

Nationwide House Energy Rating Scheme® Class 1 Summary

NatHERS® Certificate No. #HR-XZU4VW-01

Generated on 05 Jun 2025 using Hero 4.1

Property

Address 14 Avoca Street, Yagoona, NSW, 2199
Lot/DP Lot 67/ DP 6376
NatHERS climate zone 56 - Mascot AMO



Accredited assessor

Name Jamie Bonnefin
Business name Certified Energy
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Accreditation No. 10056
Assessor Accrediting Organisation HERA

Verification

To verify this certificate, scan the QR code or visit <http://www.hero-software.com.au/pdf/HR-XZU4VW-01>.
When using either link, ensure you are visiting <http://www.hero-software.com.au>



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 J3D3 and J3D15 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.

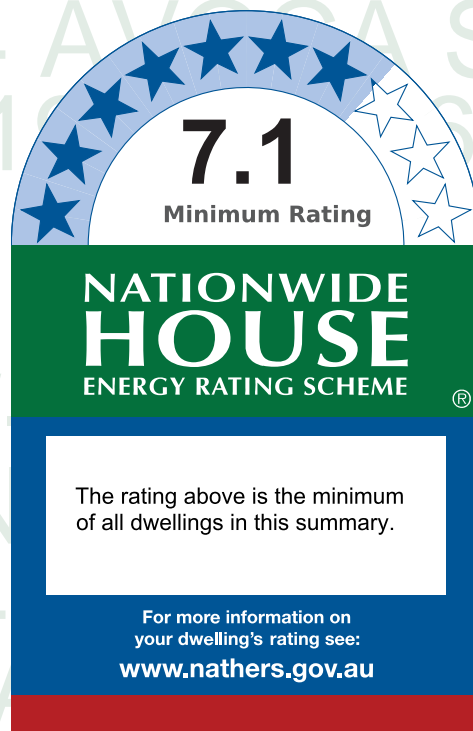
The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

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

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-ICTOO2-01	GF	13.1 (25)	9.6 (18)	22.8	7.8	n/a
HR-QXG6FL-01	H-A	14.5 (25)	11.5 (18)	26.1	7.4	n/a
HR-W166Y1-01	H-B	21.7 (25)	7.5 (18)	29.2	7.1	n/a
HR-BNUDEB-01	H-C	15.6 (25)	11.8 (18)	27.4	7.3	n/a

Thermal performance Star rating



Whole of Home performance rating

No Whole of Home performance rating generated for this certificate or not completed for all dwellings.

Explanatory notes

About the ratings

This is a summary of NCC Class 1 dwellings in a development. For more details of each dwelling refer to the individual dwelling's certificate using the certificate number in summary of all dwellings table.

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 energy loads and societal cost. 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 production and storage to estimate the home's societal cost.

For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

For high quality 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.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

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 certificates 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 use, 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 while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-QXG6FL-01

Generated on 05 Jun 2025 using Hero 4.1 (Chenath v3.23)

Property

Address H-A, 14 Avoca Street, Yagoona, NSW, 2199
Lot/DP Lot 67/ DP 6376
NCC Class* 1a
Floor/all Floors 1 of 2 floors
Type New

Plans

Main Plan Rev F Issue Date: 20.05.2025
Prepared by Ideas

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 174.4	Suburban
Unconditioned* 4.1	NatHERS climate zone
Total 205.8	56 - Mascot AMO
Garage 27.3	



Accredited assessor

Name Jamie Bonnefin
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Phone +61 1300 443
Accreditation No. 10056
Assessor Accrediting Organisation HERA
Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2
State/Territory variation Yes

National Construction Code (NCC) requirements

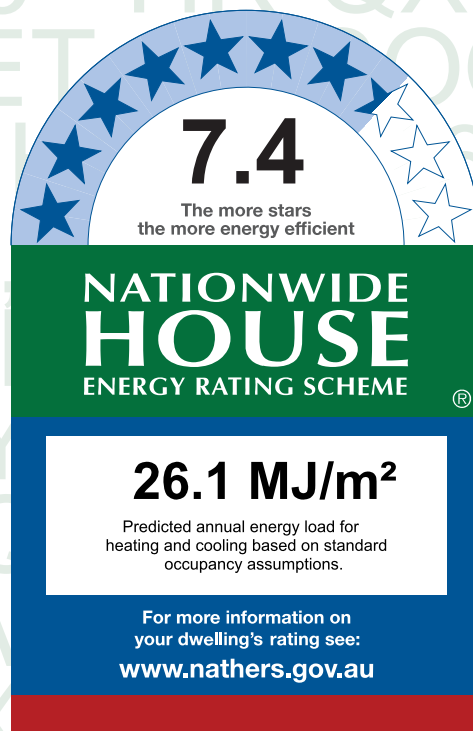
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	14.5	11.5
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

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<http://www.hero-software.com.au/pdf/HR-QXG6FL-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.

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 Certificate?

☐☐☐☐☐

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?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Additional Notes

- * Obscure glazing has been modelled as clear glass as it has similar thermal properties.
- * The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
- * Custom Windows from the NatHERS custom window library have been used.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	57.07
Pantry	Day Time	3.62
WC	Day Time	3.35
Living	Living	14.65
Garage	Garage	27.29
Bedroom 1	Bedroom	17.90
Bathroom	Unconditioned	4.09
Bedroom 2	Bedroom	15.73
Bedroom 3	Bedroom	15.81
ENS 4	Night Time	5.37
Bedroom 4	Bedroom	15.49
WIR 4	Night Time	4.14
Corridor	Day Time	27.09

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
HAAWS-055-030	Housing Aluminium Awning Window Single Glazed	5.5	0.30	0.29	0.32
HAFWS-050-062	Housing Aluminium Fixed Window Single Glazed	4.8	0.62	0.59	0.65
HAHDS-050-050	Housing Aluminium Hinged Door Single Glazed	4.9	0.52	0.49	0.54
HASDS-050-050	Housing Aluminium Sliding Door Single Glazed	5.0	0.50	0.48	0.53
HASWS-055-030	Housing Aluminium Sliding Window Single Glazed	5.3	0.30	0.29	0.32

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*
Bathroom	HAAWS-055-030	W30	600	1210	Awning	10	NNW	None
Bedroom 1	HAAWS-055-030	W28	1800	610	Awning	10	NNW	None
Bedroom 1	HAAWS-055-030	W29	1800	610	Awning	10	NNW	None
Bedroom 1	HASDS-050-050	D32	2100	3200	Sliding Door	60	WSW	None
Bedroom 2	HASWS-055-030	W31	1030	1810	Sliding	10	NNW	None
Bedroom 3	HASWS-055-030	W32	1030	1810	Sliding	10	NNW	None
Bedroom 4	HAAWS-055-030	W34	1800	610	Awning	10	NNW	None
Bedroom 4	HAAWS-055-030	W35	1800	610	Awning	10	NNW	None
Bedroom 4	HAAWS-055-030	W36	1800	610	Awning	10	ENE	None
Bedroom 4	HASDS-050-050	D39	2100	2170	Sliding Door	45	ENE	None
Corridor	HAFWS-050-062	W27	2060	850	Fixed	0	WSW	None
ENS 4	HAAWS-055-030	W33	600	1210	Awning	10	NNW	None
Garage	HAAWS-055-030	W01	600	2410	Awning	45	NNW	None
Kitchen/Living	HAAWS-055-030	W04	600	2650	Awning	45	NNW	None
Kitchen/Living	HAAWS-055-030	W05	1800	1570	Awning	30	NNW	None
Kitchen/Living	HAHDS-050-050	D01	2340	920	Hinged Door	90	ENE	None
Kitchen/Living	HAFWS-050-062	D01.a	2340	300	Fixed	0	ENE	None
Kitchen/Living	HASDS-050-050	D06	2100	3200	Sliding Door	30	WSW	None
Living	HAAWS-055-030	W02	1800	610	Awning	60	NNW	None
Living	HAAWS-055-030	W03	1800	610	Awning	60	NNW	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	2.6	0.24	0.23	0.25

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Corridor	VEL-011-01 W	SL1	0	550	980	WSW	None	None
Corridor	VEL-011-01 W	SL2	0	450	980	WSW	None	None
Corridor	VEL-011-01 W	SL3	0	450	980	WSW	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4200	90	ENE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV11	Brick Veneer Stud Wall with Non-Reflective Sarking	0.30	Light	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	BV-NONREFL-CAV11	2700	1508	NNW	746	Yes
Bedroom 1	BV-NONREFL-CAV11	2700	4266	NNW	746	No
Bedroom 1	BV-NONREFL-CAV11	2700	4256	WSW	2142	Yes
Bedroom 2	BV-NONREFL-CAV11	2700	3708	NNW	746	Yes
Bedroom 3	BV-NONREFL-CAV11	2700	4285	NNW	746	Yes
Bedroom 4	BV-NONREFL-CAV11	2700	3921	NNW	746	Yes
Bedroom 4	BV-NONREFL-CAV11	2700	3951	ENE	712	Yes
Corridor	BV-NONREFL-CAV11	2700	1240	WSW	2142	Yes
ENS 4	BV-NONREFL-CAV11	2700	1492	NNW	746	Yes
Garage	BV-NONREFL-CAV11	2900	5997	NNW		Yes
Garage	BV-NONREFL-CAV11	2900	4550	ENE		Yes
Garage	BV-NONREFL-CAV11	2900	3159	SSE		Yes
Garage	BV-NONREFL-CAV11	2900	599	WSW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	7848	NNW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	1526	ENE	3076	Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	1666	WSW		No
Kitchen/Living	BV-NONREFL-CAV11	2900	3921	WSW	4043	Yes
Living	BV-NONREFL-CAV11	2900	3709	NNW		Yes
Pantry	BV-NONREFL-CAV11	2900	1810	NNW		Yes
WIR 4	BV-NONREFL-CAV11	2700	1526	ENE	712	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
CAV-BRICK-110-110-PB Neighbour_wall	Cavity Brick Wall - 110mm/110mm Plasterboard Internally	100.7	0.00
INT-PB	Internal Plasterboard Stud Wall	116.4	0.00
INT-PB	Internal Plasterboard Stud Wall	34.9	2.50

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	4.1	N/A	0.00	Vinyl
Bedroom 1	TIMB-001: Suspended Timber Floor	17.9	N/A	0.00	Vinyl
Bedroom 2	TIMB-001: Suspended Timber Floor	15.7	N/A	0.00	Vinyl
Bedroom 3	TIMB-001: Suspended Timber Floor	15.8	N/A	0.00	Vinyl
Bedroom 4	TIMB-001: Suspended Timber Floor	15.5	N/A	0.00	Vinyl
Corridor	TIMB-001: Suspended Timber Floor	26.7	N/A	0.00	Vinyl
Corridor	TIMB-001: Suspended Timber Floor	0.5	N/A	2.50	Vinyl
ENS 4	TIMB-001: Suspended Timber Floor	5.4	N/A	0.00	Vinyl
Garage	CSOG-200: Concrete Slab on Ground (200mm)	27.3	N/A	1.00	Exposed
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	57.1	N/A	1.00	Tile (8mm)
Living	CSOG-200: Concrete Slab on Ground (200mm)	14.7	N/A	1.00	Tile (8mm)
Pantry	CSOG-200: Concrete Slab on Ground (200mm)	3.6	N/A	1.00	Tile (8mm)
WC	CSOG-200: Concrete Slab on Ground (200mm)	3.4	N/A	1.00	Tile (8mm)
WIR 4	TIMB-001: Suspended Timber Floor	4.1	N/A	2.50	Vinyl

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Corridor	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ENS 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Garage	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
WIR 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	4	Downlight	200	Sealed
Bedroom 2	3	Downlight	200	Sealed
Bedroom 3	3	Downlight	200	Sealed
Bedroom 4	3	Downlight	200	Sealed
Corridor	6	Downlight	200	Sealed
ENS 4	1	Downlight	200	Sealed
ENS 4	1	Exhaust Fan	350	Sealed
Kitchen/Living	12	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Living	3	Downlight	200	Sealed
Pantry	1	Downlight	200	Sealed
WC	1	Downlight	200	Sealed
WC	1	Exhaust Fan	350	Sealed
WIR 4	1	Downlight	200	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	1.80	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				



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
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No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

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 home's 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 home's 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.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-W166Y1-01

Thermal performance
star rating

Generated on 05 Jun 2025 using Hero 4.1 (Chenath v3.23)

Property

Address H-B, 14 Avoca Street, Yagoona, NSW, 2199
Lot/DP Lot 67/ DP 6376
NCC Class* 1a
Floor/all Floors 1 of 2 floors
Type New

Plans

Main Plan Rev F Issue Date: 20.05.2025
Prepared by Ideas

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 174.4	Suburban
Unconditioned* 4.1	NatHERS climate zone
Total 205.8	56 - Mascot AMO
Garage 27.3	



Accredited assessor

Name Jamie Bonnefin
Business name Certified Energy
Email jobs@certifiedenergy.com.au
Phone +61 1300 443
Accreditation No. 10056
Assessor Accrediting Organisation HERA
Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2
State/Territory variation Yes

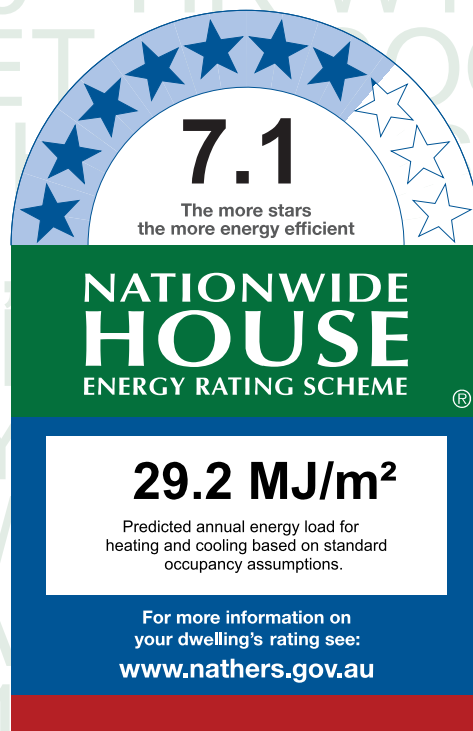
National Construction Code (NCC) requirements

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 (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	21.7	7.5
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-W166Y1-01>.

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.

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 Certificate?

☐☐☐☐☐

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?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Additional Notes

- * Obscure glazing has been modelled as clear glass as it has similar thermal properties.
- * The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
- * Custom Windows from the NatHERS custom window library have been used.

Room schedule

Room	Zone Type	Area (m ²)
Living	Living	14.65
Pantry	Day Time	3.62
Garage	Garage	27.29
WC	Day Time	3.35
Kitchen/Living	Kitchen/Living	57.07
Bedroom 2	Bedroom	15.73
Bedroom 1	Bedroom	17.90
WIR 4	Night Time	4.14
Corridor	Day Time	27.09
Bathroom	Unconditioned	4.09
Bedroom 3	Bedroom	15.81
ENS 4	Night Time	5.37
Bedroom 4	Bedroom	15.49

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
HAAWD-035-024	Housing Aluminium Awning Window Double Glazed	3.5	0.24	0.23	0.26
HAFWD-030-024	Housing Aluminium Fixed Window Double Glazed	3.0	0.24	0.23	0.25
HAHDD-040-027	Housing Aluminium Hinged Door Double Glazed	3.9	0.28	0.26	0.29
HASDD-030-027	Housing Aluminium Sliding Door Double Glazed	3.0	0.26	0.24	0.27
HASWD-030-045	Housing Aluminium Sliding Window Double Glazed	3.0	0.47	0.45	0.50

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*
Bathroom	HAAWD-035-024	W43	600	1210	Awning	10	SSE	None
Bedroom 1	HAAWD-035-024	W45	1800	610	Awning	10	SSE	None
Bedroom 1	HAAWD-035-024	W44	1800	610	Awning	10	SSE	None
Bedroom 1	HASDD-030-027	D42	2100	3200	Sliding Door	60	WSW	None
Bedroom 2	HASWD-030-045	W42	1030	1810	Sliding	10	SSE	None
Bedroom 3	HASWD-030-045	W41	1030	1810	Sliding	10	SSE	None
Bedroom 4	HAAWD-035-024	W39	1800	610	Awning	10	SSE	None
Bedroom 4	HAAWD-035-024	W38	1800	610	Awning	10	SSE	None
Bedroom 4	HAAWD-035-024	W37	1800	610	Awning	10	ENE	None
Bedroom 4	HASDD-030-027	D49	2100	2170	Sliding Door	45	ENE	None
Corridor	HAFWD-030-024	W46	2060	850	Fixed	0	WSW	None
ENS 4	HAAWD-035-024	W40	600	1210	Awning	10	SSE	None
Garage	HAAWD-035-024	W12	600	2410	Awning	45	SSE	None
Kitchen/Living	HAAWD-035-024	W09	600	2650	Awning	45	SSE	None
Kitchen/Living	HAAWD-035-024	W08	1800	1570	Awning	30	SSE	None
Kitchen/Living	HAHDD-040-027	D08	2340	920	Hinged Door	90	ENE	None
Kitchen/Living	HAFWD-030-024	D08.a	2340	300	Fixed	0	ENE	None
Kitchen/Living	HASDD-030-027	D13	2100	3200	Sliding Door	30	WSW	None
Living	HAAWD-035-024	W11	1800	610	Awning	60	SSE	None
Living	HAAWD-035-024	W10	1800	610	Awning	60	SSE	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	2.6	0.24	0.23	0.25

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Corridor	VEL-011-01 W	SL4	0	550	980	WSW	None	None
Corridor	VEL-011-01 W	SL5	0	450	980	WSW	None	None
Corridor	VEL-011-01 W	SL6	0	450	980	WSW	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4200	90	ENE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV11	Brick Veneer Stud Wall with Non-Reflective Sarking	0.30	Light	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	BV-NONREFL-CAV11	2700	1508	SSE	645	Yes
Bedroom 1	BV-NONREFL-CAV11	2700	4266	SSE	645	Yes
Bedroom 1	BV-NONREFL-CAV11	2700	4256	WSW	2142	Yes
Bedroom 2	BV-NONREFL-CAV11	2700	3708	SSE	645	Yes
Bedroom 3	BV-NONREFL-CAV11	2700	4285	SSE	645	Yes
Bedroom 4	BV-NONREFL-CAV11	2700	3921	SSE	645	Yes
Bedroom 4	BV-NONREFL-CAV11	2700	3951	ENE	712	Yes
Corridor	BV-NONREFL-CAV11	2700	1240	WSW	2142	Yes
ENS 4	BV-NONREFL-CAV11	2700	1492	SSE	645	Yes
Garage	BV-NONREFL-CAV11	2900	5997	SSE		Yes
Garage	BV-NONREFL-CAV11	2900	4550	ENE		Yes
Garage	BV-NONREFL-CAV11	2900	3159	NNW		Yes
Garage	BV-NONREFL-CAV11	2900	599	WSW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	7848	SSE		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	1526	ENE		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	3929	WSW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	1658	WSW		No
Living	BV-NONREFL-CAV11	2900	3709	SSE		Yes
Pantry	BV-NONREFL-CAV11	2900	1810	SSE		Yes
WIR 4	BV-NONREFL-CAV11	2700	1526	ENE	712	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
CAV-BRICK-110-110-PB Neighbour_wall	Cavity Brick Wall - 110mm/110mm Plasterboard Internally	100.7	0.00
INT-PB	Internal Plasterboard Stud Wall	116.4	0.00
INT-PB	Internal Plasterboard Stud Wall	34.9	2.50

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	4.1	N/A	0.00	Vinyl
Bedroom 1	TIMB-001: Suspended Timber Floor	17.9	N/A	0.00	Vinyl
Bedroom 2	TIMB-001: Suspended Timber Floor	15.7	N/A	0.00	Vinyl
Bedroom 3	TIMB-001: Suspended Timber Floor	15.8	N/A	0.00	Vinyl
Bedroom 4	TIMB-001: Suspended Timber Floor	15.5	N/A	0.00	Vinyl
Corridor	TIMB-001: Suspended Timber Floor	26.7	N/A	0.00	Vinyl
Corridor	TIMB-001: Suspended Timber Floor	0.5	N/A	2.50	Vinyl
ENS 4	TIMB-001: Suspended Timber Floor	5.4	N/A	0.00	Vinyl
Garage	CSOG-200: Concrete Slab on Ground (200mm)	27.3	N/A	1.00	Exposed
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	57.1	N/A	1.00	Tile (8mm)
Living	CSOG-200: Concrete Slab on Ground (200mm)	14.7	N/A	1.00	Tile (8mm)
Pantry	CSOG-200: Concrete Slab on Ground (200mm)	3.6	N/A	1.00	Tile (8mm)
WC	CSOG-200: Concrete Slab on Ground (200mm)	3.4	N/A	1.00	Tile (8mm)
WIR 4	TIMB-001: Suspended Timber Floor	4.1	N/A	2.50	Vinyl

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Corridor	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ENS 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Garage	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
WIR 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 1	4	Downlight	200	Sealed
Bedroom 2	3	Downlight	200	Sealed
Bedroom 3	3	Downlight	200	Sealed
Bedroom 4	3	Downlight	200	Sealed
Corridor	5	Downlight	200	Sealed
ENS 4	1	Downlight	200	Sealed
ENS 4	1	Exhaust Fan	350	Sealed
Kitchen/Living	12	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Living	3	Downlight	200	Sealed
Pantry	1	Downlight	200	Sealed
WC	1	Exhaust Fan	350	Sealed
WC	1	Downlight	200	Sealed
WIR 4	1	Downlight	200	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	1.80	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				



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

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 home's 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 home's 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.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-BNUDEB-01

Generated on 05 Jun 2025 using Hero 4.1 (Chenath v3.23)

Property

Address H-C, 14 Avoca Street, Yagoona, NSW, 2199
Lot/DP Lot 67/ DP 6376
NCC Class* 1a
Floor/all Floors 1 of 2 floors
Type New

Plans

Main Plan Rev F Issue Date: 20.05.2025
Prepared by Ideas

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 156.3	Suburban
Unconditioned* 12.3	NatHERS climate zone
Total 190.3	56 - Mascot AMO
Garage 21.6	



Accredited assessor

Name Jamie Bonnefin
Business name Certified Energy
Email jobs@certifiedenergy.com.au
Phone +61 1300 443
Accreditation No. 10056
Assessor Accrediting Organisation HERA
Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2
State/Territory variation Yes

National Construction Code (NCC) requirements

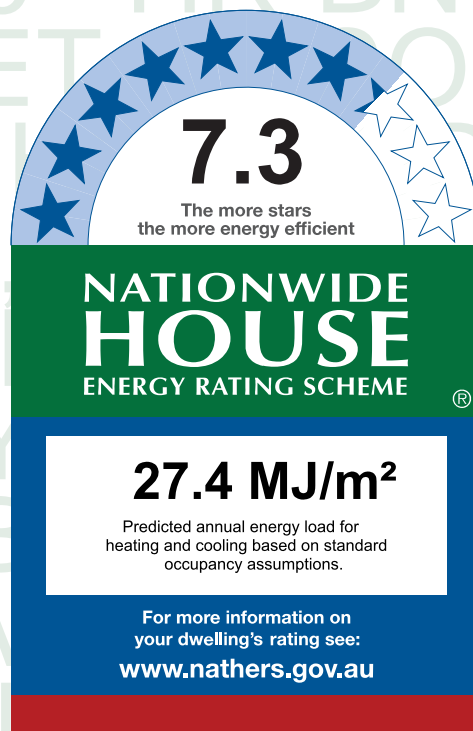
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	15.6	11.8
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-BNUDEB-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.

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 Certificate?

☐☐☐☐☐

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?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Additional Notes

- * Obscure glazing has been modelled as clear glass as it has similar thermal properties.
- * The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
- * Custom Windows from the NatHERS custom window library have been used.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	11.05
Pantry	Day Time	2.04
Laundry	Unconditioned	2.77
WC	Unconditioned	3.80
Garage	Garage	21.63
Kitchen/Living	Kitchen/Living	57.86
Bedroom 2	Bedroom	13.30
ENS 2	Night Time	3.17
WIR 2	Night Time	3.04
Bedroom 3	Bedroom	9.90
Bedroom 4	Bedroom	9.90
Bathroom	Unconditioned	5.76
Bedroom 5	Bedroom	19.41
ENS 5	Night Time	5.12
Study	Day Time	3.33
Living	Living	24.47

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
HAAWD-035-024	Housing Aluminium Awning Window Double Glazed	3.5	0.24	0.23	0.26
HAHDD-035-037	Housing Aluminium Hinged Door Double Glazed	3.5	0.38	0.36	0.40
HASDD-025-041	Housing Aluminium Sliding Door Double Glazed	2.5	0.39	0.37	0.41

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
HASWD-030-045	Housing Aluminium Sliding Window Double Glazed	3.0	0.47	0.45	0.50

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*
Bathroom	HAAWD-035-024	W49	600	850	Awning	10	NNW	None
Bedroom 1	HASWD-030-045	W18	860	1810	Sliding	45	SSE	None
Bedroom 2	HASDD-025-041	D59	2100	2700	Sliding Door	60	WSW	None
Bedroom 2	HAAWD-035-024	W47	1800	610	Awning	10	NNW	None
Bedroom 2	HAAWD-035-024	W48	1800	610	Awning	10	NNW	None
Bedroom 3	HAHDD-035-037	W59	1030	1810	Hinged Door	10	SSE	None
Bedroom 4	HAHDD-035-037	W58	1030	1810	Hinged Door	10	SSE	None
Bedroom 5	HAAWD-035-024	W52	1800	610	Awning	10	NNW	None
Bedroom 5	HAAWD-035-024	W53	1800	610	Awning	10	NNW	None
Bedroom 5	HAAWD-035-024	W54	1800	610	Awning	10	ENE	None
Bedroom 5	HAAWD-035-024	W55	1800	610	Awning	10	ENE	None
Bedroom 5	HAHDD-035-037	D50	2040	820	Hinged Door	90	ENE	None
ENS 2	HAHDD-035-037	W60	600	850	Hinged Door	10	SSE	None
ENS 5	HAHDD-035-037	W56	600	850	Hinged Door	10	SSE	None
Garage	HAAWD-035-024	W19	600	2410	Awning	45	SSE	None
Kitchen/Living	HAAWD-035-024	W15	600	2650	Awning	45	NNW	None
Kitchen/Living	HASWD-030-045	W16	1800	1810	Sliding	45	NNW	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*
Kitchen/Living	HASWD-030-045	W13	1800	2650	Sliding	45	NNW	None
Kitchen/Living	HAHDD-035-037	D15	2340	920	Hinged Door	90	ENE	None
Kitchen/Living	HAAWD-035-024	D15.a	2340	600	Awning	60	ENE	None
Kitchen/Living	HASWD-030-045	W17	1800	1810	Sliding	45	WSW	None
Kitchen/Living	HASDD-025-041	D22	2100	2700	Sliding Door	60	WSW	None
Living	HAAWD-035-024	W51	600	2410	Awning	10	NNW	None
Living	HAHDD-035-037	W57	600	2410	Hinged Door	10	SSE	None
Study	HAAWD-035-024	W50	600	1570	Awning	10	NNW	None
WC	HAAWD-035-024	W14	600	850	Awning	90	NNW	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
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Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	3400	90	ENE
Laundry	2040	820	90	NNW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV11	Brick Veneer Stud Wall with Non-Reflective Sarking	0.30	Light	2.70	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	BV-NONREFL-CAV11	2700	3603	NNW	497	Yes
Bedroom 1	BV-NONREFL-CAV11	2900	3567	SSE		Yes
Bedroom 2	BV-NONREFL-CAV11	2700	3947	WSW	1992	Yes
Bedroom 2	BV-NONREFL-CAV11	2700	3132	NNW	497	Yes
Bedroom 3	BV-NONREFL-CAV11	2700	3025	SSE	557	Yes
Bedroom 4	BV-NONREFL-CAV11	2700	3567	SSE	557	Yes
Bedroom 5	BV-NONREFL-CAV11	2700	4531	NNW	497	Yes
Bedroom 5	BV-NONREFL-CAV11	2700	5857	ENE	635	No
Bedroom 5	BV-NONREFL-CAV11	2700	1771	SSE	557	Yes
ENS 2	BV-NONREFL-CAV11	2700	1741	SSE	557	Yes
ENS 2	BV-NONREFL-CAV11	2700	1820	WSW	1992	No
ENS 5	BV-NONREFL-CAV11	2700	2708	SSE	557	Yes
Garage	BV-NONREFL-CAV11	2900	3607	ENE		Yes
Garage	BV-NONREFL-CAV11	2900	5997	SSE		Yes
Garage	BV-NONREFL-CAV11	2900	510	WSW		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Garage	BV-NONREFL-CAV11	2900	973	NNW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	6284	NNW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	3558	NNW		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	2661	ENE	916	Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	1239	SSE		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	6284	SSE		Yes
Kitchen/Living	BV-NONREFL-CAV11	2900	5857	WSW	2969	Yes
Laundry	BV-NONREFL-CAV11	2900	1983	NNW		Yes
Living	BV-NONREFL-CAV11	2700	3657	NNW	497	Yes
Living	BV-NONREFL-CAV11	2700	2667	SSE	557	Yes
Pantry	BV-NONREFL-CAV11	2900	1458	NNW		Yes
Study	BV-NONREFL-CAV11	2700	2073	NNW	488	Yes
WC	BV-NONREFL-CAV11	2900	2719	NNW		Yes
WIR 2	BV-NONREFL-CAV11	2700	1277	SSE	557	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	56.7	2.50
INT-PB	Internal Plasterboard Stud Wall	127.1	0.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.8	N/A	0.00	Vinyl
Bedroom 1	CSOG-200: Concrete Slab on Ground (200mm)	11.0	N/A	1.00	Tile (8mm)
Bedroom 2	TIMB-001: Suspended Timber Floor	13.3	N/A	0.00	Vinyl
Bedroom 3	TIMB-001: Suspended Timber Floor	9.8	N/A	0.00	Vinyl

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 4	TIMB-001: Suspended Timber Floor	9.9	N/A	0.00	Vinyl
Bedroom 5	TIMB-001: Suspended Timber Floor	16.7	N/A	0.00	Vinyl
Bedroom 5	TIMB-001: Suspended Timber Floor	2.7	N/A	2.50	Vinyl
ENS 2	TIMB-001: Suspended Timber Floor	3.2	N/A	0.00	Vinyl
ENS 5	TIMB-001: Suspended Timber Floor	5.1	N/A	0.00	Vinyl
Garage	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	21.6	Enclosed (Disc.)	2.50	Exposed
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	41.1	N/A	1.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	16.8	Enclosed (Disc.)	2.50	Tile (8mm)
Laundry	CSOG-200: Concrete Slab on Ground (200mm)	2.8	N/A	1.00	Tile (8mm)
Living	TIMB-001: Suspended Timber Floor	24.5	N/A	0.00	Vinyl
Pantry	CSOG-200: Concrete Slab on Ground (200mm)	2.0	N/A	1.00	Tile (8mm)
Study	TIMB-001: Suspended Timber Floor	3.3	N/A	0.00	Vinyl
WC	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.8	Enclosed (Disc.)	2.50	Tile (8mm)
WIR 2	TIMB-001: Suspended Timber Floor	3.0	N/A	0.00	Vinyl

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 5	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ENS 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ENS 5	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Garage	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Living	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Study	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
WIR 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	3	Downlight	200	Sealed
Bedroom 2	3	Downlight	200	Sealed
Bedroom 3	2	Downlight	200	Sealed
Bedroom 4	2	Downlight	200	Sealed
Bedroom 5	4	Downlight	200	Sealed
ENS 2	1	Downlight	200	Sealed
ENS 2	1	Exhaust Fan	350	Sealed
ENS 5	1	Downlight	200	Sealed
ENS 5	1	Exhaust Fan	350	Sealed
Kitchen/Living	10	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed
Laundry	1	Exhaust Fan	350	Unsealed
Living	5	Downlight	200	Sealed
Pantry	1	Downlight	200	Sealed
Study	1	Downlight	200	Sealed
WC	1	Downlight	200	Sealed
WC	1	Exhaust Fan	350	Unsealed

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
WIR 2	1	Downlight	200	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	1.80	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				

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	

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 home's 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 home's 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.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-ICTOO2-01

Thermal performance
star rating

Generated on 05 Jun 2025 using Hero 4.1 (Chenath v3.23)

Property

Address GF, 14 Avoca Street, Yagoona, NSW, 2199
Lot/DP Lot 67/ DP 6376
NCC Class* 1a
Floor/all Floors 1 of 1 floors
Type New

Plans

Main Plan Rev F Issue Date: 20.05.2025
Prepared by Ideas

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	45.5	Suburban
Unconditioned*	6.2	NatHERS climate zone
Total	51.7	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Jamie Bonnefin
Business name Certified Energy
Email jobs@certifiedenergy.com.au
Phone +61 1300 443
Accreditation No. 10056
Assessor Accrediting Organisation HERA
Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2
State/Territory variation Yes

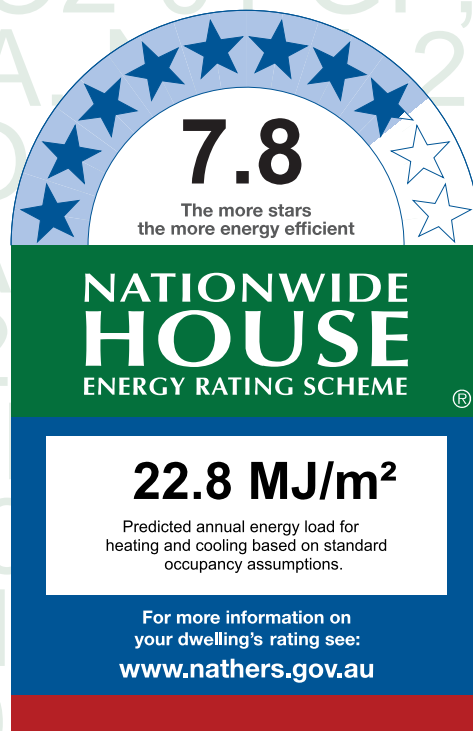
National Construction Code (NCC) requirements

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 (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	13.1	9.6
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-ICTOO2-01>.

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.

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 Certificate?

☐☐☐☐☐

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?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Additional Notes

- * Obscure glazing has been modelled as clear glass as it has similar thermal properties.
- * The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
- * Custom Windows from the NatHERS custom window library have been used.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	11.16
Bedroom 2	Bedroom	11.20
WC_1	Unconditioned	3.12
WC_2	Unconditioned	3.13
Kitchen/Living	Kitchen/Living	23.12

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
HAAWS-055-030	Housing Aluminium Awning Window Single Glazed	5.5	0.30	0.29	0.32
HASDS-050-050	Housing Aluminium Sliding Door Single Glazed	5.0	0.50	0.48	0.53

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	HAAWS-055-030	W23	1800	610	Awning	60	NNW	None
Bedroom 1	HASDS-050-050	D25	2100	1570	Sliding Door	45	WSW	None
Bedroom 2	HAAWS-055-030	W22	1800	610	Awning	60	NNW	None
Bedroom 2	HAAWS-055-030	W21	1800	1570	Awning	30	ENE	None
Kitchen/Living	HASDS-050-050	D24	2100	2170	Sliding Door	45	SSE	None
Kitchen/Living	HAAWS-055-030	W26	1800	610	Awning	60	SSE	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	HAAWS-055-030	W25	600	2410	Awning	45	WSW	None
WC_1	HAAWS-055-030	W24	600	850	Awning	90	WSW	None
WC_2	HAAWS-055-030	W20	600	610	Awning	90	ENE	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
Kitchen/Living	2040	820	90	ENE

External wall *type*

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

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV11	Brick Veneer Stud Wall with Non-Reflective Sarking	0.30	Light	2.70	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bedroom 1	BV-NONREFL-CAV11	2450	3724	NNW	459	Yes
Bedroom 1	BV-NONREFL-CAV11	2450	2998	WSW	642	Yes
Bedroom 2	BV-NONREFL-CAV11	2450	3735	NNW	459	No
Bedroom 2	BV-NONREFL-CAV11	2450	2998	ENE	2607	Yes
Kitchen/Living	BV-NONREFL-CAV11	2450	2671	ENE	2607	Yes
Kitchen/Living	BV-NONREFL-CAV11	2450	7548	SSE	630	No
Kitchen/Living	BV-NONREFL-CAV11	2450	2671	WSW	642	Yes
WC_1	BV-NONREFL-CAV11	2450	1221	WSW	642	Yes
WC_2	BV-NONREFL-CAV11	2450	1221	ENE	2607	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	9.5	0.00
INT-PB	Internal Plasterboard Stud Wall	28.9	2.50

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	CSOG-200: Concrete Slab on Ground (200mm)	11.2	N/A	1.00	Tile (8mm)
Bedroom 2	CSOG-200: Concrete Slab on Ground (200mm)	11.2	N/A	1.00	Tile (8mm)
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	23.1	N/A	1.00	Tile (8mm)
WC_1	CSOG-200: Concrete Slab on Ground (200mm)	3.1	N/A	1.00	Tile (8mm)
WC_2	CSOG-200: Concrete Slab on Ground (200mm)	3.1	N/A	1.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Bedroom 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
Kitchen/Living	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
WC_1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
WC_2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bedroom 1	3	Downlight	200	Sealed
Bedroom 2	3	Downlight	200	Sealed
Kitchen/Living	5	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
WC_1	1	Downlight	200	Sealed
WC_1	1	Exhaust Fan	350	Unsealed
WC_2	1	Downlight	200	Sealed
WC_2	1	Exhaust Fan	350	Unsealed

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	1.80	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				



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
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No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

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 home's 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 home's 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.