally with 10mm plasterboard and separated by 20mm air gap from the Nasahi panel. Insulation is fitted in wall cavities on either side.

Nasahi Intertenancy Wall system 3:
comprising Nasahi Panel wall at the central core with a metal stud framed section on each side lined externally with 10mm plasterboard. Both wall cavities are filled with insulation.

Nasahi Intertenancy Wall system 4:
comprising two Nasahi panel walls separated by 20mm air gap and lined externally with 10mm plasterboard. The central core air gap is filled with insulation.

Nasahi Intertenancy Shaft Wall System 1:
comprising Nasahi Panel wall with direct fix 10mm standard plasterboard lining on the tenancy side only.

The Nasahi Intertenancy Wall Systems 1 to 4 are assessed with FRL of -/120/120 and exposure from either side.

The Nasahi Intertenancy Shaft Wall System 1 is assessed with FRL of -/90/90 with exposure from either side.

Refer to the below Schedule of Components:

Item	Description	
Cladding		
1	**Item name**	Nasahi 62mm AAC Panels
	Product	AAC Panels
	Size	62mm thick × 600mm wide × 3000mm tall
	Density	591.40 kg/m3(measured)
	Installation	The panels were installed vertically on the exposed side onto the J-Channel (item 3) and screw fixed to the galvanised steel angle (item 4) on the bottom with hex head screws (item 8). Nasahi Adhesive (item 13) was applied in between the panel joints.
2	**Item Name**	Unexposed Plasterboard
	Product	USG Boral Sheetrock ® Plasterboard
	Size	10mm thick × 1200mm wide × 3000mm long
	Density	600 kg/m^3
	Location	The plasterboard sheets were screw fixed onto the steel framing (item5 & 6) at 300mm centres with needle point screws (item 9). The joints were sealed with jointing compound (item 14).
Framing		
3	**Item Name**	J-Channel
	Product	Rondo 64 J Runner 0.80BMT

	Size	64mm × 57mm × 25mm × 0.80 BMT
	Installation	The J-Channels were installed along the top lintel on the exposed side with the channels fixed into the lintel with masonry anchors (item 10). Nasahi AAC Panels (item 1) were installed into the J-Channels. Fire and acoustic rated sealant (item 11) was applied in the gaps between the channel and the lintel.
4	**Item Name**	Angle
	Product	Galvanised Steel Angle
	Size	50mm × 50mm
	Installation	The galvanised steel angles were installed along the bottom lintel and fixed into the lintel with masonry anchors (item 10). The Nasahi AAC Panels sat on the steel angle and were screw fixed together with hex head screws (item 8).
5	**Item Name**	C-Section Studs
	Product	Studco Stud
	Size	51mm × 3000mm × 0.5BMT
	Installation	Fitted vertically at 600mm centres on the unexposed side steel frame. Fire and acoustic rated sealant (item 11) was applied in the gaps between the steel framing and the lintel.
6	**Item Name**	Noggings
	Product	Studco Nogging Track
	Size	51mm × 3655mm × 0.70BMT
	Installation	Fitted horizontally at 600mm centres on the unexposed side steel frame.
Insulation		
7	**Item Name**	Insulation
	Product	Bradford™ Acoustigard™ - R1.3
	Density	14kg/m^3
	Installation	Fitted in between the studs and nogging of the steel frame on the unexposed side
Fixings		
8	**Item Name**	Hex Head Screws
	Product	12G-10 × 45mm Hex Head Type 17 Screws
	Installation	Used to screw fix the angle (item 4) to the Nasahi AAC Panels (item 1). Two screws were used on each panel.
9	**Item Name**	Needle Point Screws
	Product	No.6 × 25mm Type 'S' needle point screws
	Installation	Used to screw fix the unexposed plasterboard (item 2) to the steel frame at 300mm centres.
10	**Item Name**	Fixings - Framing to Lintel
	Product	50mm × Ø6.5mm Metal Pin Anchors
	Installation	Used to fix the J-Channel (item 3), angle (item 4), and steel framing (item 5&6) into the lintel.
Sealant		
11	**Item Name**	Fire and acoustic rated sealant
	Product	Swirl Engineering Firesealant
	Installation	Installed in between the gaps of the J-Channel (item 3), angle (item 4), steel framing (item 5 & 6) and lintels.
Adhesive		
12	**Item Name**	Stud Adhesive
	Product	USG Boral Premium Bond™ Stud Adhesive
	Installation	Applied on the unexposed steel framing before the installation of unexposed plasterboard (item 2).
13	**Item Name**	Adhesive Mortar

	Product	Nasahi® Adhesive
	Installation	Applied in between the Nasahi AAC Panels (item 1).
14	**Item Name**	Jointing Compound
	Product	Boral Plasterboard Total Joint Finish
	Installation	Applied on all joints of the unexposed plasterboard (item 2).

Source: *Exova Warringtonfire Report No: 50509000.1; dated 25 January 2018.*

Nasahi Wall Batten and Fixing Spacing

	Max Horizontal Spacing for Battens and Panel Screw (mm)		Max Panel Screw Spacing Vertically (mm)			
Wind Zone	**Corner Zone**	**Typical Zone**	**Corner Zone**		**Typical Zone**	
N1, N2, N3, C1	600	900	500	2 screw/panel width	500	2 screw/panel width
N4, C2	600	450	250	3 screw/panel width	500	2 screw/panel width
N5, N6, C3, C4	450	450	250	3 screw/panel width	250	3 screw/panel width

Nasahi Floor System Joist Spacing

	50mm Panel 2.0kPa	62mm Panel 2.0kPa	75mm Panel 2.0kPa	75mm Panel 3.0kPa
Max Joist Spacing (mm)	450	450	600	450

Source: *A. Poon Consultants Pty Ltd, Design Certification 11th May 2016*

A4 Manufacturer and manufacturing plant(s)

Nanjing Asahi New Building Materials Co., Ltd.
No.259, Zhongshan (N) Rd.,
Nanjing, 210039 China.

A5 Installation requirements

Installation requirements are outside the scope of this certificate and subject to project specific engineering advice. The Certificate Holder has made available the:

- Nasahi Design and Installation Guide External Wall system. Issue: March 2019;
- Nasahi Design and Installation Guide Nasahi Flooring System. Issue: March 2019;
- Nasahi Design and Installation Guide Party Wall system. Issue: April 2019.

A6 Other relevant technical data

Asbestos testing of Nasahi AAC Panel by Nanjing Fibreglass, CNAS accreditation number L0846; Report No. 19010032 dated 15 January 2019 - No asbestos detected.

Acoustic – Boundary Walls

Acoustic performance opinion of Nasahi external boundary wall systems conducted by Renzo Tonin & Associates.

System	Estimated R_w + Ctr
2 leaves of 50mm thick Nasahi Panels spaced a minimum distance of 20mm apart (polystyrene spacers with no mechanical linkage between the panels). On both side of the wall: • 70mm timber stud with C-section battens/top hats • 10mm plasterboard internally • R2.0 insulation (11kg/m3) in the stud cavity on both sides.	Rw + Ctr 51
2 leaves of 62mm thick Nasahi Panels spaced a minimum distance of 50mm apart (polystyrene spaces with no mechanical linkage between the panels). On both side of the wall: • 70mm timber stud with C-section battens/top hats • 10mm plasterboard internally • R2.0 insulation (11kg/m3) in the stud cavity on both sides.	Rw + Ctr 51
2 leaves of 75mm thick Nasahi Panels spaced a minimum distance of 50mm apart (polystyrene spaces with no mechanical linkage between the panels). On both side of the wall: • 70mm timber stud with C-section battens/top hats • 10mm plasterboard internally • R2.0 insulation (11kg/m3) in the stud cavity on both sides.	Rw + Ctr 52
Source: *Report No. TK354-01F01 (r2) Dated 26/06/2018.*	

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Structural Provisions A5.2(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.
2. Fire Safety Provisions A5.2(1)(d). Reports from Accredited Testing Laboratories.
3. Thermal Provisions A5.2(1)(e). Reports from a professional engineer.
4. Weatherproofing Provision A5.2(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.

B2 Reports

1. A. Poon Consultants Pty Ltd, Structural Assessment; Design Certification for Nasahi 50mm, 62mm and 75mm panels; Dated 11/05/2016.
2. Ian Bennie & Associates; NATA Accreditation No. 2371; Test Rep. 2018-084-S1; Wind testing in accordance with AS 4040.2-1992 (R2016) Stud spacing 450mm; Dated November 2018.
3. Ian Bennie & Associates; NATA Accreditation No. 2371; Test Rep. 2018-084-S2; Wind testing in accordance with AS 4040.2-1992 (R2016) Stud spacing 600mm; Dated November 2018.
4. Ian Bennie & Associates; NATA Accreditation No. 2371; Weatherproof testing in accordance with AS/NZS 4284:2008 to NCC 2015 Verification Methods FV1 and V2.2.1; Dated 22/01/2016.
5. Exova Warringtonfire Pty Ltd, NATA Accreditation No. 3277; Report No. 38259000.4; Assessment of the fire resistance performance of NASAHI Super 50 AAC external wall systems if tested in accordance with AS1530.4-2014; Dated 03/05/2018.
6. Exova Warringtonfire Pty Ltd, NATA Accreditation No. 3277; Report N0.39410000.7; Assessment of the fire resistance performance of Nasahi Super50 party wall Systems if tested in accordance with AS1530.4-2014; Dated 24/10/2018.
7. Exova Warringtonfire Pty Ltd, NATA Accreditation No. 3277; Report Number 50098100.1; Fire resistance performance of Nasahi 62mm non-loadbearing Intertenancy wall system tested in accordance with AS1530.4-2014; Dated 31/08/2017.
8. Exova Warringtonfire Pty Ltd, NATA Accreditation No. 3277; Report Number 50509000.1; Assessment of the likely fire resistance performance of Nasahi non-load bearing Intertenancy Wall system if tested in accordance with AS1530.4-2014 with variations to Report Number 50098100.1; Dated 25/01/2018.
9. Exova Warringtonfire Pty Ltd, NATA Accreditation No. 3277; Report Number 365312-00.1; Test report to determine the non-combustibility in accordance with AS/NZS 1530.1:1994; Dated 25 August 2015
10. James M Fricker Pty Ltd; Report No. i449a; Thermal properties of 50mm Nasahi floor system by calculation in accordance with AS/NZS 4859.1:2002/Amdt 1 2006; Dated 14/10/2015.
11. James M Fricker Pty Ltd; Report No. i449a; Thermal properties of 50mm Nasahi wall system by calculation in accordance with AS/NZS 4859.1:2002/Amdt 1 2006; Dated 14/10/2015.
12. Renzo Tonin & Associates; Report No. TH736-01F02(r6); Estimate of the acoustic performance of Nasahi external wall systems, inter-tenancy wall systems and inter-tenancy flooring systems for residential applications by way of calculation in accordance with BCA Specification F5.2; Dated 08/02/2019.
13. Renzo Tonin & Associates; Report No. TJ622-01D02 (r0); Estimate of the acoustic performance of Nasahi inter-tenancy wall systems, for residential applications by way of calculation in accordance with BCA Specification F5.2; Dated 23/03/2017.
14. Renzo Tonin & Associates; Report No. TK354-01F04 (r0); Letter regarding Nasahi Boundary Wall System - Required air gap – Acoustics; Dated 09/08/2018.

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