Certificate of Conformity

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Certificate Holder:
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Certificate number: CM 30005 Rev 1

THIS TO CERTIFY THAT

NRG Greenboard™ Insulated Wall Cladding System

Type and/or use of product:

NRG Greenboard™ Insulated Wall Cladding System is an External Wall Cladding System with thermal Insulation properties.

Description of product:

NRG Greenboard™ Insulated Wall Cladding System is made of:

- Expanded polystyrene: 40, 50, 60, 75 or 100mm thick complying with Class M of AS 1366.3–1992 (R 2018), which contains Bifenthrin
- Fixed to stud framing by screws and PVC washers
- PVC beading (UV stabilized)
- 5 x 5 mm alkali resistant fibreglass mesh reinforcement
- Polymer modified render system to NRG Render Specification
- Acrylic based texture membrane coating

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), (iv), (viii), (x), (xi), (xii)**	Structural reliability	**P2.1.1 (a); (b) (i), (ii), (iii), (iv), (viii), (x), (xi), (xii); (c)**	Structural stability and resistance
	BP1.2	Structural resistance		
	FP1.4	Weatherproofing	**P2.2.2**	Weatherproofing

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).

Herve Michoux
Global-Mark Managing Director

Peter Gardner
Unrestricted Building Certifier

Date of issue: 16/05/2019

Date of expiry: 14/05/2022

	FP1.5	Rising damp	**P2.2.3**	Rising damp
Deemed-to-Satisfy Provision(s):	**Schedule 6**	Fire Hazard Properties		
	G5.2	Construction in Bushfire Prone Areas – Protection To BAL-29	**3.10.5**	Bushfire Areas To BAL-29
	J1.2	Thermal construction – general	**3.12.1.1**	Building fabric thermal insulation
	J1.5	Walls	**3.12.1.4**	External walls
State or territory variation(s):	**SA FP1.5**	Rising damp	**SA P2.2.3**	Rising damp
	NSW G5.2	Construction in Bushfire Prone Areas – Protection	**NSW P2.2.3**	Rising damp
	NSW Section J	Energy Efficiency	**NSW 3.10.5.0**	Bushfire Areas – Acceptable construction manuals
	NT Section J	Energy Efficiency	**Qld 3.10.5.0**	Bushfire Areas – Acceptable construction manuals
	Qld Section J	Energy Efficiency	**NSW 3.12**	Energy Efficiency
			NT 3.12	Energy Efficiency
			SA 3.12	Energy Efficiency
			Qld 3.12	Energy Efficiency
			Tas 3.12	Energy Efficiency
			ACT 3.12	Energy Efficiency

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

Limitations and conditions:

1. Compliance with the above BCA Provisions is subject to design and construction being carried out in accordance with the NRG Greenboard™ Specification 10th Edition (May 2017) and the following requirements:
    a. Wall thermal insulation performance shall be determined using the insulation values for NRG Greenboard™ specified in Table 1.
    b. Fastener spacings shall not exceed the specified maximum spacing for the site wind class as per Table 2, Table 3, Table 4, Table 5.
    c. Damp-proof courses complying with AS/NZS 2904:1995 (incorporating Amendment No.1 and Amendment No.2) shall be provided and the product installed above the finished ground or paving level.
    d. In bushfire areas, construction shall also be carried out in accordance with the relevant requirements of

Building classification/s:

Unrestricted

AS 3959-2018 for bushfire attack levels up to BAL-29. e. Where NRG Greenboard™ is installed, electrical installations must comply with AS/NZS 3000:2018. 2. Excludes compliance with NCC 2019 Volume One Section C: compliance for non-combustibility, fire hazard properties when used as a wall lining, fire hazard properties when used as a composite member (e.g. insulation within a wall), fire hazard properties generally, and regarding fire resistance or fire resistance levels. 3. Excludes compliance NCC 2019 Volume Two Part 3.7: compliance for non-combustibility and regarding fire resistance or fire resistance levels (FRL).	

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

See “Type and/or use of product “on page 1.

A2 Description of product

See “Description of product:” on page1

The cladding system is fixed to a stud frame, incorporating a reflective or non-reflective cavity and plasterboard lining.

A3 Product specification

Refer to NRG Greenboard™ Specification 10th Edition (May 2017).

A4 Manufacturer and manufacturing plant(s)

3/13-15 Octal St Yatala, QLD 4207

8/31 Lundberg Drive, Murwillumbah, NSW 2484

A5 Installation requirements

Product installation shall be carried out in accordance with the NRG Greenboard™ Specification 10th Edition (May 2017) by an NRG trained and competent person (having received the NRG Greenboard™ Certificate of Competence) under the direction of a Builder.

An Application for NRG CodeMark Certification Form shall be completed and signed by the Supplier, Builder and Installer. This form must be signed by the Builder, and submitted to NRG, with the copy issued to the owner.

Fixing of NRG Greenboard™ to framing shall be in accordance with Tables 2 to 5.

A6 Other relevant technical data

Any referenced documents within the technical literature identified in Appendix A, A3 and Appendix A, A5.
In accordance with NCC Volume One Schedule 6, NRG Greenboard achieves the following fire hazard properties (as an insulation material), tested in accordance with AS/NZS 1530.3:1999:

Ignitability Index -	6
Spread of Flame Index -	0
Heat Evolved Index -	1
Smoke Developed Index -	4

Thermal insulation for use in walls (assessed based on ASTM C518, referenced in AS/NZS 4859.1:2018).

The thermal resistances in Table 1 are of the NRG Greenboard™ insulation alone (i.e. corresponding to “added insulation” as used in the NCC). The total thermal resistance of a wall system is the sum of values for the external air film (0.04), external cladding, air space or cavity (if applicable), NRG Greenboard™ insulation (from Table 1), internal cladding, and internal air space (0.12).

The calculated thermal resistance values do not account for thermal bridging at studs and the like.

Table 1: Thermal Resistance

NRG Greenboard Thickness (mm)	Thermal Resistance (m^2.K/W)	Equivalent R rating
40	1.03	1.03
50	1.28	1.28
60	1.54	1.54
75	1.93	1.93
100	2.57	2.57

Table 2: NRG Greenboard™ Cladding Fixing Requirements – General Areas								
40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	450	300	N1	450	300	N1	450	300
N2	450	300	N2	450	300	N2	450	300
N3	450	300	N3	450	300	N3	450	300
N4	450	300	N4	450	300	N4	450	300
N5	450	200	N5	450	200	N5	450	275
C1	450	300	C1	450	300	C1	450	300
C2	450	200	C2	450	200	C2	450	250
C3	450	130	C3	450	130	C3	450	175
C4	450	90	C4	450	90	C4	450	115

Table 3: NRG Greenboard™ Cladding Fixing Requirements – General Areas								
40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	600	300	N1	600	300	N1	600	300
N2	600	300	N2	600	300	N2	600	300
N3	600	250	N3	600	250	N3	600	250
N4	600	225	N4	600	225	,	600	225
N5	600	150	N5	600	150	N5	600	200
C1	600	250	C1	600	250	C1	600	250
C2	600	150	C2	600	150	C2	600	250
C3	600	95	C3	600	95	C3	600	130
C4	600	65	C4	600	65	C4	600	85

Table 4: NRG Greenboard™ Cladding Fixing Requirements – Within 1,200 mm of Edges								
40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	450	300	N1	450	300	N1	450	300
N2	450	300	N2	450	300	N2	450	300
N3	450	250	N3	450	250	N3	450	300
N4	450	225	N4	450	225	N4	450	230
N5	450	150	N5	450	150	N5	450	160
C1	450	250	C1	450	250	C1	450	240
C2	450	150	C2	450	150	C2	450	160
C3	450	95	C3	450	95	C3	450	100
C4	450	65	C4	450	65	C4	450	70

Table 5: NRG Greenboard™ Cladding Fixing Requirements – Within 1,200 mm of Edges								
40mm NRG Greenboard™ Cladding			50-60mm NRG Greenboard™ Cladding			75-100mm NRG Greenboard™ Cladding		
Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)	Wind Classification	Stud Spacing (mm)	Fastener Spacing Vertically (mm)
N1	600	250	N1	600	250	N1	600	250
N2	600	225	N2	600	225	N2	600	225
N3	600	210	N3	600	210	N3	600	210
N4	600	140	N4	600	140	N4	600	170
N5	600	90	N5	600	90	N5	600	120
C1	600	140	C1	600	140	C1	600	160
C2	600	90	C2	600	90	C2	600	120
C3	600	60	C3	600	60	C3	600	75
C4	600	45	C4	600	45	C4	600	50

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The following assessment methods have been used to determine compliance with NCC 2019:

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
Volume One			
Volume One BP1.1 (a); (b) (i), (ii), (iii), (iv), (viii), (x), (xi), (xii)	Volume One A2.2(2)(a)	Volume One A5.2(1)(d) Report issued by a registered testing authority	Item 3
	Volume One A2.2(2)(a)	Volume One A5.2(1)(e) Report issued by a professional engineer	Items 8, 9, 10, 11, 12 and 13
Volume One BP1.2	Volume One A2.2(2)(a)	Volume One A5.2(1)(d) Report issued by a registered testing authority	Items 3 and 8
	Volume One A2.2(2)(a)	Volume One A5.2(1)(e) Report issued by a professional engineer	Items 9, 10, 11, 12 and 13
Volume One FP1.4	Volume One A2.2(2)(a)	Volume One A5.2(1)(e) Report issued by a professional engineer	Items 9 and 11
Volume One FP1.5	Volume One A2.2(2)(d)	Comparison with the Deemed-to-Satisfy Provisions in Volume One F1.9 and F1.10	Item 14
	Volume One A2.2(2)(a)	Volume One A5.2(1)(e) Report issued by a professional engineer	Items 9 and 11
Volume One Schedule 6	Volume One A2.3(2)(a)	Volume One A5.2(1)(d) Report issued by a registered testing authority	Items 1, 2, 5, 6, and 7
Volume One G5.2	Volume One A2.3(2)(a)	Volume One A5.2(1)(d) Report issued by a registered testing authority	Items 1, 2, 5, 6, and 7
Volume One J1.2	Volume One A2.3(2)(a)	Volume One A5.2(1)(d) Report issued by a registered testing authority	Item 4
Volume One J1.5	Volume One A2.3(2)(a)	Volume One A5.2(1)(d) Report issued by a registered testing authority	Item 4
Volume Two			
Volume Two P2.1.1 (a); (b) (i), (ii), (iii), (iv), (viii), (x), (xi), (xii); (c)	Volume Two A2.2(2)(a)	Volume Two A5.2(1)(d) Report issued by a registered testing authority	Item 3
	Volume Two A2.2(2)(a)	Volume Two A5.2(1)(e) Report issued by a professional engineer	Items 8, 9, 10, 11, 12 and 13
Volume Two P2.2.2	Volume Two A2.2(2)(d)	Comparison with the Deemed-to-Satisfy Provisions in Volume Two Part 3.5.4	Item 14
	Volume Two A2.2(2)(a)	Volume Two A5.2(1)(e) Report issued by a professional engineer	Items 9 and 11
Volume Two P2.2.3	Volume Two A2.2(2)(d)	Comparison with the Deemed-to-Satisfy Provisions in Volume Two Part 3.4	Item 14
	Volume Two A2.2(2)(a)	Volume Two A5.2(1)(e) Report issued by a professional engineer	Items 9 and 11
Volume Two 3.10.5	Volume Two A2.3(2)(a)	Volume Two A5.2(1)(d) Report issued by a registered testing authority	Items 1, 2, 5, 6, and 7
Volume Two 3.12.1.1	Volume Two A2.3(2)(a)	Volume Two A5.2(1)(d) Report issued by a registered testing authority	Item 4
Volume Two 3.12.1.4	Volume Two A2.3(2)(a)	Volume Two A5.2(1)(d) Report issued by a registered testing authority	Item 4

B2 Reports

The following reports have been used as evidence to determine compliance with NCC 2019:

Ref	Author	Reference	Date	Description	NATA Registration
1	Australian Wool Testing Authority (AWTA) Product Testing	Test Report Number: 7-566170-CQ	4/5/2009	AS/NZS 1530.3:1999, "Simultaneous determination of Ignitability, Flame Propagation, Heat Release and Smoke Release"	Accreditation No. 1356
2	Australian Wool Testing Authority (AWTA) Product Testing	Test Report Number: 7-586446-CQ	8/8/2012	AS/NZS 3837:1998, "Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter"	Accreditation No. 1356
3	BRANZ	Report No.: DC 1869	22/2/2010	"Testing of NRG Building Systems Pty Ltd EPS Specimens"	ilac-MRA via. IANZ Accreditation No. 918
4	BRANZ	Report No.: DI 0031/01	22/4/2009	"Thermal Resistance of an Insulation Sample"	ilac-MRA via. IANZ Accreditation No. 37
5	Exova Warringtonfire	EWFA Report No.: 2581501.1	Test Date: 31/5/2011	"Full scale bushfire external wall test of a framed wall system in accordance with AS1530.8.1-2007"	Accreditation No. 3277 Site No. 3270
6	Exova Warringtonfire	EWFA Report No.: 26733-04	Issue Date: 30/4/2017 Expiry Date: 30/4/2022	"The bushfire resistance performance of a framed wall system if tested in accordance with AS1530.8.1-2007 as appropriate for external walls"	Accreditation No. 3277 Site No. 3270
7	Exova Warringtonfire	Certificate No.: SFC 26733-04	30/4/2017 (valid until 30/4/2022)	EWFA Certificate of Assessment	Accreditation No. 3277 Site No. 3270
8	Structural Testing Services (STS)	Test ID #: STS-10-258-P	3/12/2010	"Screw Pullout Test Report"	Not applicable
9	SUMMERMORE Pty Ltd Ron Bell	-	3/11/2011	"Report on NRG Greenboard™ Evidence of Suitability"	Not applicable
10	SUMMERMORE Pty Ltd Ron Bell	-	16/3/2012	"Report on Impact Testing of NRG Board"	Not applicable
11	SUMMERMORE Pty Ltd Ron Bell	-	29/4/2012	"NRG Greenboard Cladding"	Not applicable
12	SUMMERMORE Pty Ltd Ron Bell	-	12/11/2012	"Report on Bending Testing of NRG Green Board Cladding"	Not applicable
13	SUMMERMORE Pty Ltd Ron Bell	17-12560	4/3/2017	"Report on NRG Greenboard™ Cladding Fixing Requirements"	Not applicable
14	NRG	-	May 2017	NRG Greenboard™ Specification 10th Edition (May 2017)	Not applicable