

Nationwide House Energy Rating Scheme® Class 1 Summary NatHERS® Certificate No. #HR-F6WIFG-02

Generated on 01 May 2025 using Hero 4.1

Property

Address 4 Wirrilda Way , Forestville, NSW, 2087
Lot/DP 6/26948
NatHERS climate zone 56 - Mascot AMO



Accredited assessor

Name Krzysztof Kwiatkowski
Business name Building Sustainability Assessments
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Phone +61 413626023
Accreditation No. DMN/24/2214
Assessor Accrediting Organisation DMN

Verification

To verify this certificate, scan the QR code or visit <http://www.hero-software.com.au/pdf/HR-F6WIFG-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.

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-Q24GVG-02	Unit 01	25.0 (25)	4.6 (18)	29.7	7.0	n/a
HR-1H0BE8-02	Unit 02	12.8 (25)	8.3 (18)	21.1	7.9	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-Q24GVG-02

Thermal performance
star rating

Generated on 01 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address Unit 01, 4 Wirrilda Way , Forestville,
NSW, 2087

Lot/DP 6/26948

NCC Class* 1a

Floor/all Floors 1 of 3 floors

Type New

Plans

Main Plan Project No. 2151 16/04/2025 A

Prepared by GGA (BSA21063)

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 402.5	Suburban
Unconditioned* 11.5	NatHERS climate zone
Total 478.3	56 - Mascot AMO
Garage 64.2	



Accredited assessor

Name Krzysztof Kwiatkowski

Business name Building Sustainability Assessments

Email enquiries@buildingsustainability.net.au

Phone +61 413626023

Accreditation No. DMN/24/2214

Assessor Accrediting Organisation DMN

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2

State/Territory variation Yes

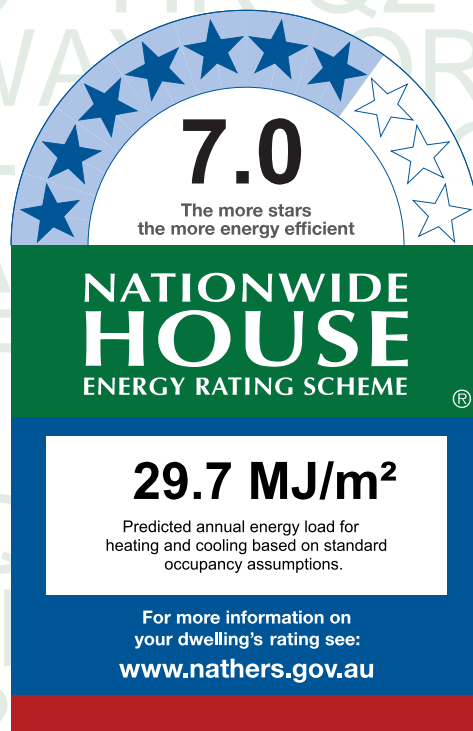
National Construction Code (NCC) requirements

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	25.0	4.6
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-Q24GVG-02>

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* 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

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.
- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.
- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m ²)
GARAGE	Garage	64.22
GYM	Day Time	69.67
STUDY/GUEST	Bedroom	17.18
POWDER	Unconditioned	3.81
LAUNDRY	Unconditioned	7.72
LOUNGE	Living	22.37
BATH	Night Time	4.60
PANTRY	Day Time	5.33
KITCHEN/LIVING	Kitchen/Living	133.92
BED 3	Bedroom	22.78
ENS	Night Time	3.78
ENS	Night Time	3.71
BED 2	Bedroom	19.61
BED 4	Bedroom	14.42
ENS	Night Time	3.75
ENS	Night Time	8.11
BED 1	Bedroom	35.57
HALL	Day Time	54.53



Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ATB-005-03 B	Al Thermally Broken A DG Argon Fill High Solar Gain low-E - Clear	2.91	0.44	0.42	0.46
ATB-006-03 B	Al Thermally Broken B DG Argon Fill High Solar Gain low-E - Clear	2.90	0.51	0.48	0.54

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BATH	ATB-005-03 B	W03	1500	1200	Awning	90	W	None
BED 1	ATB-006-03 B	W20	1000	1000	Fixed	0	N	None
BED 1	ATB-005-03 B	W21	2100	1600	Hinged Door	45	N	None
BED 1	ATB-006-03 B	W23	2100	600	Fixed	0	N	None
BED 1	ATB-006-03 B	W24	2100	600	Fixed	0	N	None
BED 1	ATB-006-03 B	W28	300	2900	Fixed	0	N	None
BED 2	ATB-006-03 B	W07	600	2900	Sliding	45	W	None
BED 2	ATB-005-03 B	W22	2100	1600	Hinged Door	45	N	None
BED 2	ATB-006-03 B	W25	2100	600	Fixed	0	N	None
BED 2	ATB-006-03 B	W26	2100	600	Fixed	0	N	None
BED 2	ATB-006-03 B	W27	300	2900	Fixed	0	N	None
BED 3	ATB-006-03 B	W10	600	2200	Sliding	45	W	None
BED 3	ATB-005-03 B	W37	2000	1500	Awning	30	S	None
BED 4	ATB-005-03 B	W38	2000	1500	Awning	30	S	None
ENS	ATB-006-03 B	W09	600	1200	Sliding	45	W	None
ENS	ATB-006-03 B	W08	600	1200	Sliding	45	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*
ENS	ATB-005-03 B	W11	800	700	Awning	90	E	None
ENS	ATB-006-03 B	W12	800	2200	Sliding	45	E	None
GYM	ATB-006-03 B	W29	400	1600	Sliding	45	S	None
GYM	ATB-006-03 B	W30	400	1600	Sliding	45	S	None
HALL	ATB-006-03 B	W36	1000	1000	Fixed	0	S	None
KITCHEN/LIVING	ATB-006-03 B	W35	2400	900	Fixed	0	W	None
KITCHEN/LIVING	ATB-006-03 B	W04	600	2200	Sliding	45	W	None
KITCHEN/LIVING	ATB-006-03 B	W05	600	2200	Sliding	45	W	None
KITCHEN/LIVING	ATB-006-03 B	W19	2400	2500	Sliding Door	45	N	None
KITCHEN/LIVING	ATB-006-03 B	W17	2400	2500	Sliding Door	45	E	None
KITCHEN/LIVING	ATB-006-03 B	W18	2400	5400	Sliding Door	45	N	None
KITCHEN/LIVING	ATB-006-03 B	W16	600	3000	Fixed	0	E	None
KITCHEN/LIVING	ATB-006-03 B	W34	2400	900	Fixed	0	E	None
LOUNGE	ATB-006-03 B	W13	1500	1000	Double Hung	45	E	None
LOUNGE	ATB-006-03 B	W14	1500	1000	Double Hung	45	E	None
LOUNGE	ATB-005-03 B	W32	2400	1600	Hinged Door	80	S	None
LOUNGE	ATB-005-03 B	W33	2400	1600	Hinged Door	80	S	None
PANTRY	ATB-005-03 B	W15	1500	1200	Awning	90	E	None
POWDER	ATB-006-03 B	W06	1500	900	Double Hung	45	S	None
STUDY/GUEST	ATB-006-03 B	W01	1500	1200	Double Hung	45	W	None
STUDY/GUEST	ATB-006-03 B	W02	1500	1200	Double Hung	45	W	None
STUDY/GUEST	ATB-005-03 B	W31	2400	1600	Hinged Door	80	S	None

* Refer to glossary.

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)	Orientation	Outdoor shade	Indoor shade
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None

Skylight type and performance

Skylight ID	Skylight description
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None

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
GARAGE	2400	5400	90	S
KITCHEN/LIVING	2400	2000	90	S
LAUNDRY	2040	820	90	W

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*
CAV-BRICK-110-110-EXP-A	Cavity Brick Wall - 110mm/110mm Exposed	0.50	Medium	0.00	No
CAV-BRICK-110-110-EXP-B	Cavity Brick Wall - 110mm/110mm Exposed	0.50	Medium	1.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	CAV-BRICK-110-110-EXP-B	2700	2619	W	1654	Yes
BED 1	CAV-BRICK-110-110-EXP-B	2600	6680	N	700	Yes
BED 1	CAV-BRICK-110-110-EXP-B	2600	7077	E	700	No
BED 2	CAV-BRICK-110-110-EXP-B	2600	6420	W	700	Yes
BED 2	CAV-BRICK-110-110-EXP-B	2600	3448	N	700	Yes
BED 3	CAV-BRICK-110-110-EXP-B	2600	7719	W	700	Yes
BED 3	CAV-BRICK-110-110-EXP-B	2600	3313	S	700	No
BED 4	CAV-BRICK-110-110-EXP-B	2600	3685	E	700	No
BED 4	CAV-BRICK-110-110-EXP-B	2600	4012	S	700	No
ENS	CAV-BRICK-110-110-EXP-B	2600	1302	W	700	Yes
ENS	CAV-BRICK-110-110-EXP-B	2600	1276	W	700	Yes
ENS	CAV-BRICK-110-110-EXP-B	2600	2584	E	700	No
ENS	CAV-BRICK-110-110-EXP-B	2600	3311	E	700	No
GARAGE	CAV-BRICK-110-110-EXP-A	2400	5713	N		No
GARAGE	CAV-BRICK-110-110-EXP-A	2400	11241	E		No
GARAGE	CAV-BRICK-110-110-EXP-A	2400	5713	S	1324	Yes
GYM	CAV-BRICK-110-110-EXP-B	2400	8054	W		No
GYM	CAV-BRICK-110-110-EXP-B	2400	2967	N		No
GYM	CAV-BRICK-110-110-EXP-B	2400	1223	NW		No
GYM	CAV-BRICK-110-110-EXP-B	2400	1197	NNW		No
GYM	CAV-BRICK-110-110-EXP-B	2400	290	N		No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
GYM	CAV-BRICK-110-110-EXP-B	2400	2664	W		No
GYM	CAV-BRICK-110-110-EXP-B	2400	2258	N		No
GYM	CAV-BRICK-110-110-EXP-B	1500	7150	S		No
GYM	CAV-BRICK-110-110-EXP-B	2400	1197	E	6112	Yes
GYM	CAV-BRICK-110-110-EXP-B	900	7150	S		No
HALL	CAV-BRICK-110-110-EXP-B	2600	2537	S	1027	No
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	1230	W	5188	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	5624	W	500	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	6889	N	1800	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	3319	E	6780	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	6280	N	5119	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	6110	E	500	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	934	S	9062	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	2465	S	2900	No
KITCHEN/LIVING	CAV-BRICK-110-110-EXP-B	2700	1230	E	6516	Yes
LAUNDRY	CAV-BRICK-110-110-EXP-B	2700	2845	W	500	Yes
LOUNGE	CAV-BRICK-110-110-EXP-B	2700	4035	E	500	Yes
LOUNGE	CAV-BRICK-110-110-EXP-B	2700	5713	S	1100	Yes
LOUNGE	CAV-BRICK-110-110-EXP-B	2700	934	N	15156	Yes
PANTRY	CAV-BRICK-110-110-EXP-B	2700	3456	E	1434	Yes
POWDER	CAV-BRICK-110-110-EXP-B	2700	1277	W	500	Yes
POWDER	CAV-BRICK-110-110-EXP-B	2700	1154	S	8269	Yes
STUDY/GUEST	CAV-BRICK-110-110-EXP-B	2700	4104	W	500	Yes
STUDY/GUEST	CAV-BRICK-110-110-EXP-B	2700	1154	N	15087	Yes
STUDY/GUEST	CAV-BRICK-110-110-EXP-B	2700	4467	S	1100	Yes

* Refer to glossary.

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
BV-NONREFL-CAV	Brick Veneer Stud Wall with Non-Reflective Sarking	25.2	2.50
INT-PB	Internal Plasterboard Stud Wall	123.4	0.00
SGL-BRICK-110-EXP	Single 110mm Brick Wall - Exposed	111.3	0.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	4.4	N/A	0.15	Tile (8mm)
BATH	CSOG-200: Concrete Slab on Ground (200mm)	0.2	N/A	0.00	Tile (8mm)
BED 1	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	22.5	N/A	0.15	Timber (12mm)
BED 1	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	13.1	N/A	2.50	Timber (12mm)
BED 2	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	19.6	N/A	0.15	Timber (12mm)
BED 3	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	22.7	N/A	0.15	Timber (12mm)
BED 4	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	14.4	N/A	0.15	Timber (12mm)
ENS	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	19.3	N/A	0.15	Tile (8mm)
GARAGE	CSOG-200: Concrete Slab on Ground (200mm)	64.2	N/A	0.00	Exposed
GYM	CSOG-200: Concrete Slab on Ground (200mm)	4.2	N/A	0.00	Timber (12mm)
GYM	CSOG-200: Concrete Slab on Ground (200mm)	65.4	N/A	0.00	Tile (8mm)
HALL	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	54.4	N/A	0.15	Timber (12mm)
HALL	CSOG-200: Concrete Slab on Ground (200mm)	0.2	N/A	0.00	Timber (12mm)
KITCHEN/LIVING	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	30.3	N/A	2.50	Timber (12mm)
KITCHEN/LIVING	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	42.7	N/A	0.15	Timber (12mm)
KITCHEN/LIVING	CSOG-200: Concrete Slab on Ground (200mm)	60.8	N/A	0.00	Timber (12mm)
LAUNDRY	CSOG-200: Concrete Slab on Ground (200mm)	7.7	N/A	0.00	Tile (8mm)
LOUNGE	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	22.4	N/A	2.50	Timber (12mm)
PANTRY	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	5.3	N/A	2.50	Timber (12mm)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
POWDER	CSOG-200: Concrete Slab on Ground (200mm)	3.8	N/A	0.00	Tile (8mm)
STUDY/GUEST	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	17.2	N/A	0.15	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 1	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 2	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 3	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 4	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ENS	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
GYM	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	7.00	No
HALL	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
KITCHEN/LIVING	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
LAUNDRY	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
LOUNGE	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
PANTRY	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
POWDER	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
STUDY/GUEST	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	1	Downlight	200	Sealed
BATH	1	Exhaust Fan	350	Sealed
BED 1	7	Downlight	200	Sealed
BED 2	4	Downlight	200	Sealed
BED 3	5	Downlight	200	Sealed

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BED 4	3	Downlight	200	Sealed
ENS	5	Downlight	200	Sealed
ENS	4	Exhaust Fan	350	Sealed
GYM	14	Downlight	200	Sealed
GYM	1	Exhaust Fan	350	Sealed
HALL	11	Downlight	200	Sealed
KITCHEN/LIVING	27	Downlight	200	Sealed
KITCHEN/LIVING	1	Exhaust Fan	350	Sealed
LAUNDRY	2	Downlight	200	Sealed
LAUNDRY	1	Exhaust Fan	350	Sealed
LOUNGE	4	Downlight	200	Sealed
PANTRY	1	Downlight	200	Sealed
POWDER	1	Downlight	200	Sealed
POWDER	1	Exhaust Fan	350	Sealed
STUDY/GUEST	3	Downlight	200	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	0.00	0.88	Dark (Char Grey)
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
None				

* Refer to glossary.



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-1H0BE8-02

Thermal performance
star rating

Generated on 01 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address Unit 02, 4 Wirrilda Way , Forestville,
NSW, 2087

Lot/DP 6/26948

NCC Class* 1a

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan Project No. 2151 16/04/2025 A

Prepared by GGA (BSA21063)

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 45.1	Suburban
Unconditioned* 3.3	NatHERS climate zone
Total 48.5	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name Krzysztof Kwiatkowski

Business name Building Sustainability Assessments

Email enquiries@buildingsustainability.net.au

Phone +61 413626023

Accreditation No. DMN/24/2214

Assessor Accrediting Organisation DMN

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2

State/Territory variation Yes

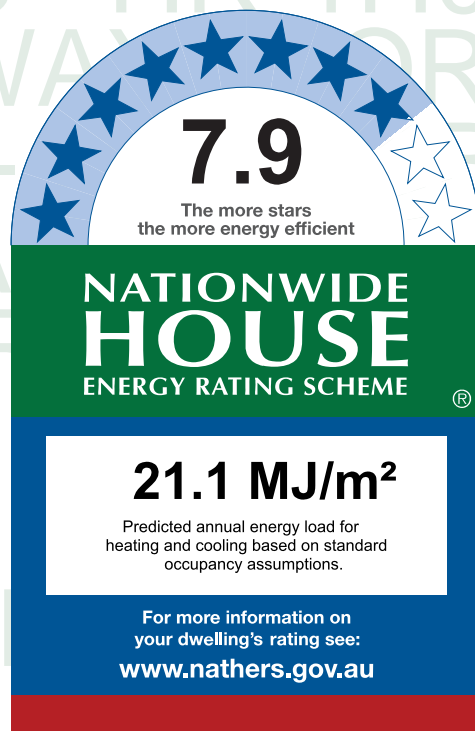
National Construction Code (NCC) requirements

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	12.8	8.3
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-1H0BE8-02>.

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.

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"/>
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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"/>
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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"/>			
--	--------------------------	--------------------------	--	--	--

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

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.
- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.
- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m ²)
BED 1	Bedroom	10.51
BED 2	Bedroom	10.51
BATH	Unconditioned	3.35
KITCHEN/LIVING	Kitchen/Living	24.11

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BATH	ALM-002-01 A	W07	900	800	Sliding	45	S	None
BED 1	ALM-002-01 A	W03	900	1300	Sliding	45	W	None
BED 1	ALM-002-01 A	W06	900	1300	Sliding	45	S	None
BED 2	ALM-002-01 A	W04	900	1300	Sliding	45	W	None
BED 2	ALM-002-01 A	W05	900	1300	Sliding	45	N	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
KITCHEN/LIVING	ALM-002-01 A	W09	600	500	Sliding	45	N	None
KITCHEN/LIVING	ALM-002-01 A	W10	600	500	Sliding	45	N	None
KITCHEN/LIVING	ALM-002-01 A	W01	2100	2300	Sliding Door	45	E	None
KITCHEN/LIVING	ALM-002-01 A	W02	600	1600	Fixed	0	E	None
KITCHEN/LIVING	ALM-002-01 A	W08	600	1600	Sliding	45	S	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CAV-BRICK-110-110-EXP	Cavity Brick Wall - 110mm/110mm Exposed	0.50	Medium	1.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	CAV-BRICK-110-110-EXP	2600	1784	S	732	Yes
BED 1	CAV-BRICK-110-110-EXP	2600	2973	W	700	Yes
BED 1	CAV-BRICK-110-110-EXP	2600	3534	S	732	Yes
BED 2	CAV-BRICK-110-110-EXP	2600	2973	W	700	Yes
BED 2	CAV-BRICK-110-110-EXP	2600	3534	N	724	No
KITCHEN/LIVING	CAV-BRICK-110-110-EXP	2600	4598	N	724	No
KITCHEN/LIVING	CAV-BRICK-110-110-EXP	2600	6087	E	1274	Yes
KITCHEN/LIVING	CAV-BRICK-110-110-EXP	2600	2692	S	732	Yes

Internal wall type

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

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	CSOG-200: Concrete Slab on Ground (200mm)	3.3	N/A	0.00	Tile (8mm)
BED 1	CSOG-200: Concrete Slab on Ground (200mm)	10.5	N/A	0.00	Timber (12mm)
BED 2	CSOG-200: Concrete Slab on Ground (200mm)	10.5	N/A	0.00	Timber (12mm)
KITCHEN/LIVING	CSOG-200: Concrete Slab on Ground (200mm)	24.1	N/A	0.00	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 1	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
BED 2	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
KITCHEN/LIVING	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	1	Downlight	200	Sealed
BATH	1	Exhaust Fan	350	Sealed
BED 1	2	Downlight	200	Sealed
BED 2	2	Downlight	200	Sealed
KITCHEN/LIVING	3	Downlight	200	Sealed
KITCHEN/LIVING	2	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	0.00	0.88	Dark (Char Grey)

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

**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.