Certificate of Conformity

Certification Body:

CertMark International
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JAS-ANZ Accreditation No. Z4450210AK
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Certificate Holder:

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Certificate number: CM40331

THIS IS TO CERTIFY THAT

Walsc® 50mm & 75mm External Wall Cladding System

Type and/or use of product:

Walsc® External Wall Cladding System is used to clad external residential single storey or multi-storey loadbearing walls.

Description of product:

Walsc® 50mm & 75mm External Wall Cladding System comprises lightweight steel reinforced Autoclaved Aerated Concrete (AAC) Wall Panels.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) **BCA 2019 (Amdt. 1)**

	Volume One	Volume Two	
Performance Requirement(s):	Not applicable	P2.1.1(a)(b)(i)(ii)(iii)	Structural stability and resistance – Subject to *Limitations and conditions 7 & 10*
		P2.2.2	Weatherproofing – Subject to *Limitations and conditions 3*
		3.7.1.1	Fire properties for materials and construction – General concession – non-combustible materials. *Refer Limitations and conditions 8*
Deemed-to-Satisfy Provision(s):	Not applicable	3.7.2.4(b)(i)	Fire properties for materials and construction – Construction of external walls *Refer Limitations and conditions 2*
		3.10.5.0	Construction in bushfire prone areas. *Refer Limitations and conditions 4*
		3.12.1.4	Energy efficiency – External walls
State or territory variation(s):	Not applicable	3.10.5.0 (NSW, Qld)	
		Part 3.12 (NSW, NT, SA, Qld, Tas, ACT)	

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

Richard Donarski - CMI

Don Grehan – Unrestricted Building Certifier

Date of issue: 30/07/2021

Date of expiry: 30/07/2024

Limitations and conditions:

1. Construction shall be in strict accordance with the Walsc External Wall Cladding System 50 - Design and Installation Guide V.202107 & Walsc External Wall Cladding System 75 Light - Design and Installation Guide V.2021
2. 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
3. To satisfy P2.2.2 via verification, the relevant design is required to meet the criteria of V2.2.1 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 factor scores are determined in accordance with Table V2.2.1a; and
   (a)(ii) is not subjected to an ultimate limit state wind pressure or more than 2.5kPa; and
   (a)(iii) include only windows that comply with AS 2047
   Compliance with Weatherproofing is limited to the tested specimen detailed in A3, deviations from this specimen, is subject to site specific design and approval by the regulatory authority
4. 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
5. Walsc® External Wall Cladding System must be fixed to a structurally adequate external wall frame in accordance with the appropriate span tables in section A3
6. No assessment has been undertaken on the product for Part 3.8.7 of Vol 2 of the 2019 BCA for Condensation management. 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.
7. In all cases, it is a requirement that the Walsc® External Wall Cladding System incorporates either;
   a. A timber frame constructed in accordance with AS 1720.1-2010 or AS 1684-2010 series; or
   b. A cold-formed steel frame and top hat constructed in accordance with AS/NZS 4600:2018; or
   c. NASH Standard for Residential and Low-rise Steel Framing, Part 1: Design Criteria.
8. Where timber frames are proposed, they are to be applied where the proposed building is permitted to have timber framing in accordance with the requirements of the BCA. Also see Non-Combustibility A3.
9. In all installations, the minimum clearance between the underside of panel and the adjoining surface level below must comply with the specifications in Part 3.5.4.7 of Volume 2 of the NCC.
10. Certification is limited to single-storey buildings or multi-storey buildings with a horizontal control joint installed in the cladding near each floor level.
11. 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.

Building classification/s:

Class 1 & 10

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.

Certificate of Conformity

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, 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

Walsc® External Wall Cladding System is used to clad external residential single storey or multi-storey loadbearing walls.

A2 Description of product

Walsc® 50mm External Wall Cladding System consists of 50mm (thick) lightweight steel reinforced AAC Panels (vertically aligned or horizontally staggered) x 600mm (wide) up to 3300mm (length). Dry Density 530kg/m^3. Refer Components of system below.

Walsc® 75mm External Wall Cladding System consists of 75mm (thick) lightweight steel reinforced AAC Panels (vertically aligned) x 600mm (wide) up to 3300mm (length). Dry Density 450kg/m^3. Refer Components of system below.

Components

Product	Description
Top Hat Batten/ Lipped C Channel Batten	For Vertically Aligned systems, use 24x30mm 0.42BMT top hat batten, G550 galvanised. For Horizontally Staggered system, use 24x40mm 0.42BMT lipped C channel batten, G550 galvanised.
Fixing Screws	Refer to the fixing details for each system in the System Performance section of this guide for specification of fixing type and size. As a minimum, all fixings shall be Class III corrosion resistance (minimum) as per AS 3566.2-2002.
Walsc® AAC Adhesive	Cement based AAC adhesive is applied to all adjoining panel edges and can also be used to patch up minor damaged areas.
Corrosion Protection Paint	When panels are cut, the exposed ends of the reinforcement must be treated with corrosion protection paint.
Flexible Sealant	External grade polyurethane sealant Bostik Seal 'N' Flex 1 must be used in all control joints for non-fire rated walls.
Fire Rated Sealant	Fire rated sealant Bostik Fireban One must be used in all control joints throughout the fire rated wall.

A3 Product specification

Structural

Fixing Specification for Vertically Aligned 50mm AAC Panel Installations

Fixing Type	Fixing Specifications
AAC panel to batten	For 50mm panel: 14-10x65mm type 17 hex head screw (see fixing table below)
Batten to stud	For timber studs: 2/12-11x35mm type 17 hex head screws per stud
	For steel studs: 2/10-16x16mm self-drilling hex head screws per stud

Fixing Table for Vertically Aligned 50mm AAC Panel Installations

		Wind Class (as per AS 4055-2012)			
		N1	**N2**	**N3/C1**	**N4/C2**
General areas	Max. Batten spacing (mm)	1200	1200	1200	1200
	Fixings per panel per batten	2	2	3	3
At corners	Max. Batten spacing (mm)	1200	1200	1000	800
	Fixings per panel per batten	2	2	3	3

Fixing Specification for Horizontally Staggered 50mm AAC Panel Installations

Fixing Type	Fixing Specifications
AAC panel to batten	For timber studs & 50mm panel: 14-10x125mm type 17 hex head screw (see fixing table below)
	For steel studs & 50mm panel: 14-10x95mm self-drilling hex head screw (see fixing table below)
Batten to stud	For timber studs: 12-11x35mm type 17 hex head screws @ 1200mm cts
	For steel studs: 10-16x16mm self-drilling hex head screws @ 1200mm cts

Fixing Table for Horizontally Staggered 50mm AAC Panel Installations

		Wind Class (as per AS 4055-2012)			
		N1	N2	N3/C1	N4/C2
General areas	Max. Batten spacing (mm)	1200	1200	1200	1200
	Fixings per panel per batten	2	2	2	3
At corners	Max. Batten spacing (mm)	1200	1200	1000	800
	Fixings per panel per batten	2	3	3	3

Fixing Specification for Vertically Aligned 75mm AAC Panel Installations

Fixing Type	Fixing Specifications
AAC panel to batten	For 75mm Light panel: 14-10x90mm type 17 hex head screw (see fixing table below)
Batten to stud	For timber studs: 2/12-11x35mm type 17 hex head screws per stud
	For steel studs: 2/10-16x16mm self-drilling hex head screws per stud

Fixing Table for Vertically Aligned 75mm AAC Panel Installations

		Wind Class (as per AS 4055-2012)			
		N1	N2	N3/C1	N4/C2
General areas	Max. stud spacing (mm)	600	600	600	600
	Max. top hat spacing (mm)	1200	1200	1200	900
	Fixings per panel per top hat	2	2	2	2
At corners	Max. stud spacing (mm)	600	600	600	450
	Max. top hat spacing (mm)	1200	1200	1200	900
	Fixings per panel per top hat	2	2	3	3

Fire Resistance Level (FRL) 120/120/120 Walsc® 50mm External Wall Cladding System

Walsc® 50mm External Wall Cladding System with vertically aligned or horizontally staggered 50mm Walsc® AAC panels based on 600mm centres with 24mm top hat battens fixed to the studs at 900mm, 800mm, 200mm, 2200mm and 2800mm centres on timber or steel frames with the wall cavity filled with Knauf Earthwool R1.5 glass insulation batts with a single layer of 10mm plasterboard installed horizontally. Screws - 14-10x65mm type 17 hex head.

Fire Resistance Level (FRL) 240/240/180 Walsc® 75mm External Wall Cladding System

Walsc® 75mm External Wall Cladding System with vertically aligned 75mm Walsc® AAC panels based on 600mm centres with 24mm top hat battens fixed to the studs at 900mm centres on timber or steel frames with the wall cavity filled with Knauf Earthwool R1.5 glass insulation batts with a single layer of 10mm plasterboard installed vertically. Screws - 14-10x90mm type 17 hex head.

Bushfire – BAL-FZ

BAL-FZ is based on the Walsc® 50mm panel having an FRL 120/120/120 and Walsc® 75mm panel having an FRL 240/240/180 in accordance with Clause 9.4.1(c) AS 3959:2018.

Non-Combustibility

Component	Non-Combustibility
50mm or 75mm Walsc® AAC Panel	The 50mm and 75mm Walsc® AAC panel is deemed to be non-combustible based on the materials composition
Steel top hat	This component is made from galvanized steel. The steel and galvanizing zinc is non-combustible. This component considered to be non-combustible
Shelf/Corner shelf angle	This component is made from galvanized steel. The steel and galvanizing zinc is non-combustible. This component considered to be non-combustible
Wall wrap	Clause 3.7.1.1.(f) of BCA Volume 2 allows sarking-type materials to be used where non-combustible material is required provided they have a thickness of not more than 1mm and flammability index not greater than 5. Wall wrap may be used for this system provided they have a thickness of not more than 1mm in thickness and flammability index of not greater than 5
Sealing and waterproof tape	Clause 3.7.1.1 (g) of the BCA Volume 2 allows for bonded laminated materials where: i. Each lamina, including any core, is non-combustible; and ii. Each adhesive layer does not exceed 1mm in thickness and the total thickness of the adhesive layer does not exceed 2mm; and iii. The Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively when tested in accordance with AS/NZS 1530.3 Sealing and waterproof tape are suitable for use in this system provided they satisfy the above criteria
AAC panel and top hat fixing screw	This his component is made from steel or galvanized steel. The steel and galvanized zinc is non-combustible. This component considered to be non-combustible
Plasterboard	Clause 3.7.1.1 (a) of the BCA Volume 2 allows plasterboard to be used where non-combustible material is required
Stud frame	This component is made from galvanised steel. The steel and galvanizing zinc is non-combustible. This component considered to be non-combustible Where timber frames are proposed, they are to be applied where the proposed building is permitted to have timber framing in accordance with the requirements of the BCA. Where applied, the FRL established by the tested wall system is considered to be consistent. This is evaluated as per Ignis advice IGNS-9201 I01 R00 dated 16/07/2021
Walsc® AAC adhesive	This component is based on 30%-60% Portland cement. Cementitious based materials are typically non-combustible. This component is considered to be exempt from the requirements as established by the BCA volume 1
Corrosion protection paint	In accordance with the requirements of the BCA Volume 1, Paint is exempt from the requirements of non-combustibility. Clause 3.7.1.1 of the BCA does not provide any requirements for paints on external walls
Sealant	In accordance with the requirements of the BCA Volume 1, Sealants are exempt from the requirements of non-combustibility. Clause 3.7.1.1 of the BCA does not provide any requirements for sealants on external walls
Render coating	This component is made of a cementitious type of material. These are typically non-combustible. This component is considered to be non-combustible provided test evidence is provided
Paint finish	When tested to AS 1530.1 it is likely that the paint finish will be classified as combustible. BCA Volume 1 provides a concession for paint finish. Clause 3.7.1 of the BCA Volume 2 does not provide any concession for paints applied on an external wall.

Source: *Ignis Solutions; Report number IGNS-9201 I01R00 - External Wall Fire FRL - 50mm & 75mmm with Timber Frame Assessment; Dated 16/07/2021 & Ignis Solutions; Report number IGNS-9172 IO1R02 – Walsc 50mm & 75mm AAC Panel Systems; Dated 16/07/2021 & CSIRO; NATA Accreditation No. 165, Report number FSV 2009; Fire-resistance test on a load bearing vertical separating element – Steel Frame; 50mm FRL 120/120/120; Dated 08/07/2019 & CSIRO; NATA Accreditation No. 165, Report number FSV 2201; Fire-resistance test on a load bearing vertical separating element – Steel Frame; 75mm FRL 240/240/180; Dated 01/06/2021.*

Certificate of Conformity

Thermal

Walsc® 50mm RESIDENTIAL EXTERNAL WALL SYSTEMS	Insul Path		All Surface (bridged)			
	Total R, m²·K/W		Total R, m²·K/W		Total U, W/(m²·K)	
Timber framing	Winter	Summer	Winter	Summer	Winter	Summer
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and pine stud (70 x 35mm) at 600mm centres (10mm plasterboard)	R1.86	R1.82	R1.80	R1.76	U0.556	U0.567
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and pine stud (70 x 45mm) at 600mm centres (10mm plasterboard)	R2.75	R2.61	R2.44	R2.34	U0.409	U0.428
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and pine stud (70 x 45mm) at 600mm centres (10mm plasterboard)	R3.25	R3.10	R2.77	R2.67	U0.361	U0.374
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R3.28	R3.09	R2.89	R2.75	U0.347	U0.363
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R3.48	R3.28	R3.02	R2.89	U0.331	U0.346
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R3.78	R3.59	R3.21	R3.08	U0.312	U0.324
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R3.97	R3.79	R3.33	R3.21	U0.300	U0.311
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and pine stud (70 x 35mm) at 450mm centres (10mm plasterboard)	R1.86	R1.82	R1.78	R1.75	U0.561	U0.571
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and pine stud (70 x 45mm) at 450mm centres (10mm plasterboard)	R2.75	R2.61	R2.38	R2.29	U0.420	U0.438
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and pine stud (70 x 45mm) at 450mm centres (10mm plasterboard)	R3.25	R3.10	R2.68	R2.59	U0.373	U0.386
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R3.28	R3.09	R2.81	R2.69	U0.356	U0.372
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R3.48	R3.28	R2.93	R2.81	U0.341	U0.355
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R3.78	R3.59	R3.11	R3.00	U0.322	U0.334
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R3.97	R3.79	R3.22	R3.11	U0.311	U0.321

The above table gives Total R & Total U values (Australia) for the thermally bridged whole wall surface (no glazing). For New Zealand (8% M.C.) Total R values will be R0.044 less. The All Wall (bridged) results do not have any thermal break products present.50mm Walsc® AAC Panel assumed to have 0.151 thermal conductivity at 4% M.C. based on assumed 0.128 conductivity at 530 kg/m3 dry density. Results are unchanged for 16mm or 24mm battens as that gap is not reflective. R-values calculated per AS/NZS 4859 Parts 1&2:2018, Thermal insulation materials for buildings.

Walsc® 50mm RESIDENTIAL EXTERNAL WALL SYSTEMS	Insul Path		All Surface (bridged)			
	Total R, m²·K/W		Total R, m²·K/W		Total U, W/(m²·K)	
Steel framing	Winter	Summer	Winter	Summer	Winter	Summer
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and steel stud (76 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R1.86	R1.82	R1.63	R1.60	U0.615	U0.626
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R2.75	R2.61	R2.17	R2.08	U0.461	U0.481
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.25	R3.10	R2.43	R2.35	U0.412	U0.426
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.28	R3.09	R2.46	R2.36	U0.406	U0.423
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.48	R3.28	R2.56	R2.46	U0.390	U0.406
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.78	R3.59	R2.70	R2.61	U0.370	U0.384
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.97	R3.79	R2.79	R2.70	U0.359	U0.371
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and steel stud (76 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R1.86	R1.82	R1.58	R1.55	U0.633	U0.643
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R2.75	R2.61	R2.07	R1.99	U0.483	U0.502
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.25	R3.10	R2.30	R2.23	U0.436	U0.449
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.28	R3.09	R2.34	R2.25	U0.428	U0.445
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.48	R3.28	R2.42	R2.33	U0.413	U0.428
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.78	R3.59	R2.54	R2.46	U0.394	U0.407
50MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.97	R3.79	R2.61	R2.54	U0.383	U0.394

The above table gives Total R & Total U values (Australia) for the thermally bridged whole wall surface (no glazing). For New Zealand (8% M.C.) Total R values will be R0.044 less. The All Wall (bridged) results do not have any thermal break products present. 50mm Walsc® AAC Panel assumed to have 0.151 thermal conductivity at 4% M.C. based on assumed 0.128 conductivity at 530 kg/m3 dry density. Results are unchanged for 16mm or 24mm battens as that gap is not reflective. R-values calculated per AS/NZS 4859 Parts 1&2:2018, Thermal insulation materials for buildings.

Source: *James M Fricker; Report number i523a2; Thermal Performance Calculations AS/NZS 4859.1:2018 & AS/NZS 4859.2:2018 – 50mm; Dated 13/07/2021*

Certificate of Conformity

Walsc® 75mm RESIDENTIAL EXTERNAL WALL SYSTEMS	Insul Path		All Surface (bridged)			
	Total R, m²·K/W		Total R, m²·K/W		Total U, W/(m²·K)	
Timber framing	Winter	Summer	Winter	Summer	Winter	Summer
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and pine stud (70 x 35mm) at 600mm centres (10mm plasterboard)	R2.11	R2.08	R2.05	R2.02	U0.487	U0.495
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and pine stud (70 x 45mm) at 600mm centres (10mm plasterboard)	R3.00	R2.86	R2.72	R2.61	U0.368	U0.383
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and pine stud (70 x 45mm) at 600mm centres (10mm plasterboard)	R3.50	R3.36	R3.06	R2.96	U0.327	U0.338
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R3.53	R3.35	R3.16	R3.03	U0.316	U0.330
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R3.73	R3.54	R3.30	R3.17	U0.303	U0.315
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R4.03	R3.84	R3.50	R3.38	U0.286	U0.296
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and pine stud (90 x 45mm) at 600mm centres (10mm plasterboard)	R4.22	R4.04	R3.63	R3.51	U0.275	U0.285
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and pine stud (70 x 35mm) at 450mm centres (10mm plasterboard)	R2.11	R2.08	R2.04	R2.01	U0.490	U0.498
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and pine stud (70 x 45mm) at 450mm centres (10mm plasterboard)	R3.00	R2.86	R2.66	R2.56	U0.376	U0.390
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and pine stud (70 x 45mm) at 450mm centres (10mm plasterboard)	R3.50	R3.36	R2.98	R2.89	U0.336	U0.346
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R3.53	R3.35	R3.09	R2.97	U0.323	U0.337
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R3.73	R3.54	R3.22	R3.10	U0.310	U0.322
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R4.03	R3.84	R3.41	R3.29	U0.293	U0.304
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and pine stud (90 x 45mm) at 450mm centres (10mm plasterboard)	R4.22	R4.04	R3.52	R3.42	U0.284	U0.293

The above table gives Total R & Total U values (Australia) for the thermally bridged whole wall surface (no glazing). For New Zealand (8% M.C.) Total R values will be R0.077 less. The All Wall (bridged) results do not have any thermal break products present. 75mm Walsc® AAC Panel assumed to have 0.128 thermal conductivity at 4% M.C. based on assumed 0.109 conductivity at 450 kg/m3 dry density. Results are unchanged for 16mm or 24mm battens as that gap is not reflective. R-values calculated per AS/NZS 4859 Parts 1&2:2018, Thermal insulation materials for buildings.

Walsc® 75mm RESIDENTIAL EXTERNAL WALL SYSTEMS	Insul Path		All Surface (bridged)			
	Total R, m²·K/W		Total R, m²·K/W		Total U, W/(m²·K)	
Steel framing	Winter	Summer	Winter	Summer	Winter	Summer
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and steel stud (76 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R2.11	R2.08	R1.92	R1.89	U0.522	U0.530
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.00	R2.86	R2.52	R2.43	U0.397	U0.412
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.50	R3.36	R2.82	R2.73	U0.355	U0.366
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.53	R3.35	R2.85	R2.74	U0.351	U0.365
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R3.73	R3.54	R2.97	R2.86	U0.337	U0.350
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R4.03	R3.84	R3.13	R3.02	U0.320	U0.331
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 600mm centres (10mm plasterboard)	R4.22	R4.04	R3.23	R3.13	U0.309	U0.319
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm reflective still air space, and steel stud (76 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R2.11	R2.08	R1.88	R1.85	U0.533	U0.541
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R1.50 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.00	R2.86	R2.43	R2.35	U0.411	U0.426
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 70mm R2.00 bulk insulation, and steel stud (76 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.50	R3.36	R2.70	R2.62	U0.370	U0.381
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.00 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.53	R3.35	R2.74	R2.64	U0.366	U0.380
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.20 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R3.73	R3.54	R2.84	R2.74	U0.352	U0.365
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.50 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R4.03	R3.84	R2.98	R2.89	U0.335	U0.346
75MM WALSC AAC PANEL (4% M.C.) SYSTEM with 24mm batten and 90mm R2.70 bulk insulation, and steel stud (92 x 35mm x 0.55BMT) at 450mm centres (10mm plasterboard)	R4.22	R4.04	R3.07	R2.99	U0.325	U0.335

The above table gives Total R & Total U values (Australia) for the thermally bridged whole wall surface (no glazing). For New Zealand (8% M.C.) Total R values will be R0.077 less. The All Wall (bridged) results do not have any thermal break products present. 75mm Walsc® AAC Panel assumed to have 0.128 thermal conductivity at 4% M.C. based on assumed 0.109 conductivity at 450 kg/m3 dry density. Results are unchanged for 16mm or 24mm battens as that gap is not reflective. R-values calculated per AS/NZS 4859 Parts 1&2:2018, Thermal insulation materials for buildings.

***Source**: James M Fricker; Report number i523a; Thermal Performance Calculations AS/NZS 4859.1:2018 & AS/NZS 4859.2:2018 – 75mm; Dated 07/07/2021*

Weatherproofing

Cavity wall testing in accordance with AS/NZS 4284:2008 and 2019 NCC Amdt 1 V2.2.1 with a nominated serviceability limit state pressure +820 Pa and –1230 Pa. This is equivalent to an N4 & C2 wind classification as per AS 4055-2012. Components consisted of Walsc® Panel, BMT top hats, Bradford thermoseal wall wrap, Backing rod, Polyurethane sealant, Wall wrap tape, Damp proof course and flashing, T17 hex head screws.

***Source**: Ian Bennie & Associates; Report number 2021-022-S1; Walsc 50mm AAC Reinforced Panel – Weatherproofing to AS/NZS 4284:2008 & V2.2.1; Dated 21/04/2021 & Venn Engineering; Report number VE-SIP2106031A; Walsc External Wall Cladding System for Low-rise Residential Buildings – Weatherproofing 50mm & 75mm; Dated 11/06/2021*

A4 Manufacturer and manufacturing plant(s)

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

A5 Installation requirements

Installation must be conducted in accordance with the Walsc External Wall Cladding System 50 - Design and Installation Guide_V.202107 & Walsc External Wall Cladding System 75 Light - Design and Installation Guide_V.2021.

A6 Other relevant technical data

No other relevant technical data.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

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

B2 Reports

1. Venn Engineering; Report number VE-SIP2107141B; External Wall Cladding System for Multi-Residential Buildings – Structural 50mm & 75mm; Dated 21/07/2021.
2. Venn Engineering; Report number VE-SIP2106031A; Walsc External Wall Cladding System for Low-rise Residential Buildings – Weatherproofing 50mm & 75mm; Dated 11/06/2021.
3. Ian Bennie & Associates; Report number 2021-022-S1; Walsc 50mm AAC Reinforced Panel – Weatherproofing to AS/NZS 4284:2008 & V2.2.1; Dated 21/04/2021.
4. Ignis Solutions; Report number IGNS-9201 I01 R00 - External Wall Fire FRL - 50mm & 75mmm with Timber Frame Assessment; Dated 16/07/2021.
5. Ignis Solutions; Report number IGNS-9172 I01 R02 – Walsc 50mm & 75mm AAC Panel Systems; Dated 16/07/2021.
6. CSIRO; NATA Accreditation No. 165, Report number FSV 2009; Fire-resistance test on a load bearing vertical separating element – Steel Frame; 50mm FRL 120/120/120 - AS 1530.4:2014; Dated 08/07/2019.
7. CSIRO; NATA Accreditation No. 165, Report number FSV 2201; Fire-resistance test on a load bearing vertical separating element – Steel Frame; 75mm FRL 240/240/180 – AS 1530.4:2014; Dated 01/06/2021.
8. James M Fricker; Report number i523a; Thermal Performance Calculations AS/NZS 4859.1:2018 & AS/NZS 4859.2:2018 – 75mm; Dated 07/07/2021.
9. James M Fricker; Report number i523a2; Thermal Performance Calculations AS/NZS 4859.1:2018 & AS/NZS 4859.2:2018 – 50mm; Dated 13/07/2021.

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