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

Generated on 21 Nov 2023 using Hero 3.1.0.6

Property

Address	113A, 113-115 Faraday Rd, Padstow, NSW, 2211
Lot/DP	4/19247
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	Job No. 1349 DA, 09/11/23
Prepared by	Niche Home Designs

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	187.7	Suburban
Unconditioned*	19.8	**NatHERS climate zone**
Total	225.7	56 - Mascot AMO
Garage	18.2	

Accredited assessor

Name	Peter Barlow
Business name	Barlow Energy Efficiency Services
Email	bees1@optusnet.com.au
Phone	+61 297057097
Accreditation No.	20045
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

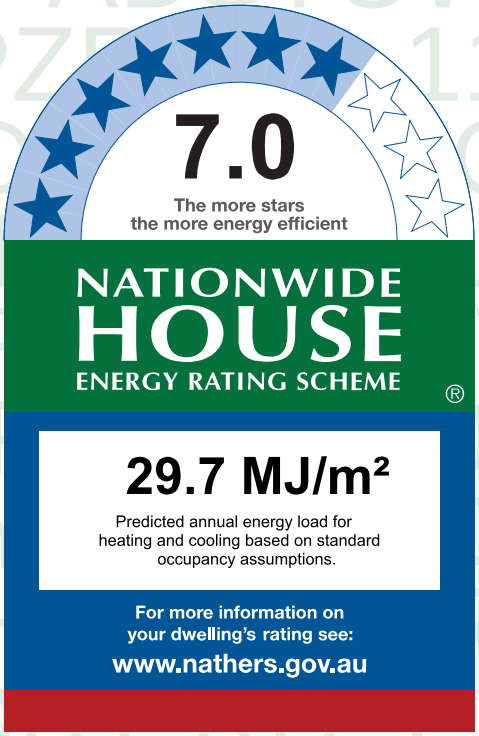
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	22.0	7.7
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-FPPZRT-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.

Additional Notes

No lighting plan. Sealed LEDs added @ 4 per 10 sqm

Room *schedule*

Room	Zone Type	Area (m²)
Garage	Garage	18.18
Bed 2	Bedroom	13.32
Powder	Unconditioned	7.37
Laundry	Unconditioned	7.01
Entry/Stair	Day Time	21.07
Pantry	Day Time	5.90
Hall Gd	Day Time	8.04
Kitchen/Dining/Lounge	Kitchen/Living	55.07
Bed 3	Bedroom	12.89
Bath 1st	Unconditioned	5.43
Bed 4	Bedroom	12.79
Ensuite 1	Night Time	8.69
WIR 1	Night Time	8.41
Study	Day Time	7.89
Bed 1	Bedroom	16.93
Hall 1st	Day Time	16.71

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*
Bath 1st	ATB-005-03 B	W15	600	1330	Awning	90	S	None
Bed 1	ATB-005-03 B	W20	860	3010	Awning	90	S	None
Bed 1	ATB-006-03 B	W21	2400	2530	Sliding Door	45	E	None
Bed 2	ATB-005-03 B	W02	860	2530	Awning	90	S	None
Bed 3	ATB-006-03 B	W25	1370	600	Fixed	0	S	None
Bed 3	ATB-005-03 B	W14	1370	1210	Awning	90	W	None
Bed 3	ATB-006-03 B	W23	1370	600	Fixed	0	W	None
Bed 3	ATB-006-03 B	W24	1370	600	Fixed	0	W	None
Bed 3	ATB-006-03 B	W22	1370	600	Fixed	0	N	None
Bed 4	ATB-005-03 B	W16	860	2410	Awning	90	S	None
Ensuite 1	ATB-005-03 B	W18	1200	1600	Awning	90	S	None
Garage	ATB-005-03 B	W01	860	3610	Awning	0	S	None
Kitchen/Dining/Lounge	ATB-006-03 B	W06	690	2770	Fixed	0	S	None
Kitchen/Dining/Lounge	ATB-005-03 B	W07	690	2885	Awning	90	S	None
Kitchen/Dining/Lounge	ATB-005-03 B	W08	690	2890	Awning	90	S	None
Kitchen/Dining/Lounge	ATB-006-03 B	W09	2400	3970	Sliding Door	60	E	None
Kitchen/Dining/Lounge	ATB-005-03 B	W11	800	1997	Awning	90	N	None
Kitchen/Dining/Lounge	ATB-006-03 B	W12	650	3200	Fixed	0	E	None
Laundry	ATB-005-03 B	W04	860	1090	Awning	90	S	None
Pantry	ATB-005-03 B	W05	690	1210	Awning	90	S	None
Powder	ATB-005-03 B	W03	600	1210	Awning	90	S	None
Study	ATB-005-03 B	W17	1200	730	Awning	90	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*
Entry/Stair	ATB-005-03 B	W13	1370	1210	Awning	90	W	None
WIR 1	ATB-005-03 B	W19	1200	730	Awning	90	S	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
Entry/Stair	2040	1160	90	W
Garage	2400	2890	0	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*

* Refer to glossary.

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	2.50	No
CAV-BRICK-110-110-PB	Cavity Brick Wall - 110mm/110mm Plasterboard Internally	0.50	Medium	1.00	No
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.50	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bath 1st	BV-NONREFL-CAV	3040	1651	S	300	Yes
Bed 1	BV-NONREFL-CAV	3040	3852	S	300	Yes
Bed 1	BV-NONREFL-CAV	3040	3687	E	2029	Yes
Bed 2	CAV-BRICK-110-110-PB	2700	4051	S		Yes
Bed 2	CAV-BRICK-110-110-PB	2700	719	E		Yes
Bed 3	BV-NONREFL-CAV	3040	3919	S	300	Yes
Bed 3	BV-NONREFL-CAV	3040	3289	W	300	No
Bed 3	BV-NONREFL-CAV	3040	639	N	300	Yes
Bed 4	BV-NONREFL-CAV	3040	3890	S	300	Yes
Bed 4	BV-NONREFL-CAV	3040	359	E	300	Yes
Ensuite 1	BV-NONREFL-CAV	3040	2167	S	300	Yes
Entry/Stair	CAV-BRICK-110-110-PB	3300	2328	W	1781	Yes
Garage	CAV-BRICK-110-110-PB	2870	5528	S	263	Yes
Garage	CAV-BRICK-110-110-PB	2870	3289	W	1142	Yes
Garage	CAV-BRICK-110-110-PB	2870	639	N	2130	Yes
Kitchen/Dining/Lounge	CAV-BRICK-110-110-PB	2700	3170	S		Yes
Kitchen/Dining/Lounge	CAV-BRICK-110-110-PB	2700	601	E		Yes
Kitchen/Dining/Lounge	CAV-BRICK-110-110-PB	2700	7201	S	564	Yes
Kitchen/Dining/Lounge	CAV-BRICK-110-110-PB	2700	5126	E	4162	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Dining/Lounge	FC-NOCAV	1000	2008	S		Yes
Kitchen/Dining/Lounge	FC-NOCAV	1400	1997	N		Yes
Kitchen/Dining/Lounge	FC-NOCAV	1200	3345	E		No
Kitchen/Dining/Lounge	FC-NOCAV	1200	3331	W		Yes
Laundry	CAV-BRICK-110-110-PB	2700	1922	S	322	Yes
Pantry	CAV-BRICK-110-110-PB	2700	1566	S		Yes
Pantry	CAV-BRICK-110-110-PB	2700	719	W		Yes
Powder	CAV-BRICK-110-110-PB	2600	2019	S	322	Yes
Study	BV-NONREFL-CAV	3510	2129	S	300	Yes
Entry/Stair	BV-NONREFL-CAV	3040	2328	W	300	Yes
WIR 1	BV-NONREFL-CAV	3040	2099	S	300	Yes
WIR 1	BV-NONREFL-CAV	3040	1681	E	300	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
DBL-BRICK-110-110-Pbd	Double Brick - 110mm/110mm Pbd both sides	133.7	0.00
INT-PB	Internal Plasterboard Stud Wall	83.7	0.00
INT-PB	Internal Plasterboard Stud Wall	23.3	2.50
SGL-BRICK-110-PBD	Single 110mm Brick Wall -Pbd Both Sides	6.6	0.00
SGL-BRICK-110-PBD inside	Single 110mm Brick Wall -Pbd Inside	52.0	1.00
SGL-BRICK-110-PBD inside	Single 110mm Brick Wall -Pbd Inside	21.5	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath 1st	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	4.9	N/A	2.50	Tile
Bath 1st	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	0.6	N/A	0.15	Tile

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed 1	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	16.9	N/A	0.15	Timber
Bed 2	CSOG-100: Concrete Slab on Ground (100mm)	13.3	N/A	2.50	Tile
Bed 3	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	12.9	N/A	2.50	Timber
Bed 4	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	12.8	N/A	0.15	Timber
Ensuite 1	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	8.4	N/A	0.15	Tile
Ensuite 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	0.2	N/A	0.00	Tile
Entry/Stair	CSOG-100: Concrete Slab on Ground (100mm)	21.1	N/A	2.50	Tile
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.2	N/A	0.00	Exposed
Hall 1st	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	16.7	N/A	0.15	Timber
Hall Gd	CSOG-100: Concrete Slab on Ground (100mm)	8.0	N/A	2.50	Tile
Kitchen/Dining/Lounge	CSOG-100: Concrete Slab on Ground (100mm)	55.1	N/A	2.50	Tile
Laundry	CSOG-100: Concrete Slab on Ground (100mm)	7.0	N/A	2.50	Tile
Pantry	CSOG-100: Concrete Slab on Ground (100mm)	5.9	N/A	2.50	Tile
Powder	CSOG-100: Concrete Slab on Ground (100mm)	7.4	N/A	2.50	Tile
Study	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	7.7	N/A	0.15	Timber
Study	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	0.2	N/A	0.00	Timber
WIR 1	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	8.5	N/A	0.15	Timber

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath 1st	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Bed 1	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Bed 3	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Bed 4	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Ensuite 1	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Hall 1st	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Kitchen/Dining/Lounge	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	No
Kitchen/Dining/Lounge	SLAB-150-CEIL-01: Concrete Slab (150mm) with Suspended PB Ceiling	4.00	No
Pantry	SLAB-150-CEIL-01: Concrete Slab (150mm) with Suspended PB Ceiling	4.00	No
Study	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Entry/Stair	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
WIR 1	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bath 1st	2	Downlight	200	Sealed
Bath 1st	1	Exhaust Fan	350	Sealed
Bed 1	7	Downlight	200	Sealed
Bed 2	5	Downlight	200	Sealed
Bed 3	5	Downlight	200	Sealed
Bed 4	5	Downlight	200	Sealed
Ensuite 1	2	Downlight	200	Sealed
Ensuite 1	1	Exhaust Fan	350	Sealed
Entry/Stair	8	Downlight	200	Sealed
Hall 1st	7	Downlight	200	Sealed
Hall Gd	2	Downlight	200	Sealed
Kitchen/Dining/Lounge	22	Downlight	200	Sealed
Kitchen/Dining/Lounge	1	Exhaust Fan	350	Sealed
Laundry	2	Downlight	200	Sealed
Laundry	1	Exhaust Fan	350	Sealed
Pantry	2	Downlight	200	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Powder	2	Downlight	200	Sealed
Powder	1	Exhaust Fan	350	Sealed
Study	2	Downlight	200	Sealed
Void Stair	3	Downlight	200	Sealed
WIR 1	2	Downlight	200	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	0.00	0.85	Dark
FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	0.00	0.85	Dark
SLAB-150-CEIL-01: Concrete Slab (150mm) with Suspended PB Ceiling	0.00	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.

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.