Nationwide House Energy Rating Scheme®
Class 1 Summary
NatHERS® Certificate No. #HR-V32CAD-02

Generated on 16 May 2025 using Hero 4.1

Property

Address	9 Greenwood Avenue, Narraweena , NSW, 2099
Lot/DP	Lot 85/ DP 12228
NatHERS climate zone	56 - Mascot AMO

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

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com.au/pdf/HR-V32CAD-02. When using either link, ensure you are visiting http://www.hero-software.com.au

National Construction Code (NCC) requirements

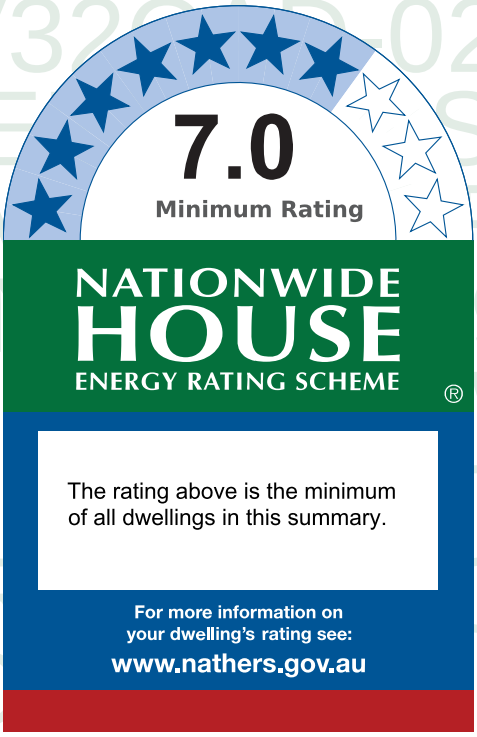
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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.

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-8AJ7TG-02	A	15.2 (25)	14.6 (18)	29.8	7.0	n/a
HR-09EBHN-02	B	15.9 (25)	13.8 (18)	29.7	7.0	n/a

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 homes 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-8AJ7TG-02

Generated on 16 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	A, 9 Greenwood Avenue, Narraweena , NSW, 2099
Lot/DP	Lot 85/ DP 12228
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	Rev 1 Issue Date: 15/05/2025
Prepared by	JDC Architect

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	195.5	Suburban	
Unconditioned*	12.3	**NatHERS climate zone**	
Total	224.8	56 - Mascot AMO	
Garage	17.0		

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

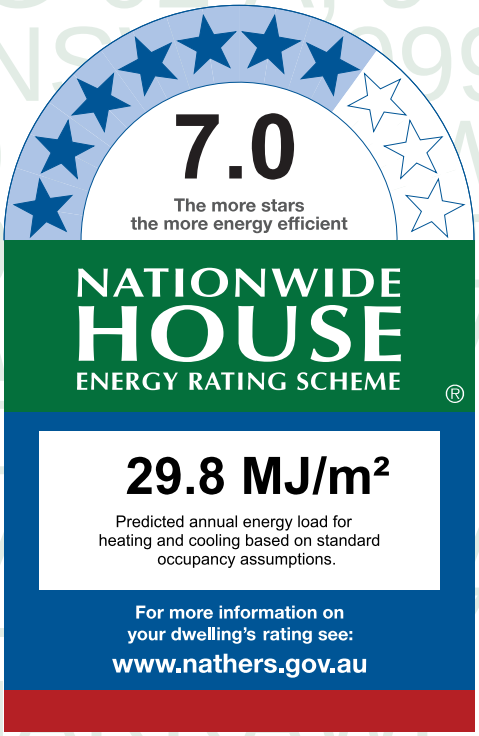
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.2	14.6
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-8AJ7TG-02. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

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

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

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

* Refer to glossary.

Certificate check

Continued

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

Other NCC requirements

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

* Refer to glossary.

Additional Notes

* 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)
Guest Bedroom	Bedroom	11.62
Media room	Living	13.14
WC	Unconditioned	3.68
Kitchen/Living	Kitchen/Living	76.19
WIP/Laundry	Day Time	5.07
Master WIR	Night Time	4.94
Guest Bedroom 1	Bedroom	12.17
WC	Unconditioned	2.70
Bathroom	Unconditioned	5.88
Guest Bedroom 2	Bedroom	10.96
Guest Bedroom 3	Bedroom	15.50
Master ENS	Night Time	10.06
Garage	Garage	17.00
Master Bedroom	Bedroom	21.53
Corridor	Day Time	18.68

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
HADWD-035-033	Housing Aluminium Double Hung Window Double Glazed	3.5	0.33	0.31	0.34
HAFWD-030-030	Housing Aluminium Fixed Window Double Glazed	3.0	0.30	0.28	0.31
HASDD-030-037	Housing Aluminium Sliding Door Double Glazed	3.0	0.36	0.34	0.38

* Refer to glossary.

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	HADWD-035-033	W17	1400	1655	Double Hung	10	W	None
Guest Bedroom	HADWD-035-033	W04	1700	840	Double Hung	45	W	None
Guest Bedroom	HADWD-035-033	W03	1700	900	Double Hung	45	W	None
Guest Bedroom 1	HADWD-035-033	W15	1400	850	Double Hung	10	W	None
Guest Bedroom 1	HADWD-035-033	W14	1400	850	Double Hung	10	W	None
Guest Bedroom 2	HADWD-035-033	W19	1400	900	Double Hung	10	W	None
Guest Bedroom 2	HADWD-035-033	W18	1400	900	Double Hung	10	W	None
Guest Bedroom 3	HASDD-030-037	D06	2140	3100	Sliding Door	45	S	None
Guest Bedroom 3	HAFWD-030-030	D06A	530	3100	Fixed	0	S	None
Guest Bedroom 3	HADWD-035-033	W21	1400	900	Double Hung	10	W	None
Guest Bedroom 3	HADWD-035-033	W20	1400	900	Double Hung	10	W	None
Guest Bedroom 3	HAFWD-030-030	W22	2700	800	Fixed	0	S	None
Kitchen/Living	HASDD-030-037	D04	2700	4938	Sliding Door	60	S	None
Kitchen/Living	HADWD-035-033	W08	2200	840	Double Hung	45	W	None
Kitchen/Living	HADWD-035-033	W07	2200	840	Double Hung	45	W	None
Kitchen/Living	HAFWD-030-030	W06	750	4060	Fixed	0	W	None
Master Bedroom	HADWD-035-033	W12	1400	900	Double Hung	10	W	None
Master Bedroom	HADWD-035-033	W11	1400	1210	Double Hung	10	W	None
Master Bedroom	HASDD-030-037	D05	2740	3500	Sliding Door	45	N	None
Master Bedroom	HAFWD-030-030	D05a	260	3500	Fixed	0	N	None
Master Bedroom	HAFWD-030-030	W10	1800	600	Fixed	0	E	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Master Bedroom	HAFWD-030-030	D05b	200	3500	Fixed	0	N	None
Master ENS	HAFWD-030-030	W09	2900	969	Fixed	0	N	OP-40%
Master WIR	HADWD-035-033	W13	1400	900	Double Hung	10	W	None
Media room	HADWD-035-033	W05	1700	840	Double Hung	45	W	None
WC	HADWD-035-033	W02	1700	900	Double Hung	45	W	None
WC	HAFWD-030-030	W01	2400	1200	Fixed	0	N	None
WC	HAFWD-030-030	W16	1400	1175	Fixed	0	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
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)	Orient-ation	Outdoor shade	Indoor shade
Corridor	VEL-011-01 W	SKYRW 05	0	700	1200	N	None	None
Corridor	VEL-011-01 W	SKYRW 06	0	700	1200	E	None	None
Corridor	VEL-011-01 W	SKYRW 07	0	700	1199	S	None	None
Master ENS	VEL-011-01 W	SKYRW 08	0	700	1200	W	None	None

Skylight *type and performance*

Skylight ID	Skylight description
None	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2700	2800	90	N
Kitchen/Living	2700	900	90	N
WIP/Laundry	2700	730	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV1	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-CAV1	3000	1656	W		Yes
Bathroom	BV-NONREFL-CAV1	3000	1272	N		Yes
Garage	BV-NONREFL-CAV1	3000	2864	N		No
Garage	BV-NONREFL-CAV1	3000	5807	W	3031	Yes
Guest Bedroom	BV-NONREFL-CAV1	3000	3114	W		Yes
Guest Bedroom 1	BV-NONREFL-CAV1	3000	4101	W		Yes
Guest Bedroom 1	BV-NONREFL-CAV1	3000	1272	S		Yes
Guest Bedroom 2	BV-NONREFL-CAV1	3000	3795	W		Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	612	S	2990	Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	1211	E	1078	Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	3250	S	1779	Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	3521	W		Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	1146	S	2990	Yes
Kitchen/Living	BV-NONREFL-CAV1	3000	1288	N	6044	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	BV-NONREFL-CAV1	3000	5938	S	2269	Yes
Kitchen/Living	BV-NONREFL-CAV1	3000	9003	W		Yes
Master Bedroom	BV-NONREFL-CAV1	3000	4546	W		Yes
Master Bedroom	BV-NONREFL-CAV1	3000	4278	N	1177	Yes
Master Bedroom	BV-NONREFL-CAV1	3000	859	E		Yes
Master Bedroom	BV-NONREFL-CAV1	3000	504	S		Yes
Master Bedroom	BV-NONREFL-CAV1	200	4278	N	1175	Yes
Master ENS	BV-NONREFL-CAV1	3000	969	N		Yes
Master WIR	BV-NONREFL-CAV1	3000	2255	W		Yes
Media room	BV-NONREFL-CAV1	3000	3524	W		Yes
WC	BV-NONREFL-CAV1	3000	2193	W		Yes
WC	BV-NONREFL-CAV1	3000	1678	N	5202	No
WC	BV-NONREFL-CAV1	3000	842	E		Yes
WC	BV-NONREFL-CAV1	3000	1475	W	536	Yes
WIP/Laundry	BV-NONREFL-CAV1	3000	1357	W		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
CAV-BRICK-110-110-Neighbour	Cavity Brick Wall - 110mm/110mm	112.9	0.00
INT-PB	Internal Plasterboard Stud Wall	160.6	0.00
INT-PB	Internal Plasterboard Stud Wall	38.9	2.50

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	0.15	Tile (8mm)
Corridor	TIMB-001: Suspended Timber Floor	18.7	N/A	0.15	Cork

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	CSOG-200: Concrete Slab on Ground (200mm)	17.0	N/A	1.00	Exposed
Guest Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	11.6	N/A	1.00	Carpet
Guest Bedroom 1	TIMB-001: Suspended Timber Floor	12.3	N/A	0.15	Carpet
Guest Bedroom 2	TIMB-001: Suspended Timber Floor	11.0	N/A	0.15	Carpet
Guest Bedroom 3	TIMB-001: Suspended Timber Floor	15.5	N/A	0.15	Carpet
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	76.2	N/A	1.00	Cork
Master Bedroom	TIMB-001: Suspended Timber Floor	9.5	N/A	0.15	Carpet
Master Bedroom	TIMB-002: Suspended Timber Floor - Lined Below	12.0	N/A	2.00	Carpet
Master ENS	TIMB-001: Suspended Timber Floor	10.0	N/A	0.15	Tile (8mm)
Master WIR	TIMB-001: Suspended Timber Floor	3.8	N/A	0.15	Carpet
Master WIR	TIMB-002: Suspended Timber Floor - Lined Below	1.1	N/A	2.00	Carpet
Media room	CSOG-200: Concrete Slab on Ground (200mm)	13.1	N/A	1.00	Carpet
WC	CSOG-200: Concrete Slab on Ground (200mm)	3.7	N/A	1.00	Tile (8mm)
WC	TIMB-001: Suspended Timber Floor	2.8	N/A	0.15	Tile (8mm)
WIP/Laundry	CSOG-200: Concrete Slab on Ground (200mm)	5.1	N/A	1.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Corridor	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Garage	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Kitchen/Living	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Master Bedroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Master ENS	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Master WIR	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Media room	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
WC	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
WIP/Laundry	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Corridor	4	Downlight	190	Sealed
Guest Bedroom	3	Downlight	190	Sealed
Guest Bedroom 1	3	Downlight	190	Sealed
Guest Bedroom 2	2	Downlight	190	Sealed
Guest Bedroom 3	3	Downlight	190	Sealed
Kitchen/Living	16	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	5	Downlight	190	Sealed
Master ENS	2	Downlight	190	Sealed
Master ENS	1	Exhaust Fan	350	Sealed
Master WIR	1	Downlight	190	Sealed
Media room	3	Downlight	190	Sealed
WC	2	Downlight	190	Sealed
WC	2	Exhaust Fan	350	Unsealed
WIP/Laundry	1	Downlight	190	Sealed

* Refer to glossary.

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	0.30	Light

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]

* Refer to glossary.

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 homes energy value*.

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

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

Accredited assessors

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

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

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

Disclaimer

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

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

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

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

Glossary

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

* Refer to glossary.

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. #HR-09EBHN-02

Generated on 16 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	B, 9 Greenwood Avenue, Narraweena , NSW, 2099
Lot/DP	Lot 85/ DP 12228
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	Rev 1 Issue Date: 15/05/2025
Prepared by	JDC Architect

Construction and environment

Assessed floor area (m²)*		**Exposure Type**
Conditioned*	195.5	Suburban
Unconditioned*	12.3	**NatHERS climate zone**
Total	224.8	56 - Mascot AMO
Garage	17.0	

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

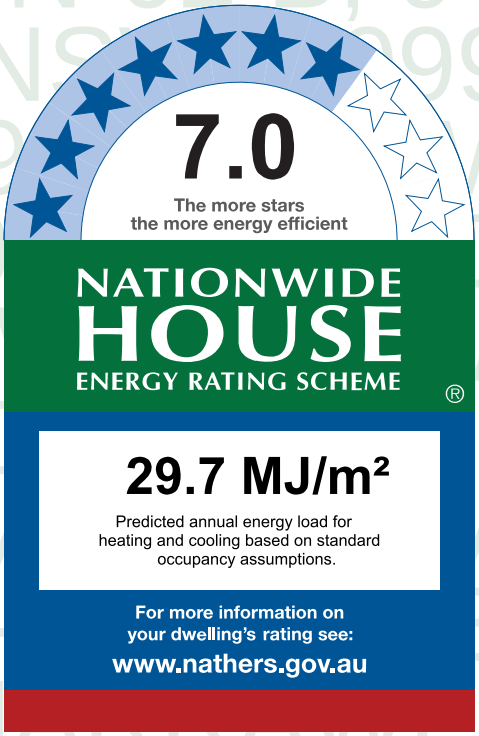
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.9	13.8
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-09EBHN-02. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

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

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

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

* Refer to glossary.

Certificate check

Continued

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

Other NCC requirements

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

* Refer to glossary.

Additional Notes

* 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)
Guest Bedroom	Bedroom	11.62
Media room	Living	13.14
WC	Unconditioned	3.68
Kitchen/Living	Kitchen/Living	76.19
WIP/Laundry	Day Time	5.07
Master WIR	Night Time	4.94
Guest Bedroom 1	Bedroom	12.17
WC	Unconditioned	2.70
Bathroom	Unconditioned	5.88
Guest Bedroom 2	Bedroom	10.96
Guest Bedroom 3	Bedroom	15.50
Master ENS	Night Time	10.06
Garage	Garage	17.00
Master Bedroom	Bedroom	21.53
Corridor	Day Time	18.68

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
HADWD-035-033	Housing Aluminium Double Hung Window Double Glazed	3.5	0.33	0.31	0.34
HAFWD-030-030	Housing Aluminium Fixed Window Double Glazed	3.0	0.30	0.28	0.31
HASDD-030-037	Housing Aluminium Sliding Door Double Glazed	3.0	0.36	0.34	0.38

* Refer to glossary.

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	HADWD-035-033	W17	1400	1655	Double Hung	10	E	None
Guest Bedroom	HADWD-035-033	W04	1700	840	Double Hung	45	E	None
Guest Bedroom	HADWD-035-033	W03	1700	900	Double Hung	45	E	None
Guest Bedroom 1	HADWD-035-033	W15	1400	850	Double Hung	10	E	None
Guest Bedroom 1	HADWD-035-033	W14	1400	850	Double Hung	10	E	None
Guest Bedroom 2	HADWD-035-033	W19	1400	900	Double Hung	10	E	None
Guest Bedroom 2	HADWD-035-033	W18	1400	900	Double Hung	10	E	None
Guest Bedroom 3	HASDD-030-037	D06	2140	3100	Sliding Door	45	S	None
Guest Bedroom 3	HAFWD-030-030	D06A	530	3100	Fixed	0	S	None
Guest Bedroom 3	HADWD-035-033	W21	2100	1210	Double Hung	10	E	None
Guest Bedroom 3	HADWD-035-033	W20	2100	1210	Double Hung	10	E	None
Guest Bedroom 3	HAFWD-030-030	W22	2700	800	Fixed	0	S	None
Kitchen/Living	HASDD-030-037	D04	2700	4938	Sliding Door	60	S	None
Kitchen/Living	HADWD-035-033	W08	2200	840	Double Hung	45	E	None
Kitchen/Living	HADWD-035-033	W07	2200	840	Double Hung	45	E	None
Kitchen/Living	HAFWD-030-030	W06	750	4060	Fixed	0	E	None
Master Bedroom	HADWD-035-033	W12	2100	1210	Double Hung	10	E	None
Master Bedroom	HADWD-035-033	W11	2100	1210	Double Hung	10	E	None
Master Bedroom	HASDD-030-037	D05	2740	3500	Sliding Door	45	N	None
Master Bedroom	HAFWD-030-030	D05a	260	3500	Fixed	0	N	None
Master Bedroom	HAFWD-030-030	W10	1800	600	Fixed	0	W	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Master Bedroom	HAFWD-030-030	D05b	200	3500	Fixed	0	N	None
Master ENS	HAFWD-030-030	W09	2900	969	Fixed	0	N	OP-40%
Master WIR	HADWD-035-033	W13	1400	900	Double Hung	10	E	None
Media room	HADWD-035-033	W05	1700	840	Double Hung	45	E	None
WC	HADWD-035-033	W02	1700	900	Double Hung	45	E	None
WC	HAFWD-030-030	W01	2400	1200	Fixed	0	N	None
WC	HAFWD-030-030	W16	1400	1175	Fixed	0	E	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)	Orient-ation	Outdoor shade	Indoor shade
Corridor	VEL-011-01 W	SKYRW 10	0	700	1200	N	None	None
Corridor	VEL-011-01 W	SKYRW 11	0	700	1200	E	None	None
Corridor	VEL-011-01 W	SKYRW 12	0	700	1200	S	None	None
Master ENS	VEL-011-01 W	SKYRW 09	0	700	1200	W	None	None

Skylight *type and performance*

Skylight ID	Skylight description
None	

* Refer to glossary.

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2700	2800	90	N
Kitchen/Living	2700	900	90	N
WIP/Laundry	2700	730	90	E

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV1	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-CAV1	3000	1656	E		Yes
Bathroom	BV-NONREFL-CAV1	3000	1272	N		Yes
Garage	BV-NONREFL-CAV1	3000	2864	N		No
Garage	BV-NONREFL-CAV1	3000	5807	E	3031	Yes
Guest Bedroom	BV-NONREFL-CAV1	3000	3114	E		Yes
Guest Bedroom 1	BV-NONREFL-CAV1	3000	4101	E		Yes
Guest Bedroom 1	BV-NONREFL-CAV1	3000	1272	S		Yes
Guest Bedroom 2	BV-NONREFL-CAV1	3000	3795	E		Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	612	S	2990	Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	1211	W	1078	Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	3250	S	1779	Yes
Guest Bedroom 3	BV-NONREFL-CAV1	3000	3521	E		No
Guest Bedroom 3	BV-NONREFL-CAV1	3000	1146	S	2990	Yes
Kitchen/Living	BV-NONREFL-CAV1	3000	1288	N	6044	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	BV-NONREFL-CAV1	3000	5938	S	2269	Yes
Kitchen/Living	BV-NONREFL-CAV1	3000	9003	E		No
Master Bedroom	BV-NONREFL-CAV1	3000	4546	E		Yes
Master Bedroom	BV-NONREFL-CAV1	3000	4278	N	1177	Yes
Master Bedroom	BV-NONREFL-CAV1	3000	859	W		Yes
Master Bedroom	BV-NONREFL-CAV1	3000	504	S		Yes
Master Bedroom	BV-NONREFL-CAV1	200	4278	N	1175	Yes
Master ENS	BV-NONREFL-CAV1	3000	969	N		Yes
Master WIR	BV-NONREFL-CAV1	3000	2255	E		Yes
Media room	BV-NONREFL-CAV1	3000	3524	E		Yes
WC	BV-NONREFL-CAV1	3000	2193	E		Yes
WC	BV-NONREFL-CAV1	3000	1678	N	5202	No
WC	BV-NONREFL-CAV1	3000	839	W		Yes
WC	BV-NONREFL-CAV1	3000	1475	E	536	Yes
WIP/Laundry	BV-NONREFL-CAV1	3000	1357	E		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
CAV-BRICK-110-110-Neighbour	Cavity Brick Wall - 110mm/110mm	112.9	0.00
INT-PB	Internal Plasterboard Stud Wall	160.6	0.00
INT-PB	Internal Plasterboard Stud Wall	38.9	2.50

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	0.15	Tile (8mm)
Corridor	TIMB-001: Suspended Timber Floor	18.7	N/A	0.15	Cork

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	CSOG-200: Concrete Slab on Ground (200mm)	17.0	N/A	0.00	Exposed
Guest Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	11.6	N/A	0.00	Carpet
Guest Bedroom 1	TIMB-001: Suspended Timber Floor	12.3	N/A	0.15	Carpet
Guest Bedroom 2	TIMB-001: Suspended Timber Floor	11.0	N/A	0.15	Carpet
Guest Bedroom 3	TIMB-001: Suspended Timber Floor	15.5	N/A	0.15	Carpet
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	76.2	N/A	0.00	Cork
Master Bedroom	TIMB-002: Suspended Timber Floor - Lined Below	12.0	N/A	2.00	Carpet
Master Bedroom	TIMB-001: Suspended Timber Floor	9.5	N/A	0.15	Carpet
Master ENS	TIMB-001: Suspended Timber Floor	10.0	N/A	0.15	Tile (8mm)
Master WIR	TIMB-001: Suspended Timber Floor	3.8	N/A	0.15	Carpet
Master WIR	TIMB-002: Suspended Timber Floor - Lined Below	1.1	N/A	2.00	Carpet
Media room	CSOG-200: Concrete Slab on Ground (200mm)	13.1	N/A	0.00	Carpet
WC	CSOG-200: Concrete Slab on Ground (200mm)	3.7	N/A	0.00	Tile (8mm)
WC	TIMB-001: Suspended Timber Floor	2.8	N/A	0.15	Tile (8mm)
WIP/Laundry	CSOG-200: Concrete Slab on Ground (200mm)	5.1	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Corridor	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Garage	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Guest Bedroom 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Kitchen/Living	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Master Bedroom	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Master ENS	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Master WIR	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
Media room	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
WC	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No
WIP/Laundry	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	5.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Corridor	4	Downlight	190	Sealed
Guest Bedroom	3	Downlight	190	Sealed
Guest Bedroom 1	3	Downlight	190	Sealed
Guest Bedroom 2	2	Downlight	190	Sealed
Guest Bedroom 3	3	Downlight	190	Sealed
Kitchen/Living	16	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	5	Downlight	190	Sealed
Master ENS	2	Downlight	190	Sealed
Master ENS	1	Exhaust Fan	350	Sealed
Master WIR	1	Downlight	190	Sealed
Media room	3	Downlight	190	Sealed
WC	2	Exhaust Fan	350	Unsealed
WC	1	Downlight	190	Sealed
WIP/Laundry	1	Downlight	190	Sealed

* Refer to glossary.

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	0.30	Light

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]

* Refer to glossary.

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 homes energy value*.

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

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

Accredited assessors

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

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

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

Disclaimer

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

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

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

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

Glossary

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

* Refer to glossary.