



Certificate of Conformity

Certification Body:



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Certificate number: CM30024 Rev 1

THIS TO CERTIFY THAT

ECOL-MEGA PANEL AAC Privacy Wall System

Type and/or use of product:

Freestanding privacy walls and fences, comprising ECOL-MEGA PANEL Reinforced AAC (Autoclaved Aerated Concrete) Panels, supported by galvanised steel posts set in concrete piers in the ground.
The construction system is relevant for use in all building types (NCC Vol 1 & NCC Vol 2).

Description of product:

Reinforced AAC (Autoclaved Aerated Concrete) panels supplied in the following dimensions:

- 1200 x 600mm (75mm thick)
- 1800 x 600 mm (75mm thick)
- 2400 x 600 mm (75mm thick)
- 2550 x 600 mm (75mm thick)
- 2700 x 600 mm (75mm thick)
- 2850 x 600 mm (75mm thick)
- 3000 x 600 mm (75mm thick)
- 3300 x 600mm (75mm thick)
- 2700 x 450 mm (100mm thick)
- 3000 x 450mm (100mm thick)

Accessories include galvanised steel posts and fittings.

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

BCA 2016

	Volume One – Amendment One		Volume Two	
Performance Requirement(s):	BP1.1	Structure	P2.1.1 (a), (b), (c)	Structure
	BP1.2	Structure		
Deemed-to-Satisfy Provision(s):	NIL			
State or territory variation(s):	NIL			

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

Limitations and conditions:

**Volume One BP1.1, BP1.2 and
Volume Two P2.1.1 (a), (b), (c):**

When designed and constructed in accordance with ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013) and Construction Manual (Issue August 2013).
Maximum permissible design wind loads and material specifications are detailed in Tables 1, 2, 3 & 4 as included in Appendix A.

Building classification/s:

All building types

Certification Body name and signature

Unrestricted Building Certifier name and signature

Date of issue: 21/05/2018

Date of expiry: 21/05/2021





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<p>Volume One Clause BP1.4, QLD BP 1.4 & SA BP 1.4 Volume Two Clause P2.1.2</p>	<p>All building types</p>
<p>Are excluded from this certification in respect of applications in flood hazard areas.</p>	
<p>General: Product selection and privacy wall system design shall be made by a professional Engineer or other appropriate person who has:</p> <ul style="list-style-type: none"> • Qualifications and experience acceptable to the relevant approval authorities; and • Ready access to ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013), related to the product design and installation. 	<p>All building types</p>
<p>General: Product installation shall be carried out by a competent tradesperson under the direction of a Builder, both of whom have ready access to ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013) and Construction Manual (Issue August 2013).</p>	<p>All building types</p>
<p>General: Installers must complete, sign and send to the Certificate Holder a Certificate of Installation when installation is completed.</p>	<p>All building types</p>

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.

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. The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions. In placing **the CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein. In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Refer to page 1 of this certificate.

A2 Description of product

Refer to page 1 of this certificate.

A3 Product specification

Refer to ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013), the product technical specifications below, also apply:

Table 1: Pier Depths for 75 mm Panels

Required Depth of 450 mm Diameter Piers - For Free-Standing Privacy Walls & Fences								Notes:
Pier spacing, m B	Soil friction, ° Φ	Height, m H	Required Depth of Piers Wind Classifications, m					
			N1 _f	N2 _f	N3 _f C1 _f	N4 _f C2 _f	N5 _f C3 _f	
3.1	25	2.4	1.40	1.60	1.90	2.20	2.60	1. Calculations are based on 75 mm Reinforced AAC panels. 2. Height is the clear height of the wall above ground surface. 3. Design pressure is based on an aerodynamic shape factor, C _{fig} , of 1.20.
		2.1	1.30	1.48	1.76	2.04	2.41	
		1.8	1.19	1.36	1.61	1.8	2.21	
		1.5	1.07	1.22	1.45	1.68	1.99	
		1.2	0.94	1.08	1.28	1.48	1.75	
	30	2.4	1.30	1.48	1.6	2.04	2.41	
		2.1	1.20	1.37	1.63	1.89	2.23	
		1.8	1.10	1.26	1.49	1.73	2.04	
		1.5	0.99	1.13	1.35	1.56	1.84	
		1.2	0.87	1.00	1.19	1.37	1.62	
	35	2.4	1.20	1.37	1.63	1.89	2.23	
		2.1	1.11	1.27	1.51	1.75	2.07	
		1.8	1.02	1.16	1.38	1.60	1.89	
		1.5	0.92	1.05	1.25	1.44	1.71	
		1.2	0.81	0.92	1.10	1.27	1.50	
2.5	25	2.4	1.26	1.44	1.71	1.98	2.34	
		2.1	1.17	1.34	1.59	1.84	2.17	
		1.8	1.07	1.22	1.45	1.68	1.99	
		1.5	0.96	1.10	1.31	1.52	1.79	
		1.2	0.85	0.97	1.15	1.34	1.58	
	30	2.4	1.17	1.33	1.58	1.84	2.17	
		2.1	1.08	1.24	1.47	1.70	2.01	
		1.8	0.99	1.13	1.35	1.56	1.84	
		1.5	0.89	1.02	1.21	1.40	1.66	
		1.2	0.79	0.90	1.07	1.24	1.46	

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Table 1, cont'd

B	Φ	H	N1 _f	N2 _f	N3 _f C1 _f	N4 _f C2 _f	N5 _f C3 _f	
2.5 cont'd	35	2.4	1.08	1.24	1.47	1.70	2.01	Refer notes above.
		2.1	1.00	1.15	1.36	1.57	1.86	
		1.8	0.92	1.05	1.25	1.44	1.70	
		1.5	0.83	0.95	1.12	1.30	1.54	
		1.2	0.73	0.83	0.99	1.14	1.35	
1.9	25	2.4	1.12	1.28	1.51	1.75	2.07	
		2.1	1.03	1.18	1.40	1.63	1.92	
		1.8	0.95	1.08	1.29	1.49	1.76	
		1.5	0.85	0.98	1.16	1.34	1.59	
		1.2	0.75	0.86	1.02	1.18	1.40	
	30	2.4	1.03	1.18	1.40	1.62	1.92	
		2.1	0.96	1.09	1.30	1.51	1.78	
		1.8	0.88	1.00	1.19	1.38	1.63	
		1.5	0.79	0.90	1.07	1.24	1.47	
		1.2	0.70	0.80	0.94	1.09	1.29	
	35	2.4	0.96	1.09	1.30	1.50	1.78	
		2.1	0.89	1.01	1.20	1.39	1.65	
		1.8	0.81	0.93	1.10	1.28	1.51	
		1.5	0.73	0.84	0.99	1.15	1.36	
		1.2	0.64	0.74	0.87	1.01	1.20	

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Table 2: Thickness of 75 x 75 SHS Steel Post Section, Free-Standing Privacy Walls & Fences

Thickness of 75 x 75 SHS Steel Post Section, Free-Standing Privacy Walls & Fences							Notes:
Pier spacing, m	Height, m	Thickness of 75 x 75 SHS steel section, mm					
B	H	N1 _f	N2 _f	N3 _f C1 _f	N4 _f C2 _f	N5 _f C3 _f	
3.1	2.4	3.0	4.0	Design	Design	Design	1. Calculations are based on 75 mm Reinforced AAC panels. 2. Height is the clear height of the wall above ground surface. 3. Design pressure is based on an aerodynamic shape factor, C _{fig} , of 1.20. 4. "Design" indicates that the 75 x 75 x 6.0 SHS has insufficient capacity. A specific design using a stronger section should be carried out by the engineer.
	2.1	2.5	3.0	5.0	Design	Design	
	1.8	2.5	2.5	3.5	5.0	Design	
	1.5	2.5	2.5	2.5	3.5	6.0	
	1.2	2.5	2.5	2.5	2.5	3.5	
2.5	2.4	2.5	3.0	5.0	Design	Design	
	2.1	2.5	2.5	3.5	6.0	Design	
	1.8	2.5	2.5	3.0	4.0	Design	
	1.5	2.5	2.5	2.5	3.0	4.0	
	1.2	2.5	2.5	2.5	2.5	3.0	
1.9	2.4	2.5	2.5	3.5	6.0	Design	
	2.1	2.5	2.5	3.0	4.0	Design	
	1.8	2.5	2.5	2.5	3.0	5.0	
	1.5	2.5	2.5	2.5	2.5	3.0	
	1.2	2.5	2.5	2.5	2.5	2.5	

Table 3 Suitable ECOL-MEGA Reinforced AAC Panels, For Free-Standing Privacy Walls & Fences

Suitable ECOL-MEGA Reinforced AAC Panels, for Free-Standing Privacy Walls & Fences						Notes:
Pier spacing, m	Suitable ECOL-MEGA Reinforced AAC Panels					
B	N1 _f	N2 _f	N3 _f C1 _f	N4 _f C2 _f	N5 _f C3 _f	
3.1	75W37	100W18 ^{Note 5}	-	-	-	1. Calculations are based on 75 mm Reinforced AAC panels 2. Height is the clear height of the wall above ground surface 3. Design pressure is based on an aerodynamic shape factor, C _{fig} , of 1.20 4. In these cases, 75W30 panels are only suitable if the reinforcement is on the "lee" side, ie. not facing the dominant wind 5. The standard post design must be modified if 100W18 panels (100 mm thick) are used 6. In the cases where a blank is shown in the table, the pier spacing must be further reduced
	75W30 ^{Note 4}					
	100W18 ^{Note 5}					
2.5	75W37	75W37 ^{Note 4}	100W18 ^{Note 5}	-	-	
	75W30	75W30 ^{Note 4}				
	100W18 ^{Note 5}	100W18 ^{Note 5}				
1.9	75W37	75W37	75W37	75W30 ^{Note 4} 100W18 ^{Note 5}	-	
	75W30	75W30 ^{Note 4}	75W30 ^{Note 4}			
	100W18 ^{Note 5}	100W18 ^{Note 5}	100W18 ^{Note 5}			100W18 ^{Note 5}

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Table 4 Load Capacities of ECOL-MEGA Reinforced AAC Panels for Privacy Walls and Fences

Product	75W37							
Bending strength	0.574	kN.m/600 mm panel			0.957	kN.m/m width		
Panel length		3.0 m	2.7 m	2.4 m	2.1 m	1.8 m	1.5 m	
Post spacing		3.1 m	2.8 m	2.5 m	2.2 m	1.9 m	1.6 m	
Panel capacity		0.85 kPa	1.05 kPa	1.33 kPa	1.74 kPa	2.36 kPa	3.40 kPa	
Classification	Pressure							
N1	0.83 kPa	OK	OK	OK	OK	OK	OK	
N2	1.15 kPa	Unsuitable	Unsuitable	OK	OK	OK	OK	
N3, C1	1.80 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK	OK	
N4, C2	2.68 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK	
N5, C3	3.94 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	
N6, C4	5.33 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	
Product	75W30 Weak direction							
Bending strength	0.436	kN.m/600 mm panel			0.727	kN.m/m width		
Panel length		3.0 m	2.7 m	2.4 m	2.1 m	1.8 m	1.5 m	
Post spacing		3.1 m	2.8 m	2.5 m	2.2 m	1.9 m	1.6 m	
Panel capacity		0.65 kPa	0.80 kPa	1.01 kPa	1.32 kPa	1.79 kPa	2.58 kPa	
Classification	Pressure							
N1	0.83 kPa	Unsuitable	Unsuitable	OK	OK	OK	OK	
N2	1.15 kPa	Unsuitable	Unsuitable	Unsuitable	OK	OK	OK	
N3, C1	1.80 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK	
N4, C2	2.68 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	
N5, C3	3.94 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	
N6, C4	5.33 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	
Product	75W30 Strong direction							
Bending strength	0.712	kN.m/600 mm panel			1.187	kN.m/m width		
Panel length		3.0 m	2.7 m	2.4 m	2.1 m	1.8 m	1.5 m	
Post spacing		3.1 m	2.8 m	2.5 m	2.2 m	1.9 m	1.6 m	
Panel capacity		1.05 kPa	1.30 kPa	1.65 kPa	2.15 kPa	2.93 kPa	4.22 kPa	
Classification	Pressure							
N1	0.83 kPa	OK ^{Note 1}	OK ^{Note 1}	OK	OK	OK	OK	
N2	1.15 kPa	Unsuitable	OK ^{Note 1}	OK ^{Note 1}	OK	OK	OK	
N3, C1	1.80 kPa	Unsuitable	Unsuitable	Unsuitable	OK ^{Note 1}	OK ^{Note 1}	OK	
N4, C2	2.68 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK ^{Note 1}	OK ^{Note 1}	
N5, C3	3.94 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK ^{Note 1}	
N6, C4	5.33 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	

Note 1: Suitable only if the reinforcement is on lee side, not facing dominant wind.

Table 4, cont'd

Product	100W18						
Bending strength	0.827	kN.m/450 mm panel		1.838	kN.m/m width		
Panel length	3.0 m	2.7 m	2.4 m	2.1 m	1.8 m	1.5 m	
Post spacing	3.1 m	2.8 m	2.5 m	2.2 m	1.9 m	1.6 m	
Panel capacity	1.53 kPa	1.88 kPa	2.35 kPa	3.04 kPa	4.07 kPa	5.74 kPa	
Classification	Pressure						
N1	0.83 kPa	OK	OK	OK	OK	OK	OK
N2	1.15 kPa	OK	OK	OK	OK	OK	OK
N3, C1	1.80 kPa	Unsuitable	OK	OK	OK	OK	OK
N4, C2	2.68 kPa	Unsuitable	Unsuitable	Unsuitable	OK	OK	OK
N5, C3	3.94 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK	OK
N6, C4	5.33 kPa	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable	OK

A4 Manufacturer and manufacturing plant(s)

One Stop Building and Hardware Pty Ltd

121 Regency Road, Croydon Park, SA 5008

Ph: 08 8340 8477

www.osbh.com.au

A5 Installation requirements

Refer to ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013), and

ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Construction Manual (Issue August 2013)

A6 Other relevant technical data

Refer to ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Technical Manual (Issue August 2013), and

ECOL-MEGA PANEL Autoclaved Aerated Concrete Wall and Floor Construction Manual (Issue August 2013)

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
NCC Vol One - BP1.1	A0.5 (a)	Combination of A2.2 a(v) & a(vi) – Engineer certificate & client published data	Documents 001, 002, 003, 004, B01, B02 & B03
NCC Vol Two - P2.1.1	1.0.5 (a)	Combination of 1.2.2 a(iii) & a(vi) – Engineer certificate & client published data	Documents 001, 002, 003, 004, B01, B02 & B04
NCC Vol One - BP1.2	A0.5 (a)	Combination of A2.2 a(v) & a(vi) – Engineer certificate & client published data	Documents 001, 002, 003, 004, B01, B02 & B05

B2 Reports

Document Reference	Author	Reference	Date	Description	NATA Registration
001	One Stop Building & Hardware	N/A	Aug 2013	Client published Technical Manual	–
002	One Stop Building & Hardware	N/A	Aug 2013	Client published Construction Manual	–
003	STAAC Walls	STOG16732	Aug 2013	Client published Technical Manual	–
004	STAAC Walls	STOG16733	Aug 2013	Client published Construction Manual	–
B01	Quasar Management Services, inc testing by BEMAC Labs	Q10121801-3	Mar 2011	Structural Test Report	1393
B02	Building Product Certification, inc testing by BEMAC Labs	B13040401-1	Apr 2013	Structural Test Report	1393
B03	Building Product Certification	0064-R6A – 50W25	Aug 2014	Structural Analysis Report	–

End of Certificate