

Nationwide House Energy Rating Scheme®

Class 1 Summary

NatHERS® Certificate No. #HR-NRSL5Q-01

Generated on 13 Jun 2024 using Hero 4.0

Property

Address 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP 159//755687
NatHERS climate zone 10 - Brisbane AMO



Accredited assessor

Name Duncan Hope
Business name Senica Consultancy Group
Email duncan@senica.com.au
Phone +61 280067784
Accreditation No. DMN/14/1658
Assessor Accrediting Organisation DMN

Verification

To verify this certificate, scan the QR code or visit <http://www.hero-software.com.au/pdf/HR-NRSL5Q-01>.
When using either link, ensure you are visiting <http://www.hero-software.com.au>



National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

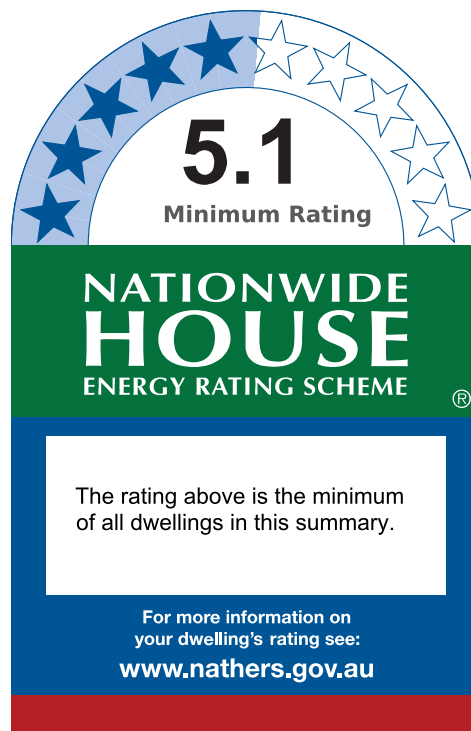
The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

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

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-54AA2K-01	8A01	10.8 (15)	41.2 (54)	52.1	6.1	n/a
HR-4I6FY8-01	8A02	14.9 (15)	49.4 (54)	64.3	5.1	n/a
HR-S9VZED-01	8A03	13.6 (15)	40.8 (54)	54.4	5.9	n/a
HR-T7HISS-01	8A04	12.8 (15)	32.6 (54)	45.4	6.8	n/a
HR-F5TME3-01	8A05	13.3 (15)	33.1 (54)	46.4	6.7	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.

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-5IBL75-01	8A06	15.1 (15)	38.0 (54)	53.1	5.9	n/a
HR-SLWUOC-01	8A07	15.0 (15)	35.4 (54)	50.4	6.3	n/a
HR-8VMDYX-01	8A08	14.9 (15)	33.4 (54)	48.3	6.4	n/a
HR-JKBBB4-01	8A09	15.2 (15)	34.4 (54)	49.6	6.3	n/a
HR-OSVPIO-01	8A10	15.0 (15)	35.4 (54)	50.4	6.3	n/a
HR-P2NF2O-01	8A11	15.1 (15)	40.8 (54)	55.9	5.8	n/a
HR-4PZS0T-01	8A12	14.1 (15)	35.2 (54)	49.3	6.4	n/a
HR-86GOMZ-01	8A13	13.8 (15)	38.0 (54)	51.8	6.1	n/a
HR-IA0RLH-01	8A14	14.8 (15)	42.5 (54)	57.2	5.6	n/a
HR-HVLUZJ-01	8A15	15.2 (15)	45.1 (54)	60.2	5.4	n/a
HR-FHT166-01	8A16	13.8 (15)	42.4 (54)	56.1	5.7	n/a
HR-2LTUFY-01	8A17	15.1 (15)	43.1 (54)	58.2	5.6	n/a
HR-WCA325-01	8A18	14.7 (15)	42.6 (54)	57.3	5.6	n/a
HR-3XJY37-01	8A19	14.8 (15)	42.5 (54)	57.2	5.6	n/a
HR-IEH4BU-01	8A20	15.1 (15)	43.1 (54)	58.2	5.6	n/a
HR-33HSMI-01	8A21	14.3 (15)	41.6 (54)	55.9	5.8	n/a
HR-UHH889-01	8A22	14.3 (15)	41.6 (54)	55.9	5.8	n/a
HR-WHB2LC-01	8A23	12.7 (15)	46.0 (54)	58.7	5.5	n/a
HR-HUXWZN-01	8A24	12.7 (15)	46.0 (54)	58.7	5.5	n/a
HR-MLT724-01	8A25	14.5 (15)	43.3 (54)	57.8	5.6	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 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-54AA2K-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A01, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 100.1	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 132.6	10 - Brisbane AMO
Garage 24.7	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

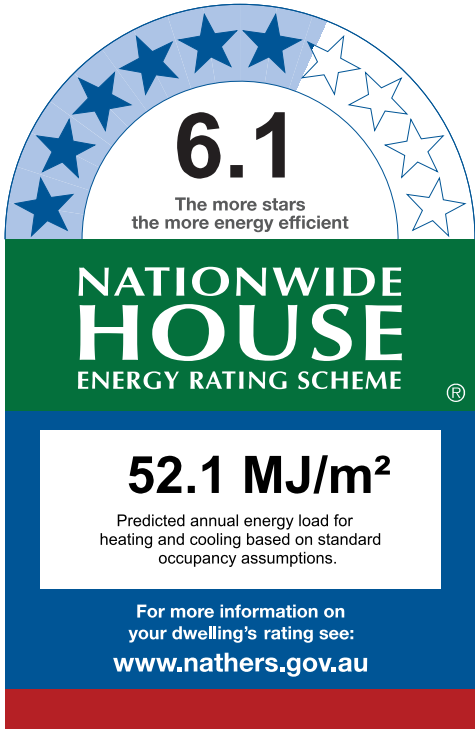
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	10.8	41.2
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-54AA2K-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted 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.



Predicted onsite renewable energy impact

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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	50.54
Garage	Garage	24.71
Bedroom 02	Bedroom	11.41
Bathroom	Unconditioned	7.83
Bedroom 03	Bedroom	11.41
Ensuite	Night Time	4.80
WIR	Night Time	3.01
Bedroom 01	Bedroom	14.08
Hallway	Day Time	4.82

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
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* Refer to glossary.



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	Sliding	45	S	None
Bedroom 01	GJA-013-01 A	06.24s	600	2400	Sliding	45	N	None
Bedroom 01	GJA-013-01 A	06.24s	600	2400	Sliding	45	E	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None
Bedroom 03	GJA-013-01 A	06.21s	600	2100	Sliding	45	E	None
Bedroom 03	GJA-013-01 A	06.21s	600	2100	Sliding	45	S	None
Ensuite	GJA-013-01 A	06.18s	600	1800	Sliding	45	E	None
Garage	GJA-080-01 A	21.09dr	2040	770	Hinged Door	0	S	None
Kitchen/Living	GJA-019-01 A	24.09dh	2400	900	Double Hung	45	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-001-01 A	24.24aw	2400	2400	Awning	60	N	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	3000	0	W
Kitchen/Living	2040	870	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	2250	S	452	Yes
Bedroom 01	WB-REFL-CAV	2560	4141	N	2342	Yes
Bedroom 01	WB-REFL-CAV	2560	3401	E	454	Yes
Bedroom 01	WB-REFL-CAV	2560	1140	W	5403	Yes
Bedroom 02	WB-REFL-CAV	2410	3001	S	452	Yes
Bedroom 03	WB-REFL-CAV	2410	3801	E	454	Yes
Bedroom 03	WB-REFL-CAV	2410	3001	S	452	Yes
Ensuite	WB-REFL-CAV	2560	3200	E	454	Yes
Garage	WB-REFL-CAV	2560	3841	N	6093	Yes
Garage	WB-REFL-CAV	2560	6502	S	452	Yes
Garage	WB-REFL-CAV	2560	3801	W		Yes
Kitchen/Living	WB-REFL-CAV	3010	1450	W	3203	Yes
Kitchen/Living	WB-REFL-CAV	3010	2750	S	1902	Yes
Kitchen/Living	WB-REFL-CAV	3010	4101	W	453	Yes
Kitchen/Living	WB-REFL-CAV	3010	9702	N	3482	Yes

* Refer to glossary.

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	83.9	0.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	3.3	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	7.8	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	14.1	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	11.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	11.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.8	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	24.7	N/A	0.00	Exposed
Hallway	TIMB-001: Suspended Timber Floor	4.8	Open	0.15	Timber (12mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	50.5	Open	0.15	Timber (12mm)
WIR	TIMB-001: Suspended Timber Floor	3.0	Open	0.15	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	2	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Hallway	1	Downlight	200	Sealed
Kitchen/Living	4	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
WIR	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 01	1	1200
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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)

* Refer to glossary.



Cooling system

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

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
------	-----------	--------------------	--------------------------	------------------------------

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-4I6FY8-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A02, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 98.4	Suburban
Unconditioned* 6.0	NatHERS climate zone
Total 129.5	10 - Brisbane AMO
Garage 25.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

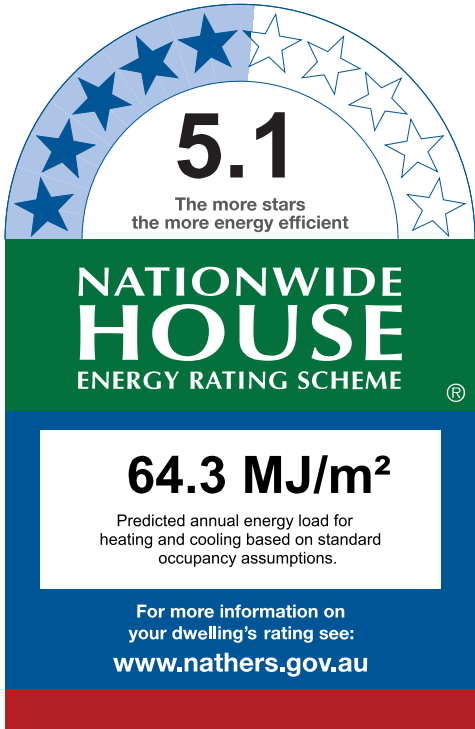
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.9	49.4
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-4I6FY8-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Livin g	Kitchen/Living	46.37
Master Bedroom	Bedroom	19.01
Ensuite	Night Time	4.74
Bedroom 02	Bedroom	10.75
Garage	Garage	25.09
Bedroom 03	Bedroom	10.70
Bathroom	Unconditioned	5.97
Hallway	Day Time	6.84

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-011-01 A	Type 130 Series Fixed Window SG 4Clr	5.95	0.79	0.75	0.83
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
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* Refer to glossary.



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	E	None
Bedroom 03	GJA-001-01 A	21.12aw	2100	1200	Awning	60	W	None
Ensuite	GJA-013-01 A	06.15s	600	1500	Sliding	45	E	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	0	S	None
Kitchen/Livin g	GJA-013-01 A	07.18s	700	1800	Sliding	45	W	None
Kitchen/Livin g	GJA-070-04 A	24.32ssd	2400	3200	Sliding Door	60	N	None
Kitchen/Livin g	GJA-019-01 A	21.09dh	2100	900	Double Hung	45	E	None
Kitchen/Livin g	GJA-070-04 A	24.34ssd	2400	3400	Sliding Door	45	N	None
Kitchen/Livin g	GJA-011-01 A	23.06f	2300	600	Fixed	0	W	None
Kitchen/Livin g	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	W	None
Master Bedroom	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	None
Master Bedroom	GJA-013-01 A	06.24s	600	2400	Sliding	45	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
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
Garage	2200	3000	0	W

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
FC-REFL-CAV	Fibre-Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes
Timber Cladding Double Thickness	Timber Cladding Double Thickness	0.50	Medium	2.00	Yes
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	2446	W	556	Yes
Bedroom 02	WB-REFL-CAV	2410	3701	E	386	Yes
Bedroom 03	WB-REFL-CAV	2410	3101	W	556	Yes
Bedroom 03	WB-REFL-CAV	2410	1100	S		Yes
Ensuite	WB-REFL-CAV	2560	1501	E		Yes
Ensuite	WB-REFL-CAV	2560	400	S	3983	Yes
Garage	FC-REFL-CAV	2560	3800	E		Yes
Garage	FC-REFL-CAV	2560	6602	S		Yes
Garage	FC-REFL-CAV	2560	3800	W		Yes
Garage	FC-REFL-CAV	2560	400	N	3829	Yes
Kitchen/Livin g	WB-REFL-CAV	3010	700	S	3035	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Livin g	WB-REFL-CAV	3010	4481	W	544	Yes
Kitchen/Livin g	Timber Cladding Double Thickness	3862	4001	N	1202	Yes
Kitchen/Livin g	WB-REFL-CAV	4715	2136	E	4159	Yes
Kitchen/Livin g	WB-REFL-CAV	3968	3591	N	3428	Yes
Kitchen/Livin g	WB-REFL-CAV	3010	2901	W	1292	Yes
Kitchen/Livin g	WB-REFL-CAV	3225	2681	S	134	Yes
Master Bedroom	WB-REFL-CAV	2560	3401	N	3428	Yes
Master Bedroom	WB-REFL-CAV	2560	5591	E		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
FC-REFL-CAV	Fibre-Cement Clad Battened (Refl Cavity) Stud Wall	0.9	2.00
INT-PB	Internal Plasterboard Stud Wall	68.4	0.00
INT-PB	Internal Plasterboard Stud Wall	12.7	2.00
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	2.5	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	4.2	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.0	Open	0.15	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	10.7	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.7	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.7	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	25.1	N/A	0.00	Exposed
Hallway	TIMB-001: Suspended Timber Floor	6.8	Open	0.15	Timber (12mm)
Kitchen/Livin g	TIMB-001: Suspended Timber Floor	46.4	Open	0.15	Timber (12mm)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Master Bedroom	TIMB-001: Suspended Timber Floor	19.0	Open	0.15	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Kitchen/Livin g	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	2	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Hallway	1	Downlight	200	Sealed
Kitchen/Livin g	7	Downlight	200	Sealed
Kitchen/Livin g	1	Exhaust Fan	350	Sealed
Master Bedroom	3	Downlight	200	Sealed

* Refer to glossary.



Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Livin g	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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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-S9VZED-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A03, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 100.0	Suburban
Unconditioned* 5.9	NatHERS climate zone
Total 105.9	10 - Brisbane AMO
Garage 0.0	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

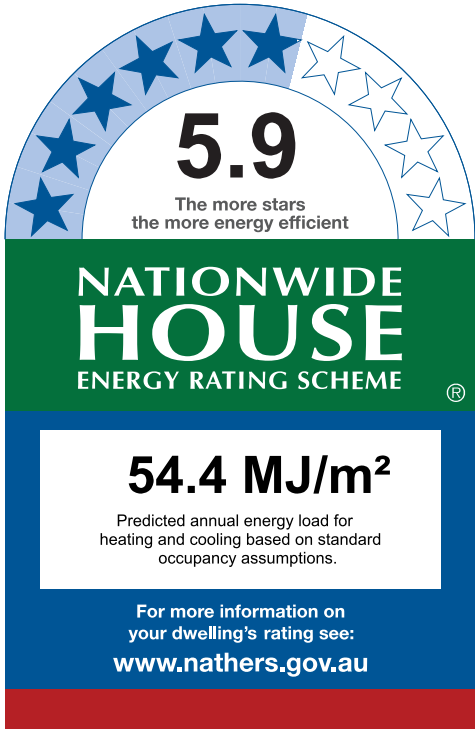
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	13.6	40.8
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-S9VZED-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABC 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 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.



Predicted onsite renewable energy impact

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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	52.19
Bedroom 02	Bedroom	10.80
Vestibule	Day Time	4.96
Bathroom	Unconditioned	5.92
Bedroom 03	Bedroom	10.81
Ensuite	Night Time	4.31
Master Bedroom	Bedroom	16.93

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*
Bathroom	ALM-002-01 A	06.15s	600	1500	Sliding	45	S	None
Bedroom 02	ALM-002-01 A	06.24s	600	2400	Sliding	45	S	None
Bedroom 03	ALM-002-01 A	06.24s	600	2400	Sliding	45	S	None
Ensuite	ALM-002-01 A	09.08aw	900	750	Awning	90	S	None
Kitchen/Living	ALM-002-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	ALM-002-01 A	08.24s	800	2400	Sliding	45	N	None

* Refer to glossary.



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	ALM-002-01 A	24.34ssd	2400	3400	Sliding Door	60	E	None
Kitchen/Living	ALM-002-01 A	24.24rd	2400	2400	Sliding Door	45	W	None
Kitchen/Living	ALM-002-01 A	23.09dr	2300	900	Hinged Door	90	W	None
Master Bedroom	ALM-002-01 A	06.24s	600	2400	Sliding	45	E	None
Master Bedroom	ALM-002-01 A	06.24s	600	2400	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*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	3101	S	450	Yes
Bedroom 02	WB-REFL-CAV	2410	3000	S	450	Yes
Bedroom 02	WB-REFL-CAV	2410	3601	W	6088	Yes
Bedroom 03	WB-REFL-CAV	2410	3001	S	450	Yes
Ensuite	WB-REFL-CAV	2410	2101	S	450	Yes
Kitchen/Living	WB-REFL-CAV	3010	12393	N	450	Yes
Kitchen/Living	WB-REFL-CAV	3010	3701	E	3020	Yes
Kitchen/Living	WB-REFL-CAV	3010	4211	W	6088	Yes
Master Bedroom	WB-REFL-CAV	2560	2480	N	4151	Yes
Master Bedroom	WB-REFL-CAV	2560	4201	E	450	Yes
Master Bedroom	WB-REFL-CAV	2560	3400	S	450	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	9.5	2.00
INT-PB	Internal Plasterboard Stud Wall	71.5	0.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.9	Open	0.00	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	10.8	Open	0.00	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.8	Open	0.00	Carpet

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Ensuite	TIMB-001: Suspended Timber Floor	4.3	Open	0.00	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	52.2	Open	0.00	Timber (12mm)
Master Bedroom	TIMB-001: Suspended Timber Floor	16.9	Open	0.00	Carpet
Vestibule	TIMB-001: Suspended Timber Floor	5.0	Open	0.00	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Vestibule	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	2	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	2	Downlight	200	Sealed

* Refer to glossary.



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Vestibule	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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			

* Refer to glossary.



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-T7HISS-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A04, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.7	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 118.6	10 - Brisbane AMO
Garage 18.4	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

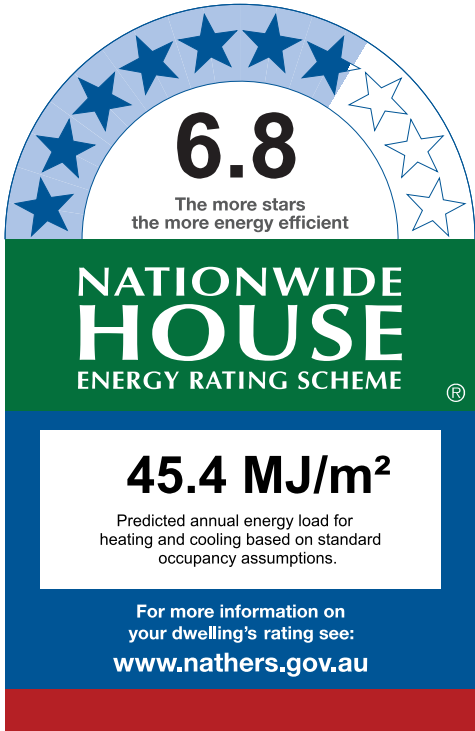
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	12.8	32.6
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-T7HISS-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	49.68
Vestibule	Day Time	1.71
Bedroom 02	Bedroom	10.81
Ensuite	Night Time	4.56
Bathroom	Unconditioned	6.46
Bedroom 03	Bedroom	10.01
Garage	Garage	18.45
Master Bedroom	Bedroom	16.94

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None
Ensuite	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	0	S	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	E	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	W	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	W	None
Master Bedroom	GJA-013-01 A	06.24s	600	2400	Sliding	45	N	None
Master Bedroom	GJA-013-01 A	09.24s	900	2400	Sliding	45	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
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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	2700	0	W

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	3101	S	451	Yes
Bedroom 02	WB-REFL-CAV	2560	3601	S	451	Yes
Bedroom 03	WB-REFL-CAV	2560	3000	S	451	Yes
Ensuite	WB-REFL-CAV	3010	1901	S	451	Yes
Garage	WB-REFL-CAV	2560	3001	W	1187	Yes
Garage	WB-REFL-CAV	2560	4001	N	3950	Yes
Garage	WB-REFL-CAV	2560	6502	S	451	Yes
Kitchen/Living	WB-REFL-CAV	3010	12473	N	449	Yes
Kitchen/Living	WB-REFL-CAV	3010	2861	E	5834	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	W	3555	Yes
Master Bedroom	WB-REFL-CAV	3010	5291	N	3310	Yes
Master Bedroom	WB-REFL-CAV	3010	4141	E	453	Yes
Master Bedroom	WB-REFL-CAV	3010	3300	S	451	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	21.1	2.00
INT-PB	Internal Plasterboard Stud Wall	69.8	0.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.8	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.5	Open	0.15	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	10.8	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.0	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.6	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.4	N/A	0.00	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	49.7	Open	0.15	Timber (12mm)
Master Bedroom	TIMB-001: Suspended Timber Floor	16.9	Open	0.15	Carpet
Vestibule	TIMB-001: Suspended Timber Floor	1.7	Open	0.15	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Vestibule	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	2	Downlight	200	Sealed
Vestibule	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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)

* Refer to glossary.



Cooling system

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

Heating system

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

Hot water system

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

Pool / spa equipment

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

Onsite Renewable Energy *schedule*

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

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-F5TME3-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A05, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.7	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 118.6	10 - Brisbane AMO
Garage 18.4	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

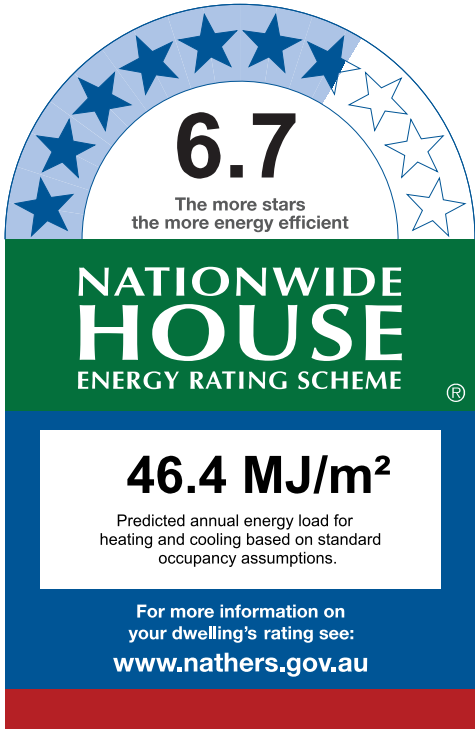
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	13.3	33.1
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-F5TME3-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

* Refer to glossary.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	49.68
Vestibule	Day Time	1.71
Bedroom 02	Bedroom	10.81
Ensuite	Night Time	4.56
Bathroom	Unconditioned	6.46
Bedroom 03	Bedroom	10.01
Garage	Garage	18.45
Master Bedroom	Bedroom	16.94

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None
Ensuite	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	0	S	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	E	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	W	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	W	None
Master Bedroom	GJA-013-01 A	06.24s	600	2400	Sliding	45	N	None
Master Bedroom	GJA-013-01 A	09.24s	900	2400	Sliding	45	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
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
Garage	2200	2700	0	W

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	3101	S	451	Yes
Bedroom 02	WB-REFL-CAV	2560	3601	S	451	Yes
Bedroom 03	WB-REFL-CAV	2560	3000	S	451	Yes
Ensuite	WB-REFL-CAV	3010	1901	S	451	Yes
Garage	WB-REFL-CAV	2560	3001	W		Yes
Garage	WB-REFL-CAV	2560	4001	N	3949	Yes
Garage	WB-REFL-CAV	2560	6502	S	451	Yes
Kitchen/Living	WB-REFL-CAV	3010	12473	N	449	Yes
Kitchen/Living	WB-REFL-CAV	3010	2861	E	5834	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	W	3000	Yes
Master Bedroom	WB-REFL-CAV	3010	5291	N	3310	Yes
Master Bedroom	WB-REFL-CAV	3010	4141	E	453	Yes
Master Bedroom	WB-REFL-CAV	3010	3300	S	451	Yes



Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	21.1	2.00
INT-PB	Internal Plasterboard Stud Wall	69.8	0.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.8	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.5	Open	0.15	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	10.8	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.0	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.6	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.4	N/A	0.00	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	49.7	Open	0.15	Timber (12mm)
Master Bedroom	TIMB-001: Suspended Timber Floor	16.9	Open	0.15	Carpet
Vestibule	TIMB-001: Suspended Timber Floor	1.7	Open	0.15	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Vestibule	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	2	Downlight	200	Sealed
Vestibule	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
------	-----------	--------------------	--------------------------	------------------------------

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-5IBL75-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A06, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.4	Suburban
Unconditioned* 5.6	NatHERS climate zone
Total 117.6	10 - Brisbane AMO
Garage 18.6	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

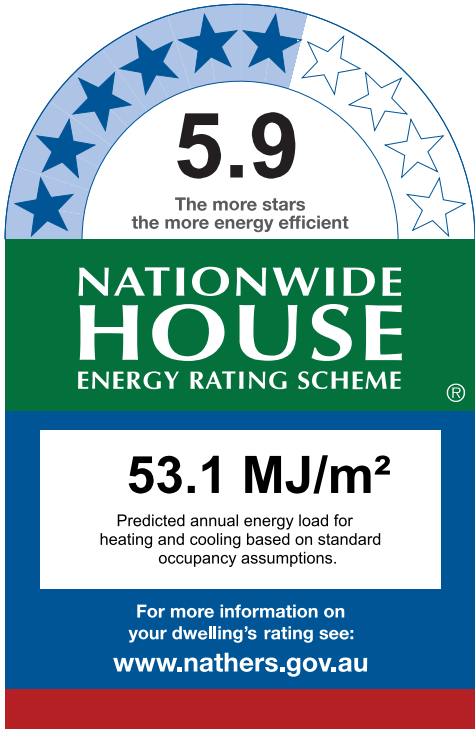
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	38.0
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-5IBL75-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted 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.



Predicted onsite renewable energy impact

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?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* 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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	47.74
Bedroom 01	Bedroom	15.59
Ensuite	Night Time	4.30
Bedroom 03	Bedroom	10.37
Bathroom	Unconditioned	5.59
Laundry	Day Time	5.08
Bedroom 02	Bedroom	10.29
Garage	Garage	18.61

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	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*
Bedroom 01	GJA-013-01 A	09.24s	900	2400	Sliding	45	S	None
Bedroom 01	GJA-019-01 A	21.08dh	2100	750	Double Hung	45	E	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Ensuite	GJA-001-01 A	12.06s	1200	600	Awning	90	W	None
Kitchen/Living	GJA-070-04 A	24.27sd	2400	2700	Sliding Door	45	N	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27s	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-070-04 A	24.33ssd	2400	3300	Sliding Door	60	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	

* Refer to glossary.



Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	2700	0	N

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	2741	W	430	Yes
Bedroom 01	WB-REFL-CAV	3010	3341	W	430	Yes
Bedroom 01	WB-REFL-CAV	3010	3881	S		Yes
Bedroom 01	WB-REFL-CAV	3010	2821	E	4500	Yes
Bedroom 02	WB-REFL-CAV	2560	3451	W	430	Yes
Bedroom 03	WB-REFL-CAV	2560	2850	W	430	Yes
Ensuite	WB-REFL-CAV	3010	1801	W	430	Yes
Garage	WB-REFL-CAV	2560	3180	N		Yes
Garage	WB-REFL-CAV	2560	5851	E	5201	Yes
Garage	WB-REFL-CAV	2560	5851	W	430	Yes
Kitchen/Living	WB-REFL-CAV	3010	4682	N	3431	Yes
Kitchen/Living	WB-REFL-CAV	3010	4481	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	700	S	9978	Yes
Kitchen/Living	WB-REFL-CAV	3010	3331	E	1129	Yes



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	700	N	11243	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	3982	S		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	64.0	0.00
INT-PB	Internal Plasterboard Stud Wall	25.2	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	6.3	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.6	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	15.6	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.3	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.3	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.6	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	47.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.1	Open	0.15	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 01	1	1200
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
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Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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-SLWUOC-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address 8A07, 30 Chinbible Avenue,
MULLUMBIMBY, NSW, 2482

Lot/DP 159//755687

NCC Class* 1a

Floor/all Floors 1 of 1 floors

Type New

Plans

Main Plan Project No. 23020

Prepared by Story Design Collective

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	93.4	Suburban
Unconditioned*	5.6	NatHERS climate zone
Total	117.6	10 - Brisbane AMO
Garage	18.6	



Accredited assessor

Name Duncan Hope

Business name Senica Consultancy Group

Email duncan@senica.com.au

Phone +61 280067784

Accreditation No. DMN/14/1658

Assessor Accrediting Organisation DMN

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2

State/Territory variation Yes

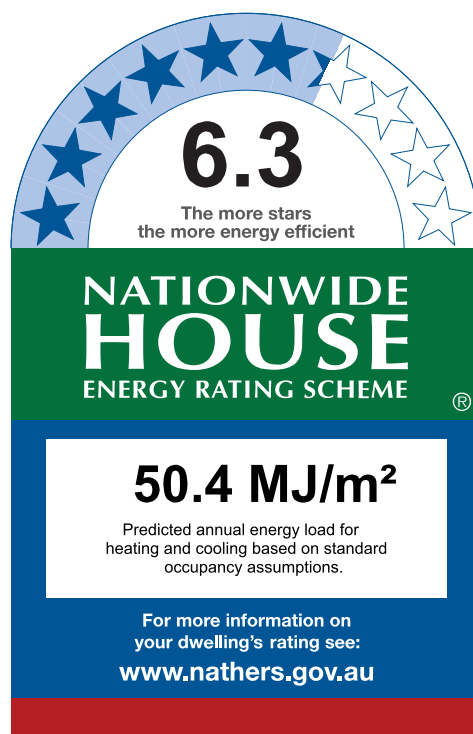
National Construction Code (NCC) requirements

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.

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.0	35.4
Load limits	15	54

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 Y

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-SLWUOC-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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

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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	47.74
Bedroom 01	Bedroom	15.59
Ensuite	Night Time	4.30
Bedroom 03	Bedroom	10.37
Bathroom	Unconditioned	5.59
Laundry	Day Time	5.08
Bedroom 02	Bedroom	10.29
Garage	Garage	18.61

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	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*
Bedroom 01	GJA-013-01 A	09.24s	900	2400	Sliding	45	S	None
Bedroom 01	GJA-019-01 A	21.08dh	2100	750	Double Hung	45	E	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Ensuite	GJA-001-01 A	12.06s	1200	600	Awning	90	W	None
Kitchen/Living	GJA-070-04 A	24.27sd	2400	2700	Sliding Door	45	N	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27s	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-070-04 A	24.33ssd	2400	3300	Sliding Door	60	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	2700	0	N

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	2741	W		Yes
Bedroom 01	WB-REFL-CAV	3010	3341	W		Yes
Bedroom 01	WB-REFL-CAV	3010	3881	S		Yes
Bedroom 01	WB-REFL-CAV	3010	2821	E	4000	Yes
Bedroom 02	WB-REFL-CAV	2560	3451	W		Yes
Bedroom 03	WB-REFL-CAV	2560	2850	W		Yes
Ensuite	WB-REFL-CAV	3010	1801	W		Yes
Garage	WB-REFL-CAV	2560	181	N		No
Garage	WB-REFL-CAV	2560	5851	E	4701	Yes
Garage	WB-REFL-CAV	2560	5851	W		Yes
Garage	WB-REFL-CAV	2560	2999	N	370	Yes
Kitchen/Living	WB-REFL-CAV	3010	4682	N	6311	Yes
Kitchen/Living	WB-REFL-CAV	3010	4481	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	700	S	9978	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	3331	E	629	Yes
Kitchen/Living	WB-REFL-CAV	3010	700	N	10747	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	3982	S	2736	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	64.0	0.00
INT-PB	Internal Plasterboard Stud Wall	25.2	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	6.3	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.6	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	15.6	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.3	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.3	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.6	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	47.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.1	Open	0.15	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 01	1	1200
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200



Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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-8VMDYX-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A08, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.4	Suburban
Unconditioned* 5.6	NatHERS climate zone
Total 117.6	10 - Brisbane AMO
Garage 18.6	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

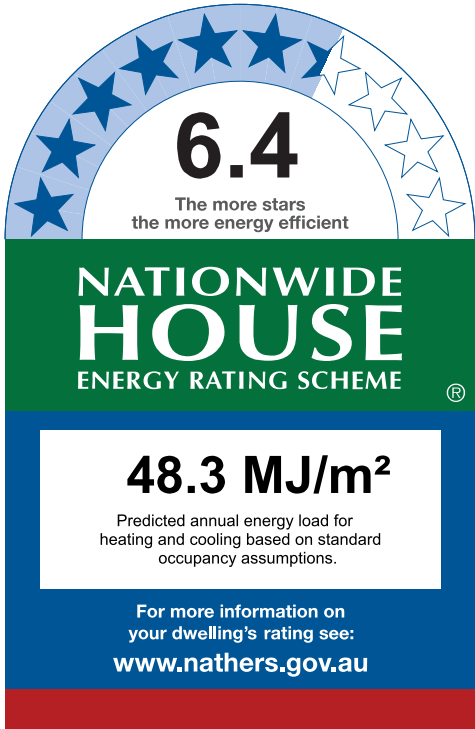
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.9	33.4
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-8VMDYX-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	47.74
Bedroom 01	Bedroom	15.59
Ensuite	Night Time	4.30
Bedroom 03	Bedroom	10.37
Bathroom	Unconditioned	5.59
Laundry	Day Time	5.08
Bedroom 02	Bedroom	10.29
Garage	Garage	18.61

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	Sliding	45	W	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-013-01 A	09.24s	900	2400	Sliding	45	S	None
Bedroom 01	GJA-019-01 A	21.08dh	2100	750	Double Hung	45	E	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Ensuite	GJA-001-01 A	12.06s	1200	600	Awning	90	W	None
Kitchen/Living	GJA-070-04 A	24.27sd	2400	2700	Sliding Door	45	N	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27s	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-070-04 A	24.33ssd	2400	3300	Sliding Door	60	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	2700	0	N

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	2741	W	430	Yes
Bedroom 01	WB-REFL-CAV	3010	3341	W	430	Yes
Bedroom 01	WB-REFL-CAV	3010	3881	S		Yes
Bedroom 01	WB-REFL-CAV	3010	2821	E	4500	Yes
Bedroom 02	WB-REFL-CAV	2560	3451	W	430	Yes
Bedroom 03	WB-REFL-CAV	2560	2850	W	430	Yes
Ensuite	WB-REFL-CAV	3010	1801	W	430	Yes
Garage	WB-REFL-CAV	2560	3180	N		Yes
Garage	WB-REFL-CAV	2560	5851	E	5201	Yes
Garage	WB-REFL-CAV	2560	5851	W	430	Yes
Kitchen/Living	WB-REFL-CAV	3010	4682	N	3480	Yes
Kitchen/Living	WB-REFL-CAV	3010	4481	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	700	S	9978	Yes
Kitchen/Living	WB-REFL-CAV	3010	3331	E	1129	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	700	N	10730	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	3982	S		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	64.0	0.00
INT-PB	Internal Plasterboard Stud Wall	25.2	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	6.3	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.6	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	15.6	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.3	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.3	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.6	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	47.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.1	Open	0.15	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 01	1	1200
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorbptance	Roof Colour
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Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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-JKBBB4-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A09, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.4	Suburban
Unconditioned* 5.6	NatHERS climate zone
Total 117.6	10 - Brisbane AMO
Garage 18.6	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

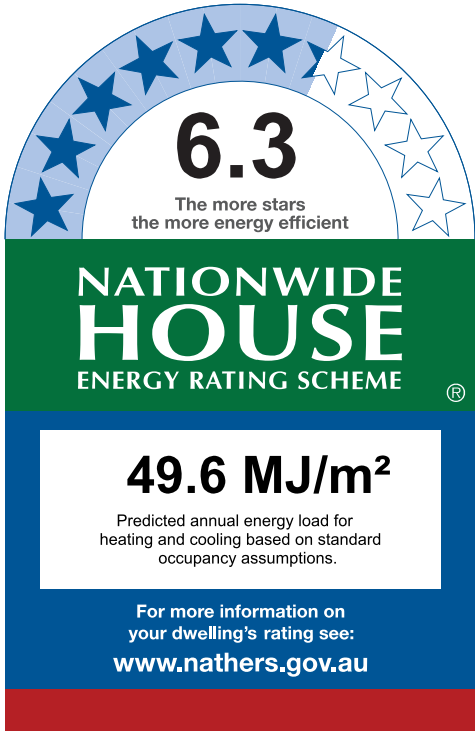
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.2	34.4
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-JKBBB4-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	47.74
Bedroom 01	Bedroom	15.59
Ensuite	Night Time	4.30
Bedroom 03	Bedroom	10.37
Bathroom	Unconditioned	5.59
Laundry	Day Time	5.08
Bedroom 02	Bedroom	10.29
Garage	Garage	18.61

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	Sliding	45	W	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-013-01 A	09.24s	900	2400	Sliding	45	S	None
Bedroom 01	GJA-019-01 A	21.08dh	2100	750	Double Hung	45	E	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Ensuite	GJA-001-01 A	12.06s	1200	600	Awning	90	W	None
Kitchen/Living	GJA-070-04 A	24.27sd	2400	2700	Sliding Door	45	N	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27s	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-070-04 A	24.33ssd	2400	3300	Sliding Door	60	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	2700	0	N

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	2741	W	430	Yes
Bedroom 01	WB-REFL-CAV	3010	3341	W	430	Yes
Bedroom 01	WB-REFL-CAV	3010	3881	S		Yes
Bedroom 01	WB-REFL-CAV	3010	2821	E	4500	Yes
Bedroom 02	WB-REFL-CAV	2560	3451	W	430	Yes
Bedroom 03	WB-REFL-CAV	2560	2850	W	430	Yes
Ensuite	WB-REFL-CAV	3010	1801	W	430	Yes
Garage	WB-REFL-CAV	2560	3180	N		Yes
Garage	WB-REFL-CAV	2560	5851	E	5201	Yes
Garage	WB-REFL-CAV	2560	5851	W	430	Yes
Kitchen/Living	WB-REFL-CAV	3010	4682	N	3431	Yes
Kitchen/Living	WB-REFL-CAV	3010	4481	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	700	S	9978	Yes
Kitchen/Living	WB-REFL-CAV	3010	3331	E	1129	Yes



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	700	N	11243	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	3982	S		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	64.0	0.00
INT-PB	Internal Plasterboard Stud Wall	25.2	2.50
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	6.3	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.6	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	15.6	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.3	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.3	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.6	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	47.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.1	Open	0.15	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	4.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 01	1	1200
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorbance	Roof Colour
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Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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-OSVPIO-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A10, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.4	Suburban
Unconditioned* 5.6	NatHERS climate zone
Total 117.6	10 - Brisbane AMO
Garage 18.6	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

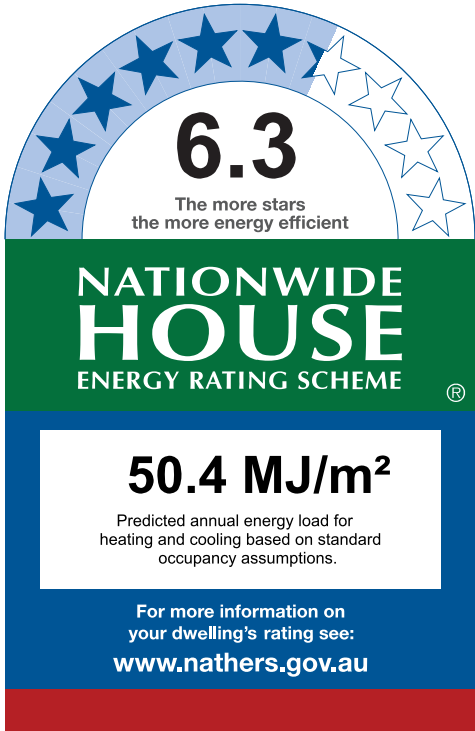
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.0	35.4
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-OSVPIO-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted 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.



Predicted onsite renewable energy impact

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.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	47.74
Bedroom 01	Bedroom	15.59
Ensuite	Night Time	4.30
Bedroom 03	Bedroom	10.37
Bathroom	Unconditioned	5.59
Laundry	Day Time	5.08
Bedroom 02	Bedroom	10.29
Garage	Garage	18.61

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.15s	600	1500	Sliding	45	W	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-013-01 A	09.24s	900	2400	Sliding	45	S	None
Bedroom 01	GJA-019-01 A	21.08dh	2100	750	Double Hung	45	E	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Ensuite	GJA-001-01 A	12.06s	1200	600	Awning	90	W	None
Kitchen/Living	GJA-070-04 A	24.27sd	2400	2700	Sliding Door	45	N	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27s	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-070-04 A	24.33ssd	2400	3300	Sliding Door	60	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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
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None

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2200	2700	0	N

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	2741	W		Yes
Bedroom 01	WB-REFL-CAV	3010	3341	W		Yes
Bedroom 01	WB-REFL-CAV	3010	3881	S		Yes
Bedroom 01	WB-REFL-CAV	3010	2821	E	4000	Yes
Bedroom 02	WB-REFL-CAV	2560	3451	W		Yes
Bedroom 03	WB-REFL-CAV	2560	2850	W		Yes
Ensuite	WB-REFL-CAV	3010	1801	W		Yes
Garage	WB-REFL-CAV	2560	181	N		No
Garage	WB-REFL-CAV	2560	5851	E	4701	Yes
Garage	WB-REFL-CAV	2560	5851	W		Yes
Garage	WB-REFL-CAV	2560	2999	N	370	Yes
Kitchen/Living	WB-REFL-CAV	3010	4682	N	6311	Yes
Kitchen/Living	WB-REFL-CAV	3010	4481	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	700	S	9978	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	WB-REFL-CAV	3010	3331	E	629	Yes
Kitchen/Living	WB-REFL-CAV	3010	700	N	10747	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	3982	S	2736	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	64.0	0.00
INT-PB	Internal Plasterboard Stud Wall	25.2	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	6.3	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	5.6	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	15.6	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.3	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.3	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.6	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	47.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.1	Open	0.15	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 01	1	1200
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200



Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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.

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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-P2NF2O-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A11, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 78.4	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 103.4	10 - Brisbane AMO
Garage 18.4	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

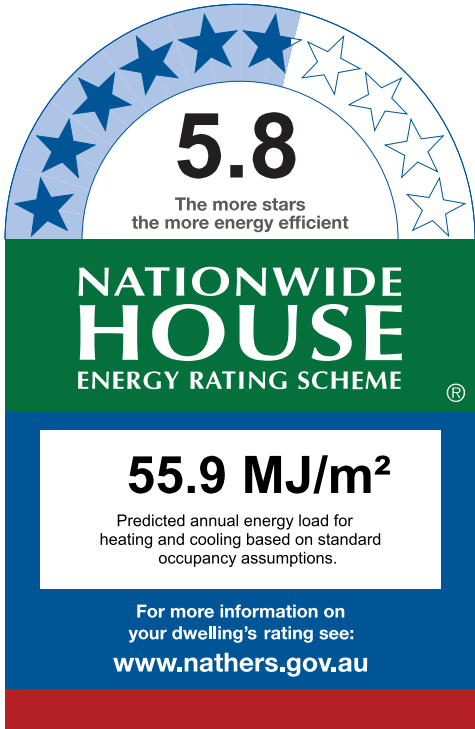
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	40.8
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-P2NF2O-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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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"/>
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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.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	46.87
Ensuite	Night Time	4.17
Bathroom	Unconditioned	6.49
Bedroom 02	Bedroom	11.22
Garage	Garage	18.45
Master Bedroom	Bedroom	13.75
Vestibule	Day Time	2.43

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	12.06s	1200	600	Awning	90	W	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	W	None
Ensuite	GJA-013-01 A	06.12s	600	1200	Sliding	45	W	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	0	W	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	E	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	N	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	N	None
Kitchen/Living	GJA-070-04 A	24.32rd	2400	3200	Sliding Door	60	S	None
Master Bedroom	GJA-013-01 A	09.21s	900	2100	Sliding	45	S	None
Master Bedroom	GJA-013-01 A	21.08dh	2100	750	Double Hung	45	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
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
Garage	2200	2700	0	N

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	3010	3115	W	421	Yes
Bedroom 02	WB-REFL-CAV	2560	3667	W	417	Yes
Ensuite	WB-REFL-CAV	3010	1501	W	428	Yes
Garage	WB-REFL-CAV	2560	3001	N		Yes
Garage	WB-REFL-CAV	2560	6502	W	426	Yes
Garage	WB-REFL-CAV	2560	5901	E	4462	Yes
Kitchen/Living	WB-REFL-CAV	3010	11560	E	429	Yes
Kitchen/Living	WB-REFL-CAV	3010	3960	N	3454	Yes
Kitchen/Living	WB-REFL-CAV	3010	3939	S	2642	Yes
Master Bedroom	WB-REFL-CAV	3010	2991	S	428	Yes
Master Bedroom	WB-REFL-CAV	3010	4589	W	426	Yes
Master Bedroom	WB-REFL-CAV	3010	2216	E	4472	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	35.2	0.00
INT-PB	Internal Plasterboard Stud Wall	30.7	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	4.9	2.50



Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.5	Open	2.00	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	11.2	Open	2.00	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.2	Open	2.00	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.4	N/A	0.00	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	46.9	Open	2.00	Timber (12mm)
Master Bedroom	TIMB-001: Suspended Timber Floor	13.7	Open	2.00	Carpet
Vestibule	TIMB-001: Suspended Timber Floor	2.4	Open	2.00	Timber (19mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Vestibule	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	2	Downlight	200	Sealed
Vestibule	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 02	1	1200
Kitchen/Living	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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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.

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are not quality assured.

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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-4PZS0T-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address 8A12, 30 Chinbible Avenue,
MULLUMBIMBY, NSW, 2482

Lot/DP 159//755687

NCC Class* 1a

Floor/all Floors 1 of 1 floors

Type New

Plans

Main Plan Project No. 23020

Prepared by Story Design Collective

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	93.7	Suburban
Unconditioned*	6.5	NatHERS climate zone
Total	118.6	10 - Brisbane AMO
Garage	18.4	



Accredited assessor

Name Duncan Hope

Business name Senica Consultancy Group

Email duncan@senica.com.au

Phone +61 280067784

Accreditation No. DMN/14/1658

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

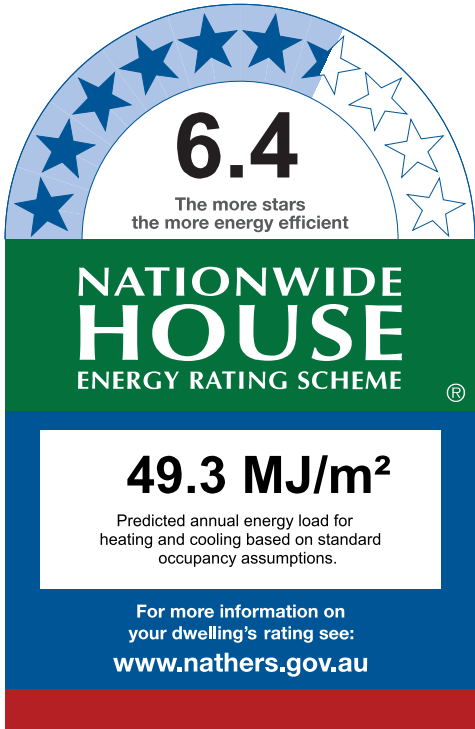
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.1	35.2
Load limits	15	54

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 Y

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-4PZS0T-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	49.68
Vestibule	Day Time	1.71
Bedroom 02	Bedroom	10.81
Ensuite	Night Time	4.56
Bathroom	Unconditioned	6.46
Bedroom 03	Bedroom	10.01
Garage	Garage	18.45
Master Bedroom	Bedroom	16.94

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None

* Refer to glossary.



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None
Ensuite	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	0	S	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	E	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	W	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	W	None
Master Bedroom	GJA-013-01 A	06.24s	600	2400	Sliding	45	N	None
Master Bedroom	GJA-013-01 A	09.24s	900	2400	Sliding	45	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
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
Garage	2200	2700	0	W

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	3101	S	451	Yes
Bedroom 02	WB-REFL-CAV	2560	3601	S	451	Yes
Bedroom 03	WB-REFL-CAV	2560	3000	S	451	Yes
Ensuite	WB-REFL-CAV	3010	1901	S	451	Yes
Garage	WB-REFL-CAV	2560	3001	W		Yes
Garage	WB-REFL-CAV	2560	4001	N	4450	Yes
Garage	WB-REFL-CAV	2560	6502	S	451	Yes
Kitchen/Living	WB-REFL-CAV	3010	12473	N	449	Yes
Kitchen/Living	WB-REFL-CAV	3010	2861	E	5834	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	W	3000	Yes
Master Bedroom	WB-REFL-CAV	3010	5291	N	3310	Yes
Master Bedroom	WB-REFL-CAV	3010	4141	E	453	Yes
Master Bedroom	WB-REFL-CAV	3010	3300	S	451	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	21.1	2.00
INT-PB	Internal Plasterboard Stud Wall	69.8	0.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.8	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.5	Open	0.15	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	10.8	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.0	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.6	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.4	N/A	0.00	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	49.7	Open	0.15	Timber (12mm)
Master Bedroom	TIMB-001: Suspended Timber Floor	16.9	Open	0.15	Carpet
Vestibule	TIMB-001: Suspended Timber Floor	1.7	Open	0.15	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Vestibule	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	2	Downlight	200	Sealed
Vestibule	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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)

* Refer to glossary.



Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
------	-----------	--------------------	--------------------------	------------------------------

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-86GOMZ-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A13, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.7	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 118.6	10 - Brisbane AMO
Garage 18.4	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

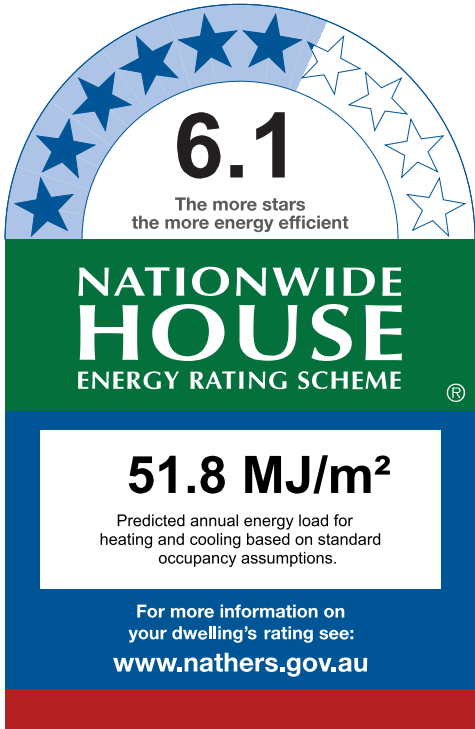
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	13.8	38.0
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-86GOMZ-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* 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"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	49.68
Vestibule	Day Time	1.71
Bedroom 02	Bedroom	10.81
Ensuite	Night Time	4.56
Bathroom	Unconditioned	6.46
Bedroom 03	Bedroom	10.01
Garage	Garage	18.45
Master Bedroom	Bedroom	16.94

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Bedroom 02	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 03	GJA-013-01 A	06.24s	600	2400	Sliding	45	S	None
Ensuite	GJA-001-01 A	09.08aw	900	750	Awning	90	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	0	S	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-013-01 A	08.24s	800	2400	Sliding	45	N	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	E	None
Kitchen/Living	GJA-070-04 A	24.24rd	2400	2400	Sliding Door	45	W	None
Kitchen/Living	GJA-080-01 A	23.09dr	2300	900	Hinged Door	90	W	None
Master Bedroom	GJA-013-01 A	06.24s	600	2400	Sliding	45	N	None
Master Bedroom	GJA-013-01 A	09.24s	900	2400	Sliding	45	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
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
Garage	2200	2700	0	W

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2560	3101	S	451	Yes
Bedroom 02	WB-REFL-CAV	2560	3601	S	451	Yes
Bedroom 03	WB-REFL-CAV	2560	3000	S	451	Yes
Ensuite	WB-REFL-CAV	3010	1901	S	451	Yes
Garage	WB-REFL-CAV	2560	3001	W		Yes
Garage	WB-REFL-CAV	2560	4001	N	4450	Yes
Garage	WB-REFL-CAV	2560	6502	S	451	Yes
Kitchen/Living	WB-REFL-CAV	3010	12473	N	449	Yes
Kitchen/Living	WB-REFL-CAV	3010	2861	E	5834	Yes
Kitchen/Living	WB-REFL-CAV	3010	3911	W	3000	Yes
Master Bedroom	WB-REFL-CAV	3010	5291	N	3310	Yes
Master Bedroom	WB-REFL-CAV	3010	4141	E	453	Yes
Master Bedroom	WB-REFL-CAV	3010	3300	S	451	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	21.1	2.00
INT-PB	Internal Plasterboard Stud Wall	69.8	0.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.8	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.5	Open	0.15	Tile (8mm)
Bedroom 02	TIMB-001: Suspended Timber Floor	10.8	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.0	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.6	Open	0.15	Tile (8mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	18.4	N/A	0.00	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	49.7	Open	0.15	Timber (12mm)
Master Bedroom	TIMB-001: Suspended Timber Floor	16.9	Open	0.15	Carpet
Vestibule	TIMB-001: Suspended Timber Floor	1.7	Open	0.15	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Vestibule	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bathroom	1	Exhaust Fan	350	Sealed
Bedroom 02	2	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Ensuite	1	Exhaust Fan	350	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Master Bedroom	2	Downlight	200	Sealed
Vestibule	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bedroom 02	1	1200
Bedroom 03	1	1200
Kitchen/Living	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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)

* Refer to glossary.



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
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No Whole of Home Data

Hot water system

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

Pool / spa equipment

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

Onsite Renewable Energy *schedule*

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

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-IA0RLH-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A14, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.3	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 118.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

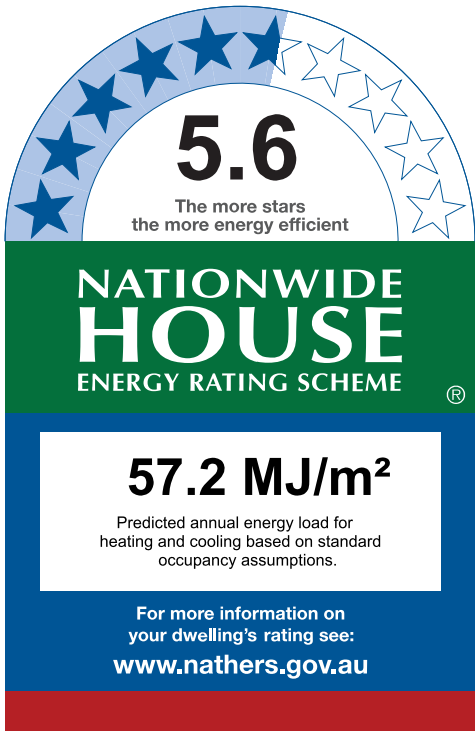
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.8	42.5
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-IA0RLH-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* 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"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.06aw	600	750	Sliding	45	E	None
Bedroom 01	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	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*
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-001-01 A	21.21aw	2100	2100	Awning	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.57sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	45	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	3010	3101	E	431	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7191	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	431	Yes
Bedroom 02	WB-REFL-CAV	3010	3701	E	431	Yes
Bedroom 02	WB-REFL-CAV	3010	2806	S	430	Yes
Bedroom 02	WB-REFL-CAV	3010	3291	W	1548	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	431	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	431	Yes
Entry Hallway	WB-REFL-CAV	3010	1020	S	3721	Yes
Garage	WB-REFL-CAV	2560	3001	S	2021	Yes
Garage	WB-REFL-CAV	2560	6501	W	431	Yes
Garage	WB-REFL-CAV	2560	1700	E	4437	Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3000	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	431	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	4101	W	430	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	50.7	0.00
INT-PB	Internal Plasterboard Stud Wall	44.3	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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
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No Whole of Home Data

Heating system

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

Hot water system

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

Pool / spa equipment

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

Onsite Renewable Energy *schedule*

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

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-HVLUZJ-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A15, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.3	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 118.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

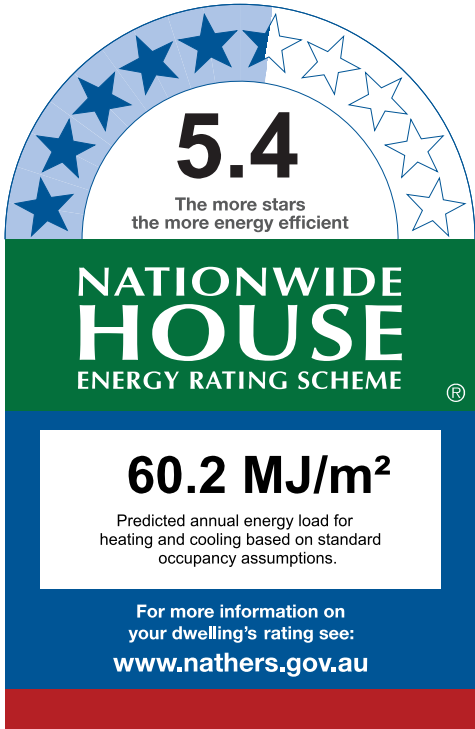
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.2	45.1
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-HVLUZJ-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	E	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-013-01 A	21.09sw	2100	900	Sliding	45	N	None
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-019-01 A	21.09dh	2100	900	Double Hung	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.27sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	45	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	3010	3101	E	431	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7191	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	430	Yes
Bedroom 02	WB-REFL-CAV	3010	3701	E	431	Yes
Bedroom 02	WB-REFL-CAV	3010	2806	S	430	Yes
Bedroom 02	WB-REFL-CAV	3010	3291	W	1193	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	431	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	430	Yes
Entry Hallway	WB-REFL-CAV	3010	1020	S	3721	Yes
Garage	WB-REFL-CAV	2560	3001	S	2021	Yes
Garage	WB-REFL-CAV	2560	6501	W	430	Yes
Garage	WB-REFL-CAV	2560	1700	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3000	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	431	Yes
Kitchen/Living	WB-REFL-CAV	3010	4101	W	430	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	89.4	0.00
INT-PB	Internal Plasterboard Stud Wall	5.6	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.50

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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-FHT166-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A16, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.3	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 118.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

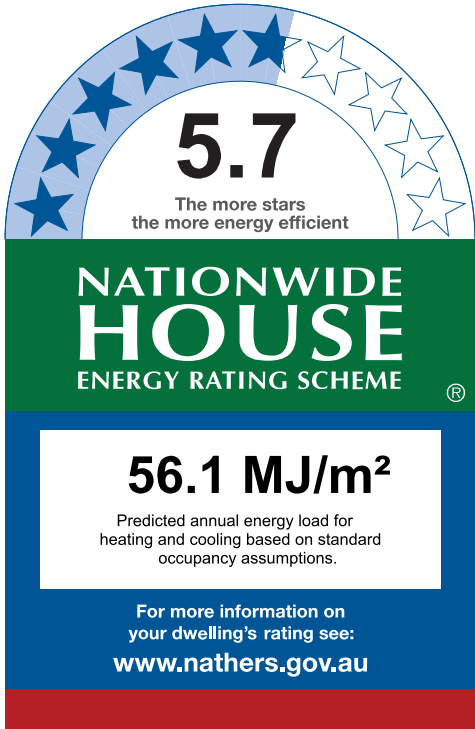
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	13.8	42.4
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-FHT166-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	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*
Bedroom 01	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	None
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-019-01 A	21.09dh	2100	900	Double Hung	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.27sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	90	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	



Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	3101	E	431	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7191	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	430	Yes
Bedroom 02	WB-REFL-CAV	3010	3701	E	431	Yes
Bedroom 02	WB-REFL-CAV	3010	2806	S	447	Yes
Bedroom 02	WB-REFL-CAV	3010	3291	W	4652	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	431	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	451	Yes
Entry Hallway	WB-REFL-CAV	2410	1020	S	3738	Yes
Garage	WB-REFL-CAV	2560	3001	S	2038	Yes
Garage	WB-REFL-CAV	2560	6501	W	451	Yes
Garage	WB-REFL-CAV	2560	1700	E	4436	Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3000	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	431	Yes
Kitchen/Living	WB-REFL-CAV	3010	4101	W	430	Yes

* Refer to glossary.



Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	68.7	0.00
INT-PB	Internal Plasterboard Stud Wall	21.8	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.50

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
No Whole of Home Data	

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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.

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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-2LTUFY-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A17, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.3	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 118.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

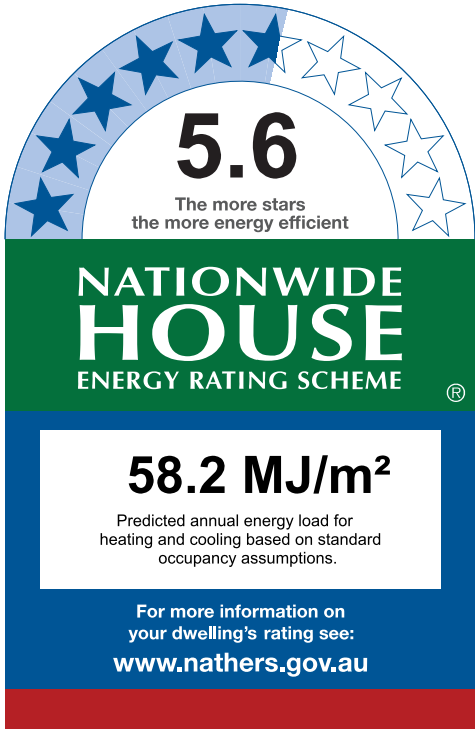
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	43.1
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-2LTUFY-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	E	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	None
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-019-01 A	21.09dh	2100	900	Double Hung	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.27sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	90	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	



Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	3101	E	453	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7213	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	452	Yes
Bedroom 02	WB-REFL-CAV	2410	3701	E	453	Yes
Bedroom 02	WB-REFL-CAV	2410	161	S		No
Bedroom 02	WB-REFL-CAV	2410	3291	W	4113	Yes
Bedroom 02	WB-REFL-CAV	2410	2645	S	469	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	453	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	452	Yes
Entry Hallway	WB-REFL-CAV	2410	1020	S	3760	Yes
Garage	WB-REFL-CAV	2560	3001	S	2060	Yes
Garage	WB-REFL-CAV	2560	6501	W	452	Yes
Garage	WB-REFL-CAV	2560	1700	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3022	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	453	Yes
Kitchen/Living	WB-REFL-CAV	3010	4101	W	452	Yes

* Refer to glossary.

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	67.2	0.00
INT-PB	Internal Plasterboard Stud Wall	21.8	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
No Whole of Home Data	

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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.

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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-WCA325-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A18, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.3	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 118.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

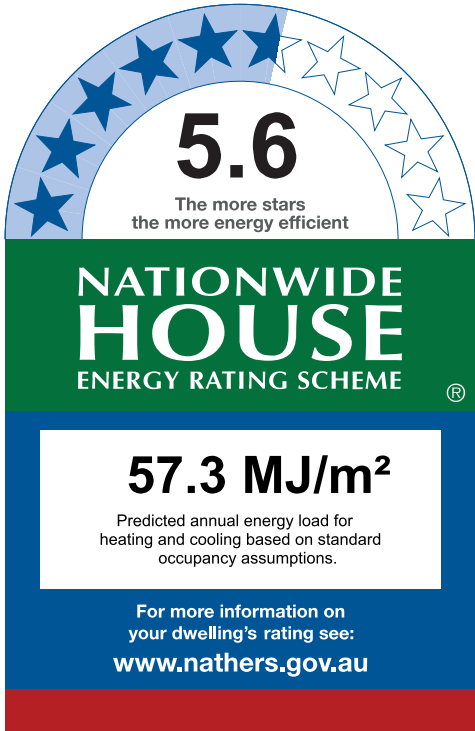
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.7	42.6
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-WCA325-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.06aw	600	750	Sliding	45	E	None
Bedroom 01	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-001-01 A	21.21aw	2100	2100	Awning	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.57sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	45	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	3010	3101	E	431	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7191	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	431	Yes
Bedroom 02	WB-REFL-CAV	3010	3701	E	431	Yes
Bedroom 02	WB-REFL-CAV	3010	2806	S	430	Yes
Bedroom 02	WB-REFL-CAV	3010	3291	W	1548	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	431	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	431	Yes
Entry Hallway	WB-REFL-CAV	3010	1020	S	3721	Yes
Garage	WB-REFL-CAV	2560	3001	S	2021	Yes
Garage	WB-REFL-CAV	2560	6501	W	431	Yes
Garage	WB-REFL-CAV	2560	1700	E	4437	Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3000	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	431	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	4101	W	430	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	50.7	0.00
INT-PB	Internal Plasterboard Stud Wall	44.3	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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.

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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-3XJY37-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A19, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 93.3	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 118.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

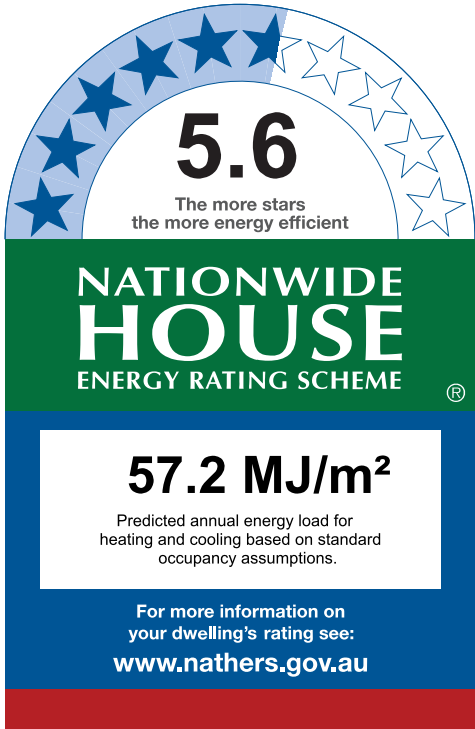
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.8	42.5
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-3XJY37-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted 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.



Predicted onsite renewable energy impact

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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-013-01 A	06.06aw	600	750	Sliding	45	E	None
Bedroom 01	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-001-01 A	21.21aw	2100	2100	Awning	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.57sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	45	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	3010	3101	E	431	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7191	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	431	Yes
Bedroom 02	WB-REFL-CAV	3010	3701	E	431	Yes
Bedroom 02	WB-REFL-CAV	3010	2806	S	430	Yes
Bedroom 02	WB-REFL-CAV	3010	3291	W	1548	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	431	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	431	Yes
Entry Hallway	WB-REFL-CAV	3010	1020	S	3721	Yes
Garage	WB-REFL-CAV	2560	3001	S	2021	Yes
Garage	WB-REFL-CAV	2560	6501	W	431	Yes
Garage	WB-REFL-CAV	2560	1700	E	4437	Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3000	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	431	Yes



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	4101	W	430	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	50.7	0.00
INT-PB	Internal Plasterboard Stud Wall	44.3	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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
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No Whole of Home Data

Heating system

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

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
------	-----------	--------------------	--------------------------	------------------------------

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-IEH4BU-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address 8A20, 30 Chinbible Avenue,
MULLUMBIMBY, NSW, 2482

Lot/DP 159//755687

NCC Class* 1a

Floor/all Floors 1 of 1 floors

Type New

Plans

Main Plan Project No. 23020

Prepared by Story Design Collective

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	93.3	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	118.8	10 - Brisbane AMO
Garage	19.1	



Accredited assessor

Name Duncan Hope

Business name Senica Consultancy Group

Email duncan@senica.com.au

Phone +61 280067784

Accreditation No. DMN/14/1658

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

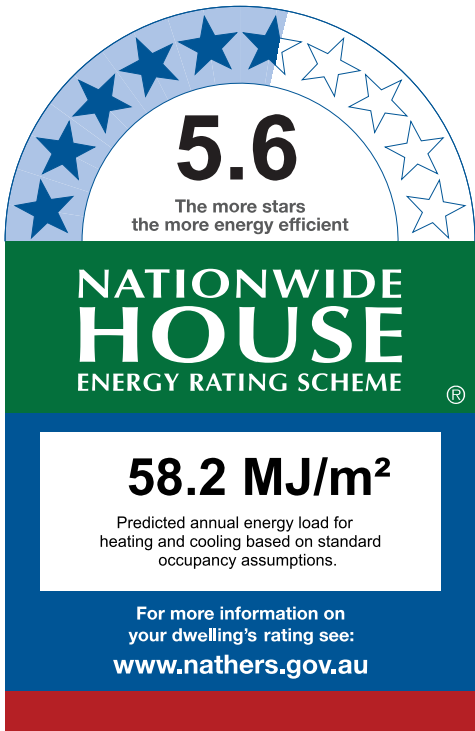
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	43.1
Load limits	15	54

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 Y

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-IEH4BU-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	41.19
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	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*
Bedroom 01	GJA-001-01 A	21.12aw	2100	1200	Awning	60	N	None
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-019-01 A	21.09dh	2100	900	Double Hung	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.27sw	600	2700	Sliding	45	E	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Sliding	90	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	3101	E	453	Yes
Bedroom 01	WB-REFL-CAV	2560	1415	N	7213	Yes
Bedroom 01	WB-REFL-CAV	2560	5591	W	452	Yes
Bedroom 02	WB-REFL-CAV	2410	3701	E	453	Yes
Bedroom 02	WB-REFL-CAV	2410	161	S		No
Bedroom 02	WB-REFL-CAV	2410	3291	W	4113	Yes
Bedroom 02	WB-REFL-CAV	2410	2645	S	469	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	453	Yes
Ensuite	WB-REFL-CAV	2560	1501	W	452	Yes
Entry Hallway	WB-REFL-CAV	2410	1020	S	3760	Yes
Garage	WB-REFL-CAV	2560	3001	S	2060	Yes
Garage	WB-REFL-CAV	2560	6501	W	452	Yes
Garage	WB-REFL-CAV	2560	1700	E		Yes
Kitchen/Living	WB-REFL-CAV	3010	5592	N	3022	Yes
Kitchen/Living	WB-REFL-CAV	3010	8782	E	453	Yes
Kitchen/Living	WB-REFL-CAV	3010	4101	W	452	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	67.2	0.00
INT-PB	Internal Plasterboard Stud Wall	21.8	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.1	2.00

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	41.2	Open	0.15	Timber (19mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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-33HSMI-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A21, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 65.9	Suburban
Unconditioned* 3.9	NatHERS climate zone
Total 69.8	10 - Brisbane AMO
Garage 0.0	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

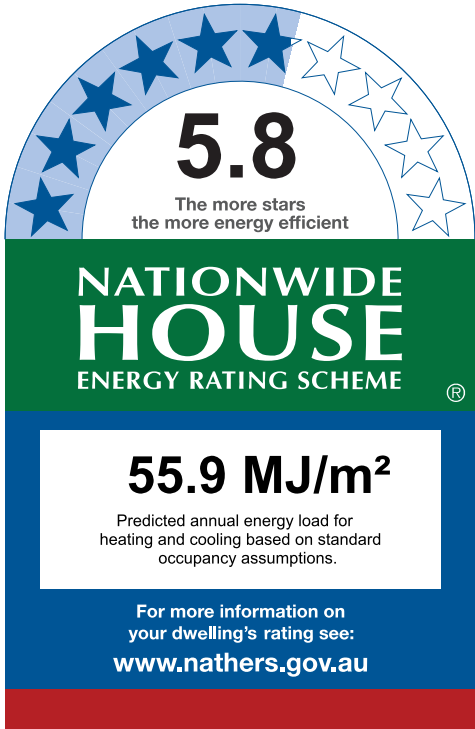
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.3	41.6
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-33HSMI-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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.

* Refer to glossary.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	35.66
Master Bedroom	Bedroom	12.61
Laundry	Day Time	5.03
Bathroom	Unconditioned	3.90
Loft	Day Time	12.57

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-03 A	Type 048 Series Awning Window SG 3EA	4.84	0.53	0.50	0.56
GJA-012-21 A	Type 131 Series Fixed Window SG 6EA	4.23	0.65	0.62	0.68
GJA-013-42 A	Type 131 Aluminium Sliding Window SG 638CPClr	4.42	0.61	0.58	0.64
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-071-01 A	Type 245 Aluminium Sliding Door DG 4/10/4	3.98	0.63	0.60	0.66
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-03 A	09.08aw	900	750	Awning	90	W	None
Kitchen/Living	GJA-001-03 A	06.27aw	600	2700	Awning	45	W	None
Kitchen/Living	GJA-071-01 A	24.40sd	2400	4000	Sliding Door	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	GJA-080-01 A	20.09dr	2000	900	Hinged Door	90	E	None
Loft	GJA-012-21 A	06.27f	600	2700	Fixed	0	E	None
Loft	GJA-013-42 A	06.24s	600	2400	Sliding	45	S	None
Master Bedroom	GJA-019-01 A	21.09dh	2100	900	Double Hung	45	N	None
Master Bedroom	GJA-013-42 A	06.24sw	600	2400	Sliding	45	W	None
Kitchen/Living	GJA-012-21 A	06.45f	600	4500	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
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
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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*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	1000	E	5328	Yes
Bathroom	WB-REFL-CAV	2410	1005	E	5928	Yes
Bathroom	WB-REFL-CAV	2410	2005	W	385	Yes
Bathroom	WB-REFL-CAV	2410	600	S	950	Yes
Bathroom	WB-REFL-CAV	2410	1645	S		Yes
Kitchen/Living	WB-REFL-CAV	2410	3512	S	2941	Yes
Kitchen/Living	WB-REFL-CAV	2410	3021	W	1785	Yes
Kitchen/Living	WB-REFL-CAV	2410	5492	N	2751	Yes
Kitchen/Living	WB-REFL-CAV	2410	3611	E	324	Yes
Kitchen/Living	WB-REFL-CAV	2410	300	S	7732	Yes
Kitchen/Living	WB-REFL-CAV	2410	4791	E	981	Yes
Laundry	WB-REFL-CAV	2410	901	E	5328	Yes
Laundry	WB-REFL-CAV	2410	1901	W	375	Yes
Laundry	WB-REFL-CAV	2110	746	S	2941	Yes
Loft	WB-REFL-CAV	2034	2910	E	385	Yes
Loft	WB-REFL-CAV	2535	3411	S	383	No
Master Bedroom	WB-REFL-CAV	2560	1410	N	5862	Yes
Master Bedroom	WB-REFL-CAV	2560	4201	W	375	Yes
Kitchen/Living	WB-REFL-CAV	1820	5491	N	2782	No

* 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	WB-REFL-CAV	1220	3610	E	382	No
Kitchen/Living	WB-REFL-CAV	1291	300	S	4740	Yes
Kitchen/Living	WB-REFL-CAV	1361	4787	E	682	Yes
Kitchen/Living	WB-REFL-CAV	1698	1445	S	3387	Yes
Kitchen/Living	WB-REFL-CAV	1220	3020	W	381	No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	23.3	0.00
INT-PB	Internal Plasterboard Stud Wall	31.6	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	3.9	Open	0.15	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	35.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.0	Open	0.15	Timber (12mm)
Loft	TIMB-001: Suspended Timber Floor	3.9	N/A	0.15	Carpet
Loft	TIMB-001: Suspended Timber Floor	8.6	N/A	2.00	Carpet
Master Bedroom	TIMB-001: Suspended Timber Floor	12.6	Open	0.15	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Loft	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Kitchen/Living	5	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed
Loft	2	Downlight	200	Sealed
Master Bedroom	2	Downlight	200	Sealed
Void	5	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Loft	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	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
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No Whole of Home Data

Heating system

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

Hot water system

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

Pool / spa equipment

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

Onsite Renewable Energy *schedule*

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

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-UHH889-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A22, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 65.9	Suburban
Unconditioned* 3.9	NatHERS climate zone
Total 69.8	10 - Brisbane AMO
Garage 0.0	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

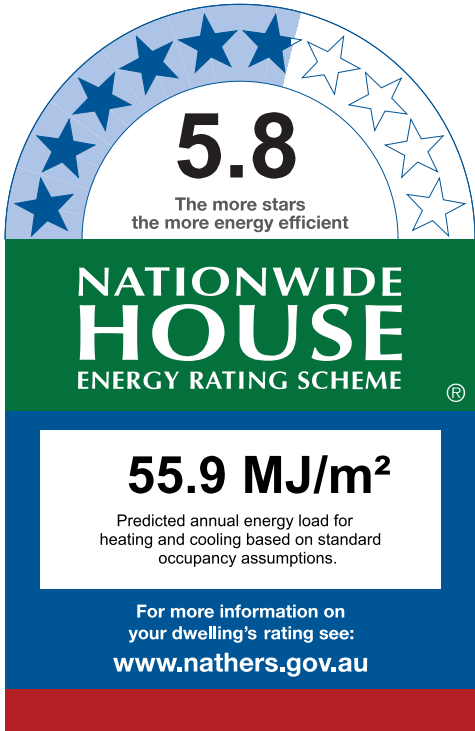
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.3	41.6
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-UHH889-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m ²)
Kitchen/Living	Kitchen/Living	35.66
Master Bedroom	Bedroom	12.61
Laundry	Day Time	5.03
Bathroom	Unconditioned	3.90
Loft	Day Time	12.57

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-03 A	Type 048 Series Awning Window SG 3EA	4.84	0.53	0.50	0.56
GJA-012-21 A	Type 131 Series Fixed Window SG 6EA	4.23	0.65	0.62	0.68
GJA-013-42 A	Type 131 Aluminium Sliding Window SG 638CPClr	4.42	0.61	0.58	0.64
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-071-01 A	Type 245 Aluminium Sliding Door DG 4/10/4	3.98	0.63	0.60	0.66
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-03 A	09.08aw	900	750	Awning	90	W	None
Kitchen/Living	GJA-001-03 A	06.27aw	600	2700	Awning	45	W	None
Kitchen/Living	GJA-071-01 A	24.40sd	2400	4000	Sliding Door	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	GJA-080-01 A	20.09dr	2000	900	Hinged Door	90	E	None
Loft	GJA-012-21 A	06.27f	600	2700	Fixed	0	E	None
Loft	GJA-013-42 A	06.24s	600	2400	Sliding	45	S	None
Master Bedroom	GJA-019-01 A	21.09dh	2100	900	Double Hung	45	N	None
Master Bedroom	GJA-013-42 A	06.24sw	600	2400	Sliding	45	W	None
Kitchen/Living	GJA-012-21 A	06.45f	600	4500	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
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
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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*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	1000	E	5328	Yes
Bathroom	WB-REFL-CAV	2410	1005	E	5928	Yes
Bathroom	WB-REFL-CAV	2410	2005	W	385	Yes
Bathroom	WB-REFL-CAV	2410	600	S	950	Yes
Bathroom	WB-REFL-CAV	2410	1645	S		Yes
Kitchen/Living	WB-REFL-CAV	2410	3512	S	2941	Yes
Kitchen/Living	WB-REFL-CAV	2410	3021	W	1785	Yes
Kitchen/Living	WB-REFL-CAV	2410	5492	N	2751	Yes
Kitchen/Living	WB-REFL-CAV	2410	3611	E	324	Yes
Kitchen/Living	WB-REFL-CAV	2410	300	S	7732	Yes
Kitchen/Living	WB-REFL-CAV	2410	4791	E	981	Yes
Laundry	WB-REFL-CAV	2410	901	E	5328	Yes
Laundry	WB-REFL-CAV	2410	1901	W	375	Yes
Laundry	WB-REFL-CAV	2110	746	S	2941	Yes
Loft	WB-REFL-CAV	2034	2910	E	385	Yes
Loft	WB-REFL-CAV	2535	3411	S	383	No
Master Bedroom	WB-REFL-CAV	2560	1410	N	5862	Yes
Master Bedroom	WB-REFL-CAV	2560	4201	W	375	Yes
Kitchen/Living	WB-REFL-CAV	1820	5491	N	2782	No

* 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	WB-REFL-CAV	1220	3610	E	382	No
Kitchen/Living	WB-REFL-CAV	1291	300	S	4740	Yes
Kitchen/Living	WB-REFL-CAV	1361	4787	E	682	Yes
Kitchen/Living	WB-REFL-CAV	1698	1445	S	3387	Yes
Kitchen/Living	WB-REFL-CAV	1220	3020	W	381	No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	23.3	0.00
INT-PB	Internal Plasterboard Stud Wall	31.6	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	3.9	Open	0.15	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	35.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.0	Open	0.15	Timber (12mm)
Loft	TIMB-001: Suspended Timber Floor	3.9	N/A	0.15	Carpet
Loft	TIMB-001: Suspended Timber Floor	8.6	N/A	2.00	Carpet
Master Bedroom	TIMB-001: Suspended Timber Floor	12.6	Open	0.15	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Loft	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Kitchen/Living	5	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed
Loft	2	Downlight	200	Sealed
Master Bedroom	2	Downlight	200	Sealed
Void	5	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Loft	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	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
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No Whole of Home Data

Heating system

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

Hot water system

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

Pool / spa equipment

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

Onsite Renewable Energy *schedule*

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

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-WHB2LC-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A23, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 65.9	Suburban
Unconditioned* 3.9	NatHERS climate zone
Total 69.8	10 - Brisbane AMO
Garage 0.0	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

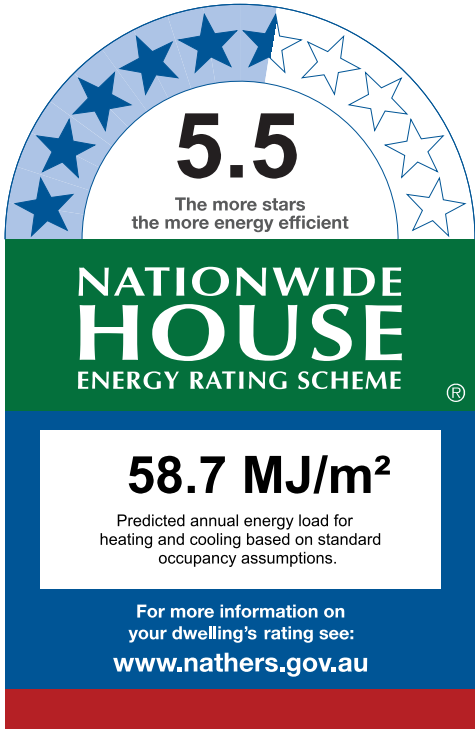
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	12.7	46.0
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-WHB2LC-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	35.66
Master Bedroom	Bedroom	12.61
Laundry	Day Time	5.03
Bathroom	Unconditioned	3.90
Loft	Day Time	12.57

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-03 A	Type 048 Series Awning Window SG 3EA	4.84	0.53	0.50	0.56
GJA-012-21 A	Type 131 Series Fixed Window SG 6EA	4.23	0.65	0.62	0.68
GJA-013-42 A	Type 131 Aluminium Sliding Window SG 638CPClr	4.42	0.61	0.58	0.64
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-071-01 A	Type 245 Aluminium Sliding Door DG 4/10/4	3.98	0.63	0.60	0.66
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-03 A	09.08aw	900	750	Awning	90	E	None
Kitchen/Living	GJA-001-03 A	06.27aw	600	2700	Awning	45	E	None
Kitchen/Living	GJA-071-01 A	24.40sd	2400	4000	Sliding Door	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	GJA-080-01 A	20.09dr	2000	900	Hinged Door	90	W	None
Loft	GJA-012-21 A	06.27f	600	2700	Fixed	0	W	None
Loft	GJA-013-42 A	06.24s	600	2400	Sliding	45	S	None
Master Bedroom	GJA-019-01 A	21.09dh	2100	900	Double Hung	45	N	None
Master Bedroom	GJA-013-42 A	06.24sw	600	2400	Sliding	45	E	None
Kitchen/Living	GJA-012-21 A	06.45f	600	4500	Fixed	0	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
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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*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	1000	W	5328	Yes
Bathroom	WB-REFL-CAV	2410	1005	W	5928	Yes
Bathroom	WB-REFL-CAV	2410	2005	E	385	Yes
Bathroom	WB-REFL-CAV	2410	600	S	950	Yes
Bathroom	WB-REFL-CAV	2410	1645	S		Yes
Kitchen/Living	WB-REFL-CAV	2410	3512	S	2941	Yes
Kitchen/Living	WB-REFL-CAV	2410	3021	E	1785	Yes
Kitchen/Living	WB-REFL-CAV	2410	5492	N	2752	Yes
Kitchen/Living	WB-REFL-CAV	2410	3611	W	324	Yes
Kitchen/Living	WB-REFL-CAV	2410	300	S	7732	Yes
Kitchen/Living	WB-REFL-CAV	2410	4791	W	981	Yes
Laundry	WB-REFL-CAV	2410	901	W	5328	Yes
Laundry	WB-REFL-CAV	2410	1901	E	375	Yes
Laundry	WB-REFL-CAV	2110	746	S	2941	Yes
Loft	WB-REFL-CAV	2034	2910	W	385	Yes
Loft	WB-REFL-CAV	2535	3411	S	383	No
Master Bedroom	WB-REFL-CAV	2560	1410	N	5862	Yes
Master Bedroom	WB-REFL-CAV	2560	4201	E	375	Yes
Kitchen/Living	WB-REFL-CAV	1820	5491	N	2782	No

* 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	WB-REFL-CAV	1220	3610	W	382	No
Kitchen/Living	WB-REFL-CAV	1291	300	S	4740	Yes
Kitchen/Living	WB-REFL-CAV	1361	4787	W	682	Yes
Kitchen/Living	WB-REFL-CAV	1698	1445	S	3387	Yes
Kitchen/Living	WB-REFL-CAV	1220	3020	E	381	No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	23.3	0.00
INT-PB	Internal Plasterboard Stud Wall	31.6	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	3.9	Open	0.15	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	35.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.0	Open	0.15	Timber (12mm)
Loft	TIMB-001: Suspended Timber Floor	3.9	N/A	0.15	Carpet
Loft	TIMB-001: Suspended Timber Floor	8.6	N/A	2.00	Carpet
Master Bedroom	TIMB-001: Suspended Timber Floor	12.6	Open	0.15	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Loft	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Kitchen/Living	5	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed
Loft	2	Downlight	200	Sealed
Master Bedroom	2	Downlight	200	Sealed
Void	5	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Loft	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	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
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No Whole of Home Data

Heating system

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

Hot water system

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

Pool / spa equipment

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

Onsite Renewable Energy *schedule*

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

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

* Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the 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-HUXWZN-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address 8A24, 30 Chinbible Avenue,
MULLUMBIMBY, NSW, 2482

Lot/DP 159//755687

NCC Class* 1a

Floor/all Floors 1 of 2 floors

Type New

Plans

Main Plan Project No. 23020

Prepared by Story Design Collective

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	65.9	Suburban
Unconditioned*	3.9	NatHERS climate zone
Total	69.8	10 - Brisbane AMO
Garage	0.0	



Accredited assessor

Name Duncan Hope

Business name Senica Consultancy Group

Email duncan@senica.com.au

Phone +61 280067784

Accreditation No. DMN/14/1658

Assessor Accrediting Organisation DMN

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2

State/Territory variation Yes

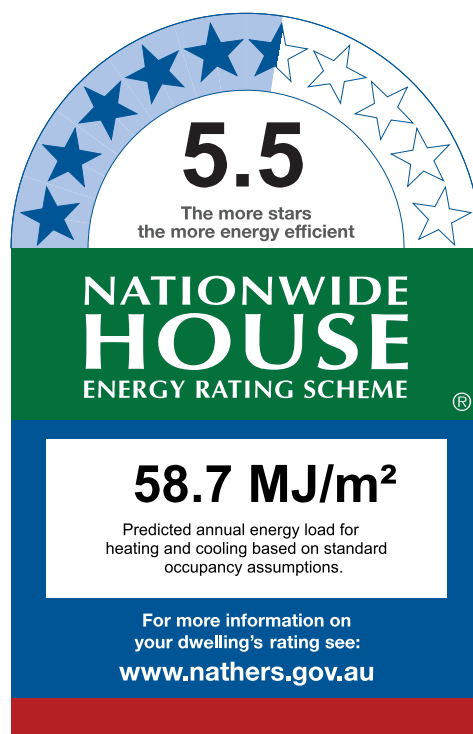
National Construction Code (NCC) requirements

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.

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	12.7	46.0
Load limits	15	54

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 Y

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-HUXWZN-01>.

When using either link,
ensure you are visiting
<http://www.hero-software.com.au>



* Refer to glossary.

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

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.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	35.66
Master Bedroom	Bedroom	12.61
Laundry	Day Time	5.03
Bathroom	Unconditioned	3.90
Loft	Day Time	12.57

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-03 A	Type 048 Series Awning Window SG 3EA	4.84	0.53	0.50	0.56
GJA-012-21 A	Type 131 Series Fixed Window SG 6EA	4.23	0.65	0.62	0.68
GJA-013-42 A	Type 131 Aluminium Sliding Window SG 638CPClr	4.42	0.61	0.58	0.64
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-071-01 A	Type 245 Aluminium Sliding Door DG 4/10/4	3.98	0.63	0.60	0.66
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-03 A	09.08aw	900	750	Awning	90	E	None
Kitchen/Living	GJA-001-03 A	06.27aw	600	2700	Awning	45	E	None
Kitchen/Living	GJA-071-01 A	24.40sd	2400	4000	Sliding Door	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	GJA-080-01 A	20.09dr	2000	900	Hinged Door	90	W	None
Loft	GJA-012-21 A	06.27f	600	2700	Fixed	0	W	None
Loft	GJA-013-42 A	06.24s	600	2400	Sliding	45	S	None
Master Bedroom	GJA-019-01 A	21.09dh	2100	900	Double Hung	45	N	None
Master Bedroom	GJA-013-42 A	06.24sw	600	2400	Sliding	45	E	None
Kitchen/Living	GJA-012-21 A	06.45f	600	4500	Fixed	0	W	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

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

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
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* Refer to glossary.



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*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	1000	W	5328	Yes
Bathroom	WB-REFL-CAV	2410	1005	W	5928	Yes
Bathroom	WB-REFL-CAV	2410	2005	E	385	Yes
Bathroom	WB-REFL-CAV	2410	600	S	950	Yes
Bathroom	WB-REFL-CAV	2410	1645	S		Yes
Kitchen/Living	WB-REFL-CAV	2410	3512	S	2941	Yes
Kitchen/Living	WB-REFL-CAV	2410	3021	E	1785	Yes
Kitchen/Living	WB-REFL-CAV	2410	5492	N	2752	Yes
Kitchen/Living	WB-REFL-CAV	2410	3611	W	324	Yes
Kitchen/Living	WB-REFL-CAV	2410	300	S	7732	Yes
Kitchen/Living	WB-REFL-CAV	2410	4791	W	981	Yes
Laundry	WB-REFL-CAV	2410	901	W	5328	Yes
Laundry	WB-REFL-CAV	2410	1901	E	375	Yes
Laundry	WB-REFL-CAV	2110	746	S	2941	Yes
Loft	WB-REFL-CAV	2034	2910	W	385	Yes
Loft	WB-REFL-CAV	2535	3411	S	383	No
Master Bedroom	WB-REFL-CAV	2560	1410	N	5862	Yes
Master Bedroom	WB-REFL-CAV	2560	4201	E	375	Yes
Kitchen/Living	WB-REFL-CAV	1820	5491	N	2782	No

* Refer to glossary.



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	1220	3610	W	382	No
Kitchen/Living	WB-REFL-CAV	1291	300	S	4740	Yes
Kitchen/Living	WB-REFL-CAV	1361	4787	W	682	Yes
Kitchen/Living	WB-REFL-CAV	1698	1445	S	3387	Yes
Kitchen/Living	WB-REFL-CAV	1220	3020	E	381	No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	23.3	0.00
INT-PB	Internal Plasterboard Stud Wall	31.6	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	3.9	Open	0.15	Tile (8mm)
Kitchen/Living	TIMB-001: Suspended Timber Floor	35.7	Open	0.15	Timber (12mm)
Laundry	TIMB-001: Suspended Timber Floor	5.0	Open	0.15	Timber (12mm)
Loft	TIMB-001: Suspended Timber Floor	3.9	N/A	0.15	Carpet
Loft	TIMB-001: Suspended Timber Floor	8.6	N/A	2.00	Carpet
Master Bedroom	TIMB-001: Suspended Timber Floor	12.6	Open	0.15	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Laundry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Loft	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes
Master Bedroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Kitchen/Living	5	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Downlight	200	Sealed
Loft	2	Downlight	200	Sealed
Master Bedroom	2	Downlight	200	Sealed
Void	5	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Loft	1	1200
Master Bedroom	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.30	Light
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	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
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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]
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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]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the home's energy value*.

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

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

* Refer to glossary.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-MLT724-01

Generated on 13 Jun 2024 using Hero 4.0 (Chenath v3.23)

Property

Address	8A25, 30 Chinbible Avenue, MULLUMBIMBY, NSW, 2482
Lot/DP	159//755687
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Project No. 23020
Prepared by	Story Design Collective

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 95.2	Suburban
Unconditioned* 6.4	NatHERS climate zone
Total 120.8	10 - Brisbane AMO
Garage 19.1	



Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Group
Email	duncan@senica.com.au
Phone	+61 280067784
Accreditation No.	DMN/14/1658
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

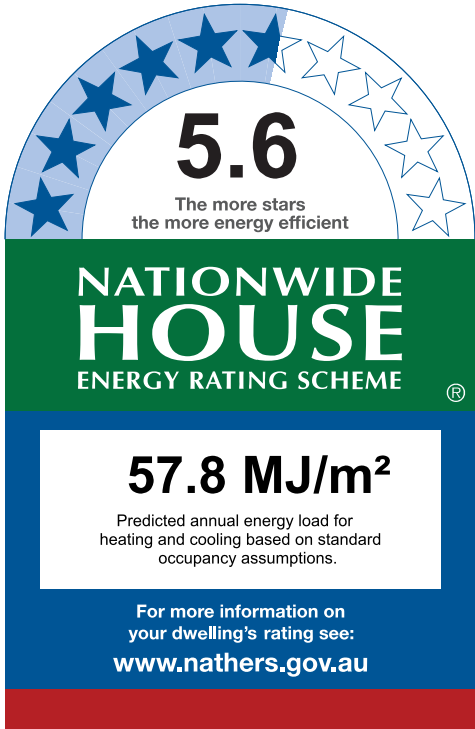
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.5	43.3
Load limits	15	54

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-MLT724-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating and Cooling Load Limits

Additional information

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

Setting options:

Floor type:

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

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

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

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

☐☐☐☐

Exposure*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Provisional values* check

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

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



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	43.12
Bedroom 01	Bedroom	16.78
Ensuite	Night Time	4.14
Garage	Garage	19.15
Bedroom 02	Bedroom	10.39
Bathroom	Unconditioned	6.43
Entry Hallway	Day Time	10.38
Bedroom 03	Bedroom	10.39

Window and glazed door type and performance

Default* windows

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

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
GJA-001-01 A	Type 048 Series Awning Window SG 3Clr	6.27	0.62	0.59	0.65
GJA-013-01 A	Type 131 Aluminium Sliding Window SG 3Clr	6.35	0.77	0.73	0.81
GJA-019-01 A	Type 138 Aluminium Double Hung Window SG 3Clr	6.44	0.67	0.64	0.70
GJA-070-04 A	Type 245 Aluminium Sliding Door SG 4Clr	6.27	0.73	0.69	0.77
GJA-080-01 A	Type 470 Aluminium Hinged Door SG 6Clr	6.07	0.65	0.62	0.68

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	GJA-001-01 A	09.08aw	900	750	Awning	90	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*
Bedroom 01	GJA-013-01 A	06.24sw	600	2400	Sliding	45	W	None
Bedroom 02	GJA-013-01 A	06.21sw	600	2100	Sliding	45	E	None
Bedroom 02	GJA-019-01 A	21.09dh	2100	900	Double Hung	27	S	None
Bedroom 03	GJA-013-01 A	06.24sw	600	2400	Sliding	45	E	None
Ensuite	GJA-013-01 A	06.12sw	600	1200	Sliding	45	W	None
Entry Hallway	GJA-013-01 A	W01	2100	900	Sliding	45	S	None
Garage	GJA-080-01 A	21.08dr	2100	820	Hinged Door	90	W	None
Kitchen/Living	GJA-070-04 A	24.40sd	2400	4000	Sliding Door	45	N	None
Kitchen/Living	GJA-013-01 A	06.27aw	600	2700	Awning	90	E	None
Kitchen/Living	GJA-013-01 A	06.27sw	600	2700	Sliding	45	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
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)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2300	2700	0	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	0.50	Medium	2.50	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	WB-REFL-CAV	2410	3101	E	452	Yes
Bedroom 01	WB-REFL-CAV	2410	5594	W	447	Yes
Bedroom 02	WB-REFL-CAV	3010	3701	E	452	Yes
Bedroom 02	WB-REFL-CAV	3010	2806	S	447	Yes
Bedroom 02	WB-REFL-CAV	3010	3291	W	4652	Yes
Bedroom 03	WB-REFL-CAV	3010	3701	E	452	Yes
Ensuite	WB-REFL-CAV	2410	1501	W	451	Yes
Entry Hallway	WB-REFL-CAV	2410	1020	S	3738	Yes
Garage	WB-REFL-CAV	2560	3001	S	2038	Yes
Garage	WB-REFL-CAV	2560	6501	W	451	Yes
Garage	WB-REFL-CAV	2560	1700	E	4436	Yes
Kitchen/Living	WB-REFL-CAV	3010	5570	N	3290	Yes
Kitchen/Living	WB-REFL-CAV	3010	4594	E	1888	Yes
Kitchen/Living	WB-REFL-CAV	3010	4504	W	450	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	WB-REFL-CAV	3010	4578	E	455	Yes
Kitchen/Living	WB-REFL-CAV	3010	1426	N	437	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	7.2	2.50
INT-PB	Internal Plasterboard Stud Wall	62.9	0.00
INT-PB	Internal Plasterboard Stud Wall	21.8	2.00
WB-REFL-CAV	Weatherboard Battened (Refl Cavity) Stud Wall	5.9	2.50

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	TIMB-001: Suspended Timber Floor	6.4	Open	0.15	Tile (8mm)
Bedroom 01	TIMB-001: Suspended Timber Floor	16.8	Open	0.15	Carpet
Bedroom 02	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Bedroom 03	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Carpet
Ensuite	TIMB-001: Suspended Timber Floor	4.1	Open	0.15	Tile (8mm)
Entry Hallway	TIMB-001: Suspended Timber Floor	10.4	Open	0.15	Timber (19mm)
Garage	CSOG-100: Concrete Slab on Ground (100mm)	19.1	N/A	0.00	Exposed
Kitchen/Living	TIMB-001: Suspended Timber Floor	43.1	Open	0.15	Timber (19mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 01	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Bedroom 02	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Ensuite	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Entry Hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	3.50	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	200	Sealed
Bedroom 01	2	Downlight	200	Sealed
Bedroom 02	1	Downlight	200	Sealed
Bedroom 03	1	Downlight	200	Sealed
Ensuite	1	Downlight	200	Sealed
Entry Hallway	1	Downlight	200	Sealed
Kitchen/Living	6	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
None		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	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]
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.