Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. #HR-2ZOYXE-03

Generated on 03 Apr 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	Unit 01, 106 Sandakan Road, Revesby Heights, NSW, 2212
Lot/DP	LOt 4165 DP 217130
NCC Class*	1a
Floor/all Floors	1 of 4 floors
Type	New

Plans

Main Plan	106 Sandakan
Prepared by	Katalyst Construction

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	238.7	Suburban	
Unconditioned*	16.1	**NatHERS climate zone**	
Total	330.5	56 - Mascot AMO	
Garage	75.7		

Accredited assessor

Name	Eric Ching Hing Lam
Business name	Elam Eco Building Design
Email	elam4arch@gmail.com
Phone	+61 416271518
Accreditation No.	20348
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

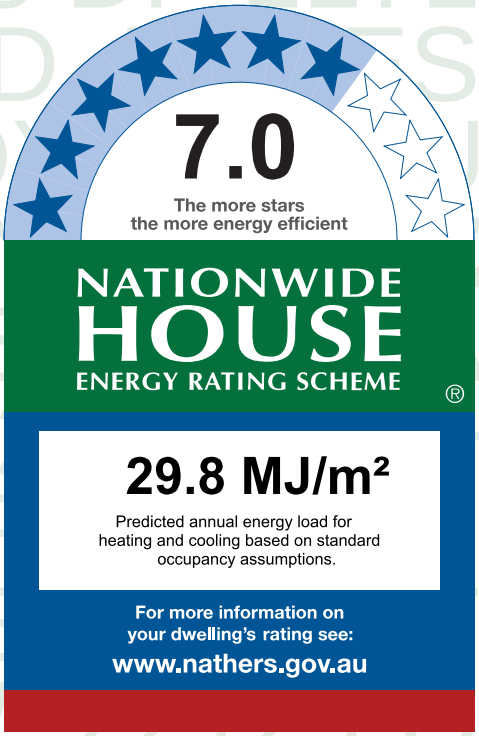
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	17.9	11.9
Load limits	25	18

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com.au/pdf/HR-2ZOYXE-03. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'External wall type table'* on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certifi cate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area (m²)
BM: Garage	Garage	75.67
LGF: WC	Day Time	2.48
LGF: Entry/ Lounge	Day Time	48.73
GF: Master Bed	Bedroom	23.66
GF: Ensuite M Bed	Night Time	4.75
GF: Laundry	Unconditioned	4.81
GF: Powder	Unconditioned	3.60
GF: Kitchen/ Pantry	Kitchen/Living	43.02
GF: Living / Dining	Living	36.47
FF Bed 5	Bedroom	13.12
FF Bed 4	Bedroom	12.27
FF Ensuite Bed 2	Night Time	3.08
FF Bed 2/WIR	Bedroom	18.97
FF Bed 3	Bedroom	13.47
FF Bathroom	Unconditioned	7.68
FF Family	Living	37.96

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.40	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.40	0.58	0.55	0.61
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

* Refer to glossary.

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
FF Bed 2/WIR	ALM-004-03 A	SD8a	2400	1570	Sliding Door	45	SW	None
FF Bed 2/WIR	ALM-001-03 A	W13	900	2410	Awning	45	SE	None
FF Bed 3	ALM-004-03 A	SD09a	2400	1570	Sliding Door	45	SW	None
FF Bed 4	ALM-001-03 A	W11a	900	2410	Awning	45	SE	None
FF Bed 5	ALM-001-03 A	W10a	900	2410	Awning	45	SE	None
FF Bed 5	ALM-004-03 A	SD7a	2400	1810	Sliding Door	45	NE	None
FF Ensuite Bed 2	ALM-001-03 A	W12a	900	610	Awning	90	SE	None
FF Family	ALM-002-03 A	W8a	2400	250	Fixed	0	NE	None
FF Family	ALM-002-03 A	W8b	2400	150	Fixed	0	ENE	None
FF Family	ALM-002-03 A	W9b	2400	194	Fixed	0	E	None
FF Family	ALM-002-03 A	W9a	2400	206	Fixed	0	ESE	None
FF Family	ALM-004-03 A	SD6a	2400	1810	Sliding Door	45	SE	None
GF: Ensuite M Bed	ALM-001-03 A	W4a	900	1810	Awning	90	NE	None
GF: Kitchen/ Pantry	ALM-002-03 A	W6a	2400	2800	Fixed	0	SE	None
GF: Laundry	ALM-001-03 A	D04a	2400	900	Hinged Door	90	SE	None
GF: Living / Dining	ALM-004-03 A	SD5a	2400	6000	Sliding Door	60	SW	None
GF: Master Bed	ALM-004-03 A	SD3a	2400	3100	Sliding Door	45	NE	None
GF: Master Bed	ALM-001-03 A	W5a	900	2400	Awning	45	SE	None
GF: Powder	ALM-002-03 A	W7a	1200	850	Double Hung	45	SE	None
LGF: Entry/ Lounge	ALM-002-03 A	W2a	2400	900	Fixed	0	NE	None
LGF: Entry/ Lounge	ALM-004-03 A	SD1a	2400	2800	Sliding Door	45	NE	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
LGF: Entry/ Lounge	ALM-002-03 A	W1a	2400	900	Fixed	0	NE	None
LGF: Entry/ Lounge	ALM-002-03 A	W3a	2400	2800	Fixed	0	SE	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
VEL-011-01 W	FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.58	0.24	0.23	0.25

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
FF Bathroom	VEL-011-01 W	SKYRW 03	0	764	1424	NW	None	None
FF Family	VEL-011-01 W	SKYRW 01	0	893.90	893.90	NE	None	None
FF Family	VEL-011-01 W	SKYRW 02	0	849.27	849.27	S	None	None

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
BM: Garage	2400	4300	90	NE
LGF: Entry/ Lounge	2400	1200	90	NE

* Refer to glossary.

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
110mm Cavity wall: soil	110mm Cavity Brick: soil	0.50	Medium	0.18	Yes
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.50	Yes
CAV-BRICK-110-110-PB	Cavity Brick Wall - 110mm/110mm Plasterboard Internally	0.50	Medium	0.18	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BM: Garage	110mm Cavity wall: soil	2700	6699	SW		Yes
BM: Garage	CAV-BRICK-110-110-PB	2700	6699	NE		Yes
BM: Garage	110mm Cavity wall: soil	2700	11295	SE		No
BM: Garage	CAV-BRICK-110-110-PB	2700	998	NW		Yes
FF Bed 2/WIR	BV-REFL-CAV	2800	3808	SW	519	Yes
FF Bed 2/WIR	BV-REFL-CAV	2800	4099	SE		No
FF Bed 3	BV-REFL-CAV	2800	3712	SW	519	Yes
FF Bed 4	BV-REFL-CAV	2800	3222	SE		No
FF Bed 4	BV-REFL-CAV	2800	902	NE		Yes
FF Bed 5	BV-REFL-CAV	2800	3802	SE		Yes
FF Bed 5	BV-REFL-CAV	2800	3262	NE	3806	Yes
FF Ensuite Bed 2	BV-REFL-CAV	2800	1711	SE		No
FF Family	BV-REFL-CAV	2800	250	NE		No
FF Family	BV-REFL-CAV	2800	197	ENE		No
FF Family	BV-REFL-CAV	2800	166	E		Yes
FF Family	BV-REFL-CAV	2800	395	E	2330	Yes
FF Family	BV-REFL-CAV	2800	208	ESE	2815	Yes
FF Family	BV-REFL-CAV	2800	2947	SE	3105	Yes
FF Family	BV-REFL-CAV	2800	2767	NE		No
FF Family	BV-REFL-CAV	2800	998	NW		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
GF: Ensuite M Bed	CAV-BRICK-110-110-PB	3300	2501	NE		Yes
GF: Ensuite M Bed	CAV-BRICK-110-110-PB	3300	998	NW		Yes
GF: Kitchen/ Pantry	CAV-BRICK-110-110-PB	3300	3372	SE		Yes
GF: Laundry	CAV-BRICK-110-110-PB	3300	1930	NE		Yes
GF: Laundry	CAV-BRICK-110-110-PB	3300	2491	SE		Yes
GF: Living / Dining	CAV-BRICK-110-110-PB	2760	7582	SW	3173	Yes
GF: Living / Dining	CAV-BRICK-110-110-PB	2760	5292	SE		Yes
GF: Living / Dining	CAV-BRICK-110-110-PB	2760	879	NE		Yes
GF: Master Bed	CAV-BRICK-110-110-PB	3300	1930	SW		Yes
GF: Master Bed	CAV-BRICK-110-110-PB	3300	4069	NE		Yes
GF: Master Bed	CAV-BRICK-110-110-PB	3300	4793	SE		Yes
GF: Powder	CAV-BRICK-110-110-PB	3300	1871	SE		Yes
LGF: Entry/ Lounge	CAV-BRICK-110-110-PB	3300	4878	NE		Yes
LGF: Entry/ Lounge	CAV-BRICK-110-110-PB	3300	5483	SE		Yes
LGF: Entry/ Lounge	CAV-BRICK-110-110-PB	3300	1820	NE		Yes
LGF: Entry/ Lounge	110mm Cavity wall: soil	3300	2158	SE		No
LGF: Entry/ Lounge	110mm Cavity wall: soil	3300	4859	SW		Yes
LGF: Entry/ Lounge	CAV-BRICK-110-110-PB	3300	998	NW		Yes
LGF: WC	110mm Cavity wall: soil	3300	1721	SW		Yes
LGF: WC	110mm Cavity wall: soil	3300	1440	SE		No

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
CAV-BRICK-110-110-PB	Cavity Brick Wall - 110mm/110mm Plasterboard Internally	152.3	0.18
INT-PB	Internal Plasterboard Stud Wall	87.3	0.00
SGL-BRICK-110-Plaster Both side	Single 110mm Brick Wall - plasterboard Both Sides	62.1	0.18

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BM: Garage	CSOG-100: Concrete Slab on Ground (100mm)	75.7	N/A	0.00	Timber (12mm)
FF Bathroom	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	7.7	N/A	0.00	Timber (12mm)
FF Bed 2/WIR	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	18.9	N/A	0.00	Timber (12mm)
FF Bed 3	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	13.4	N/A	0.00	Timber (12mm)
FF Bed 4	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	12.3	N/A	0.00	Timber (12mm)
FF Bed 5	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	13.0	N/A	0.00	Timber (12mm)
FF Ensuite Bed 2	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	3.1	N/A	0.00	Timber (12mm)
FF Family	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	38.0	N/A	0.00	Timber (12mm)
GF: Ensuite M Bed	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	4.8	N/A	0.00	Tile (10mm)
GF: Kitchen/ Pantry	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	17.1	N/A	0.00	Timber (12mm)
GF: Kitchen/ Pantry	CSOG-100: Concrete Slab on Ground (100mm)	25.9	N/A	0.00	Timber (12mm)
GF: Laundry	CSOG-100: Concrete Slab on Ground (100mm)	4.8	N/A	0.00	Timber (12mm)
GF: Living / Dining	CSOG-100: Concrete Slab on Ground (100mm)	36.5	N/A	0.00	Timber (12mm)
GF: Master Bed	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	16.0	N/A	0.00	Timber (12mm)
GF: Master Bed	CSOG-100: Concrete Slab on Ground (100mm)	7.7	N/A	0.00	Timber (12mm)
GF: Powder	CSOG-100: Concrete Slab on Ground (100mm)	3.6	N/A	0.00	Timber (12mm)
LGF: Entry/ Lounge	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	48.7	N/A	0.00	Timber (12mm)
LGF: WC	SUSP-CONC-100-LINED: Suspended Concrete Slab Floor (100mm) - Lined Below	2.5	N/A	0.00	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BM: Garage	SLAB-100-CEIL-01: Concrete Slab (100mm) with Suspended PB Ceiling	5.00	No
FF Bathroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
FF Bed 2/WIR	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
FF Bed 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
FF Bed 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
FF Bed 5	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
FF Ensuite Bed 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
FF Family	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
GF: Ensuite M Bed	SLAB-100-CEIL-01: Concrete Slab (100mm) with Suspended PB Ceiling	5.00	No
GF: Kitchen/ Pantry	SLAB-100-CEIL-01: Concrete Slab (100mm) with Suspended PB Ceiling	5.00	No
GF: Master Bed	SLAB-100-CEIL-01: Concrete Slab (100mm) with Suspended PB Ceiling	5.00	No
LGF: WC	SLAB-100-CEIL-01: Concrete Slab (100mm) with Suspended PB Ceiling	5.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
FF Ensuite Bed 2	1	Exhaust Fan	350	Sealed
GF: Ensuite M Bed	1	Exhaust Fan	350	Sealed
GF: Kitchen/ Pantry	1	Exhaust Fan	350	Sealed
GF: Laundry	1	Exhaust Fan	350	Sealed
GF: Powder	1	Exhaust Fan	350	Sealed
LGF: WC	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	1.30	0.50	Medium
SLAB-100-CEIL-01: Concrete Slab (100mm) with Suspended PB Ceiling	0.00	0.50	Medium

* Refer to glossary.

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)

None

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.