Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-5SUF9I-01

Generated on 05 Dec 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	2A EDGECLIFFE ESPLANADE, SEAFORTH, NSW, 2092
Lot/DP	A/DP360318
NCC Class*	1a
Floor/all Floors	1 of 3 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	189.2	Suburban	
Unconditioned*	8.3	**NatHERS climate zone**	
Total	224.0	56 - Mascot AMO	
Garage	26.6		

Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
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

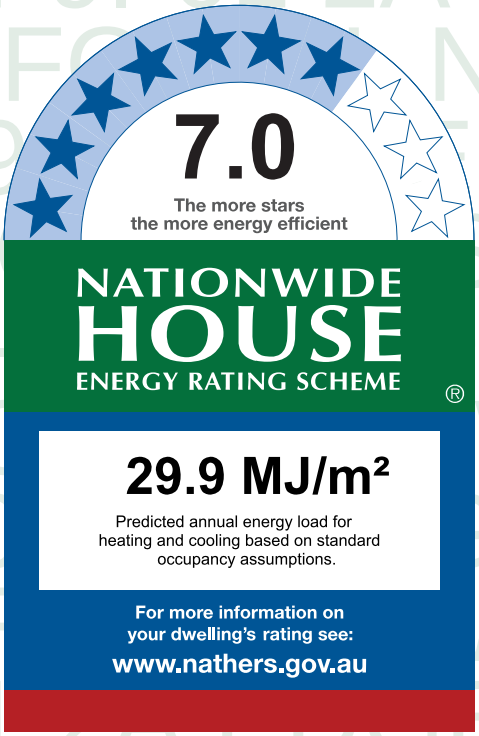
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	13.5	16.5
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-5SUF9I-01. 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)
Garage	Garage	26.56
Laundry	Unconditioned	5.29
Hallway GF	Day Time	7.02
PDR	Unconditioned	2.99
Hallway LVL1	Day Time	11.50
Ensuite 1	Night Time	6.78
WIR 1	Night Time	4.48
Master WIR	Night Time	6.99
Master Ensuite	Night Time	6.16
Bath	Day Time	5.05
Master Bedroom	Bedroom	18.11
Bedroom 3	Bedroom	12.07
Bedroom 2	Bedroom	12.04
Bedroom 1	Bedroom	13.95
Hallway LVL2	Day Time	19.69
Kitchen/Living/Dining	Kitchen/Living	71.39

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
ATB-005-03 B	Al Thermally Broken A DG Argon Fill High Solar Gain low-E - Clear	2.91	0.44	0.42	0.46
ATB-006-03 B	Al Thermally Broken B DG Argon Fill High Solar Gain low-E - Clear	2.90	0.51	0.48	0.54

* 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*
Bedroom 1	ATB-006-03 B	W10	2940	2985	Sliding Door	45	S	None
Bedroom 1	ATB-006-03 B	W09	2940	1265	Fixed	0	W	None
Bedroom 2	ATB-006-03 B	W11	2940	2985	Sliding Door	45	S	None
Bedroom 3	ATB-006-03 B	W12	2940	2985	Sliding Door	45	S	None
Ensuite 1	ATB-006-03 B	W20-C	600	1240	Fixed	0	N	None
Ensuite 1	ATB-005-03 B	W20-B	600	1240	Awning	90	N	None
Ensuite 1	ATB-006-03 B	W20-A	600	1240	Fixed	0	N	None
Hallway LVL1	ATB-006-03 B	W06	3040	1000	Fixed	0	N	None
Hallway LVL1	ATB-006-03 B	W05	2560	900	Fixed	0	E	None
Hallway LVL2	ATB-006-03 B	W19	600	6080	Fixed	0	N	None
Kitchen/Living/Dining	ATB-006-03 B	W04-B	3285	3530	Sliding Door	45	E	None
Kitchen/Living/Dining	ATB-006-03 B	W04-A	3285	1250	Fixed	0	E	None
Kitchen/Living/Dining	ATB-006-03 B	W03	3285	5420	Sliding Door	45	S	None
Kitchen/Living/Dining	ATB-006-03 B	W02	3285	6270	Fixed	0	S	None
Kitchen/Living/Dining	ATB-006-03 B	W01	3285	1215	Fixed	0	W	None
Kitchen/Living/Dining	ATB-006-03 B	W08	3100	400	Fixed	0	W	None
Master Bedroom	ATB-006-03 B	W14	500	500	Fixed	0	E	None
Master Bedroom	ATB-006-03 B	W15	500	500	Fixed	0	E	None
Master Bedroom	ATB-006-03 B	W13	2940	3640	Fixed	0	S	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*
Master Ensuite	ATB-006-03 B	W18	600	2650	Fixed	0	N	None
Master Ensuite	ATB-006-03 B	W17	500	1860	Sliding	45	E	None
Master WIR	ATB-006-03 B	W16	900	1250	Fixed	0	E	None
PDR	ATB-005-03 B	W07	900	700	Awning	90	W	None
WIR 1	ATB-006-03 B	W21	900	1200	Fixed	0	W	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
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
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
Garage	2500	4000	90	E

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway GF	2460	900	90	E
Kitchen/Living/Dining	3100	1225	90	W
Laundry	2460	920	90	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.62	Dark (Concrete)	2.50	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.33	Light (Classic Cream)	2.50	Yes
BV-REFL-CAV-C	Brick Veneer Stud Wall with Reflective Sarking	0.65	Dark (Brick (Red))	2.50	Yes
BV-REFL-CAV-D	Brick Veneer Stud Wall with Reflective Sarking	0.35	Light (Surfmist Matt)	2.50	Yes
BV-REFL-CAV-E	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium (Galvanised Steel)	2.50	Yes
CONCBLOCK-190-FCF-EXP-A	Concrete Block 190mm Fully Core-Filled - Exposed	0.50	Medium	0.00	No
CONCBLOCK-190-FCF-EXP-B	Concrete Block 190mm Fully Core-Filled - Exposed	0.50	Medium (Galvanised Steel)	0.00	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bedroom 1	BV-REFL-CAV-E	3200	2991	S	2312	Yes
Bedroom 1	BV-REFL-CAV-A	3200	4032	W	1059	Yes
Bedroom 2	CONCBLOCK-190-FCF-EXP-B	3200	2988	S	2388	Yes
Bedroom 3	BV-REFL-CAV-E	3200	2989	S	2300	Yes
Ensuite 1	BV-REFL-CAV-C	3200	320	SW	3109	Yes
Ensuite 1	BV-REFL-CAV-C	3200	226	WSW	1986	Yes
Ensuite 1	BV-REFL-CAV-C	3200	1313	W	328	No
Ensuite 1	BV-REFL-CAV-A	3200	3722	N	565	Yes
Ensuite 1	BV-REFL-CAV-C	3200	351	S	3081	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Garage	BV-REFL-CAV-A	2800	5975	N		Yes
Garage	BV-REFL-CAV-B	2800	4445	E	1471	Yes
Garage	CONCBLOCK-190-FCF-EXP-A	2800	5975	S		No
Hallway GF	CONCBLOCK-190-FCF-EXP-A	2800	2487	W		No
Hallway GF	CONCBLOCK-190-FCF-EXP-A	2800	1290	S		No
Hallway GF	CONCBLOCK-190-FCF-EXP-A	2800	1315	WSW		No
Hallway GF	CONCBLOCK-190-FCF-EXP-A	2800	2962	N		No
Hallway GF	BV-REFL-CAV-A	2800	2209	E		Yes
Hallway GF	BV-REFL-CAV-A	2800	775	N		Yes
Hallway LVL1	BV-REFL-CAV-A	3300	8433	N		Yes
Hallway LVL1	BV-REFL-CAV-D	3300	1949	E		Yes
Hallway LVL2	BV-REFL-CAV-A	3200	6089	N	565	Yes
Kitchen/Living/Dining	BV-REFL-CAV-D	3300	5255	E	1706	Yes
Kitchen/Living/Dining	BV-REFL-CAV-D	3300	5672	S	2296	Yes
Kitchen/Living/Dining	BV-REFL-CAV-D	3600	1066	E	7378	Yes
Kitchen/Living/Dining	BV-REFL-CAV-D	3600	6273	S	1230	Yes
Kitchen/Living/Dining	BV-REFL-CAV-A	3600	4318	W	538	Yes
Kitchen/Living/Dining	BV-REFL-CAV-A	3600	1499	N	3070	Yes
Kitchen/Living/Dining	BV-REFL-CAV-A	3300	2318	W	2037	Yes
Laundry	BV-REFL-CAV-B	2800	1880	S	2961	Yes
Laundry	CONCBLOCK-190-FCF-EXP-A	2800	2816	W		No
Master Bedroom	BV-REFL-CAV-D	3200	4238	E	1601	Yes
Master Bedroom	BV-REFL-CAV-E	3200	3646	S	1470	Yes
Master Bedroom	BV-REFL-CAV-B	3200	838	W	10523	Yes
Master Bedroom	BV-REFL-CAV-B	3200	169	S		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Master Ensuite	BV-REFL-CAV-A	3200	2651	N	565	Yes
Master Ensuite	BV-REFL-CAV-D	3200	2103	E	541	Yes
Master WIR	BV-REFL-CAV-D	3200	2582	E	1601	Yes
Master WIR	BV-REFL-CAV-C	3200	1164	N	471	Yes
PDR	BV-REFL-CAV-A	3300	1906	N		Yes
PDR	BV-REFL-CAV-C	3300	1571	W	2256	Yes
WIR 1	BV-REFL-CAV-A	3200	2380	W	1059	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	172.8	2.50

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	5.0	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	14.0	N/A	0.00	Carpet
Bedroom 2	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	12.0	N/A	0.00	Carpet
Bedroom 3	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	8.9	N/A	0.00	Carpet
Bedroom 3	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	3.1	N/A	2.50	Carpet
Ensuite 1	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	3.1	N/A	0.00	Tile (8mm)
Ensuite 1	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	3.7	N/A	2.50	Tile (8mm)
Garage	CSOG-200: Concrete Slab on Ground (200mm)	26.6	N/A	2.50	Exposed
Hallway GF	CSOG-200: Concrete Slab on Ground (200mm)	7.0	N/A	2.50	Timber (12mm)
Hallway LVL1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.0	N/A	0.00	Timber (12mm)
Hallway LVL1	CSOG-200: Concrete Slab on Ground (200mm)	7.5	N/A	2.50	Timber (12mm)
Hallway LVL2	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	19.6	N/A	0.00	Timber (12mm)

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living/Dining	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.0	N/A	0.00	Timber (12mm)
Kitchen/Living/Dining	CSOG-200: Concrete Slab on Ground (200mm)	66.3	N/A	2.50	Timber (12mm)
Laundry	CSOG-200: Concrete Slab on Ground (200mm)	5.3	N/A	2.50	Timber (12mm)
Master Bedroom	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	8.3	N/A	0.00	Carpet
Master Bedroom	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	9.8	N/A	2.50	Carpet
Master Ensuite	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	6.1	N/A	0.00	Tile (8mm)
Master WIR	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	4.0	N/A	0.00	Carpet
Master WIR	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	3.0	N/A	2.50	Carpet
PDR	CSOG-200: Concrete Slab on Ground (200mm)	3.0	N/A	2.50	Tile (8mm)
WIR 1	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	1.2	N/A	0.00	Carpet
WIR 1	SUSP-CONC-300: Suspended Concrete Slab Floor (300mm)	3.3	N/A	2.50	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Bedroom 1	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Bedroom 2	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Bedroom 3	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Ensuite 1	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Garage	SLAB-150-EXP-01: Concrete Slab (150mm) with Exposed Concrete Ceiling	7.00	No
Hallway GF	SLAB-150-EXP-01: Concrete Slab (150mm) with Exposed Concrete Ceiling	7.00	No
Hallway LVL2	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Laundry	SLAB-150-EXP-01: Concrete Slab (150mm) with Exposed Concrete Ceiling	7.00	No
Master Bedroom	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
Master Ensuite	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Master WIR	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes
WIR 1	FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	7.00	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bath	1	Exhaust Fan	400	Sealed
Ensuite 1	1	Exhaust Fan	400	Sealed
Kitchen/Living/Dining	1	Exhaust Fan	400	Sealed
Laundry	1	Exhaust Fan	400	Sealed
Master Ensuite	1	Exhaust Fan	400	Sealed
PDR	1	Exhaust Fan	400	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Bedroom 1	1	1200
Bedroom 2	1	1200
Bedroom 3	1	1200
Kitchen/Living/Dining	2	1200
Master Bedroom	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
FLAT-03: Flat Framed / Skillion Tile Roof & Flat PB Ceiling	2.30	0.33	Light (Surfmist)
SLAB-150-EXP-01: Concrete Slab (150mm) with Exposed Concrete Ceiling	1.30	0.50	Medium

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				

* Refer to glossary.

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.