Nationwide House Energy Rating Scheme[®] Multiple Class 1 dwellings Summary NatHERS[®] Certificate No. 0009121820

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NatHERS Climate Zone

Parkes , NSW , 2870 Lot 437-438 DP 750179 48 Dubbo

47-49 Close Street,



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation

 Design Matters National





Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate? p=WDyoInpjd . When using either link, ensure you are visiting hstar.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 <u>www.abcb.gov.au.</u>

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 /p.a.]	Cooling load (load limit) [MJ/m ² /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
0009121799-01	1	67.0 (N/A)	8.4 (N/A)	75.4	7.2	0
0009121468-01	2	61.4 (N/A)	2.5 (N/A)	63.9	7.7	0

Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for 47-49 Close Street , Parkes , NSW , 2870



Certificate number and link	Unit Number	Heating load (load limit) [MJ/m ² /p.a.]	Cooling load (load limit) [MJ/m ² /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
0009121807	3	60.3 (N/A)	15.9 (N/A)	76.2	7.1	0
0009121815	4	49.1 (N/A)	7.2 (N/A)	56.3	7.9	0
0009121500	5	48.9 (N/A)	3.5 (N/A)	52.4	8.1	0
0009121484	6	48.0 (N/A)	4.9 (N/A)	52.9	8.1	0
0009121518	7	53.4 (N/A)	5.0 (N/A)	58.4	7.9	0
0009121492	8	47.9 (N/A)	6.6 (N/A)	54.5	8	0
0009121476	9	66.6 (N/A)	6.0 (N/A)	72.6	7.3	0

Summary of all dwellings (continued)

Explanatory notes

About this ratings

Individual unit ratings are listed in the 'Summary of all dwellings' section of this Certificate.

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

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

Accredited Assessors

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

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

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

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

Disclaimer

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

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way. Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121799-01

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 1, 47-49 Close Street, Parkes , NSW , 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 60.3 Unconditioned* 8.2 Total 68.5 Garage 0.0 Exposure type Suburban NatHERS climate zone

48 Dubbo

Declaration completed: no conflicts



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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 <u>www.abcb.gov.au.</u>

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

75.4 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	67.0	8.4
Load limits	N/A	N/A

Features determining load limits

Floor Type	csoc
(lowest conditioned area)	0300
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=neVyoatqS . When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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:
- ICC Climate Zone 1 of
 - 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

Energy use



Greenhouse gas emissions



Cost



7.2 Star Rating as of 11 Dec 2023

Certificate check	Approval Stage Construction Stage			ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Conser Survey	Builder	Conser Survey	Occupa
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					

<u>.</u>



0009121799-01 NatHERS Certificate 7.2 Star Rating as of 11 Dec 2023					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	cked	ority/ cked	ed	ority cked	ther
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Cartificate only covers the energy efficiency requirements in the NCC Add	itional roqui	rements the	t must also	he satisfied	include

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	28.39
Bedroom 1	Bedroom	16.26
Entry	Daytime	4.36
Bath 1	Unconditioned	8.19
Bedroom 2	Bedroom	11.26

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill	4.8	0.51	0.48	0.54	
ALIVI-003-01 A	Clear-Clear	4.0	0.51	0.40	0.04	
	Aluminium B DG Air Fill					
ALM-004-03 A	High Solar Gain low-E -	4.3	0.53	0.50	0.56	
	Clear					

Custom windows*

Window ID	Window	Maximum		Substitution tolerance ranges		
willdow iD	Description	U-value*	3160	SHGC lower limit	SHGC upper limit	
No Data Avail	able					

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W18	2400	2400	Awning	45	Ν	No
Kitchen/Living	ALM-003-01 A	W19	900	1200	Awning	45	Ν	No
Bedroom 1	ALM-004-03 A	W20	1800	1800	Awning	45	W	No
Bath 1	ALM-003-01 A	W21	800	900	Awning	90	W	No
Bedroom 2	ALM-004-03 A	W23	1760	1800	Awning	45	S	No
Bedroom 2	ALM-003-01 A	W22	855	1200	Awning	90	W	No

HOUSE

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHCC*	SHGC* Substitution toleral	lerance ranges
	Description U-value*		SHGC	SHGC lower limit	SHGC upper limit
No Data Avai	able				
Custom roof v	vindows*				
	Window	Maximum	0U00*	Substitution to	lerance ranges
			U-value* SHGC*		
Window ID	Description	U-value*		SHGC lower limit	SHGC upper limit

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Avai	lable							

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Available						

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation	
Entry	2040	820	90	W	

External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Timber Stud Frame Brick Veneer	0	Bulk Insulation R2.5	No
EW-2 Weatherboard Timber Stud Frame Panel Direct Fix	0	Bulk Insulation R2.5	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	5950	Ν	2800	No
Kitchen/Living	EW-1	2700	3795	S	4450	No
Bedroom 1	EW-1	2700	950	S	8800	No
Bedroom 1	EW-1	2700	3850	W	375	No
Bedroom 1	EW-2	960	4400	Ν	0	No
Bedroom 1	EW-1	1740	4400	Ν	450	No
Bedroom 1	EW-2	960	3845	Е	0	No
Bedroom 1	EW-1	1740	3845	Е	6000	No
Entry	EW-1	2700	1790	W	3000	No
Bath 1	EW-1	2700	3445	S	4450	No
Bath 1	EW-1	2700	2550	W	2100	No
Bath 1	EW-1	2700	900	Ν	6100	No
Bedroom 2	EW-1	2700	3050	S	500	No
Bedroom 2	EW-1	2700	3945	W	7600	No

Internal wall type

Wall ID	Wall type	Area [m ²] Bulk insulation	Area [m ²]	
IW-001	Timber Stud Frame, Direct Fix Plasterboard	29.30 No insulation	29.30	
IW-002	Cavity brick	10.67 Bulk Insulation in the centre R0.7	10.67	7

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	28.39	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 200mm	16.26	None	No Insulation	Carpet+Rubber Underlay 18mm
Entry	Concrete Slab on Ground 200mm	4.36	None	No Insulation	Ceramic Tiles 8mm
Bath 1	Concrete Slab on Ground 200mm	8.19	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 200mm	11.26	None	No Insulation	Carpet+Rubber Underlay 18mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R3.5	
Entry	Plasterboard on Timber	Bulk Insulation R3.5	
Bath 1	Plasterboard on Timber	Bulk Insulation R3.5	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R3.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Entry	2	Downlights - LED	150	Sealed
Bath 1	4	Downlights - LED	150	Sealed
Bath 1	4	Exhaust Fans	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorpta	nce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				



Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	Minimum efficiency/ Recommend performance capacity			
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	effi	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC -		bstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	;y/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]	
No Data Available		



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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
Assessed noor area	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.
COP	Coefficient of performance
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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Skylight (also known as roof lights	b) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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.
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 Regulator (CER)
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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121468-01

Unit 2, 47-49 Close Street.

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Parkes , NSW , 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 58.7 Unconditioned* 7.3 Total 66.0 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation

 Design Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

Declaration completed: no conflicts

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 J3D3 and J3D15 of NCC Volume One.

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

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

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

63.9 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	61.4	2.5
Load limits	N/A	N/A

Features determining load limits

CSOG
0300
No
No
No

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 hstar.com.au/QR/Generate? p=fXcaonfzY . When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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:
 - ICC Climate Zone 1 of
 - 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

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



7.7 Star Rating as of 11 Dec 2023

Certificate check	Approva	I Stage	Constru Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Asses	Conse Surve	Builde	Conse Surve	Occup
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					

<u>.</u>



0009121468-01 NatHERS Certificate 7.7 Star Rating as of 11 Dec 2023					
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asses	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC Add	itional requi	romonte the	t must also	he estisfied	include

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]	
Kitchen/Living	Kitchen/Living	30.89	
Bed 1	Bedroom	10.7	
Bed 2	Bedroom	10.93	
Bath 1	Unconditioned	7.34	
Hall/Ldy	Daytime	6.17	

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHG0		Substitution tolerance ranges		
WINdow ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill	4.8	0.51	0.48	0.54	
	Clear-Clear	4.0	0.01	0.40	0.04	
	Aluminium B DG Air Fill					
ALM-004-03 A	High Solar Gain low-E -	4.3	0.53	0.50	0.56	
	Clear					

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
Description		U-value*	3160	SHGC lower limit SHGC upper limit		
No Data Avail	able					

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	W1	800	1220	Awning	90	Ν	No
Kitchen/Living	ALM-004-03 A	W2	2400	2360	Awning	45	Ν	No
Bed 1	ALM-004-03 A	W3	1445	1810	Awning	45	S	No
Bed 2	ALM-003-01 A	W6	930	800	Awning	90	E	No
Bed 2	ALM-004-03 A	W5	1445	1500	Awning	45	S	No
Bath 1	ALM-003-01 A	W4	745	900	Awning	90	S	No

HOUSE

Roof window* type and performance value

Default roof windows*

	Window	Maximum	CUCC *	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availa	able					
Custom roof wi	indows*					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
	able					

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Available						

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living	2400	920	90	Ν

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Timber Stud Frame Brick Veneer	0		Bulk Insulation R2.5	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	5900	Ν	3250	No
Kitchen/Living	EW-1	2700	500	W	5950	No
Kitchen/Living	EW-1	2700	2050	Ν	2750	No
Kitchen/Living	EW-1	2700	4445	Е	450	No
Bed 1	EW-1	2700	2895	S	950	No
Bed 2	EW-1	2700	1550	Ν	300	No
Bed 2	EW-1	2700	3950	E	575	No
Bed 2	EW-1	2700	2945	S	950	No
Bath 1	EW-1	2700	3640	S	950	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	10.67	Bulk Insulation in the centre R0.7
IW-002	Timber Stud Frame, Direct Fix Plasterboard	52.25	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	30.89	None	No Insulation	Ceramic Tiles 8mm
Bed 1	Concrete Slab on Ground 200mm	10.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2	Concrete Slab on Ground 200mm	10.93	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath 1	Concrete Slab on Ground 200mm	7.34	None	No Insulation	Ceramic Tiles 8mm
Hall/Ldy	Concrete Slab on Ground 200mm	6.17	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bed 1	Plasterboard on Timber	Bulk Insulation R3.5	

* Refer to glossary. Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 2, 47-49 Close Street , Parkes , NSW , 2870

0009121468-01 N	AtHERS Certificate 7.7 Star Rati	ng as of 11 Dec 2023	HOUSE
Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bed 2	Plasterboard on Timber	Bulk Insulation R3.5	
Bath 1	Plasterboard on Timber	Bulk Insulation R3.5	
Hall/Ldy	Plasterboard on Timber	Bulk Insulation R3.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	13	Exhaust Fans	150	Sealed
Bed 1	5	Downlights - LED	150	Sealed
Bed 2	5	Downlights - LED	150	Sealed
Bath 1	3	Downlights - LED	150	Sealed
Bath 1	3	Exhaust Fans	150	Sealed
Hall/Ldy	2	Downlights - LED	150	Sealed
Hall/Ldy	2	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bed 1	1	1200
Bed 2	1	1200

Roof type

Construction	onstruction Added insulation [R-value]		ce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

0009121468-01 NatHERS Certificate	7.7 Star	Rating as of 11	Dec 2023				HOU
Cooling system							
Appliance/ system type	Loc	ation F	uel type	eff	nimum ciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type Location Fuel type		eff	Minimum efficiency/ performance		Recommended capacity		
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ubstitution e ranges upper limit	Assesse daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	;y/	Recomm capac	
No Data Available				•			
Onsite Renewable Ene	ergy Sche	edule					
System Type Orient	ation		Syst	em Size O	r Generation	Capacity	
No Data Available							

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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
Assessed noor area	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.
COP	Coefficient of performance
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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Skylight (also known as roof lights	b) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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.
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 Regulator (CER)
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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121807

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 3, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 39.8 Unconditioned* 9.0 Total 48.8 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

76.2 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	60.3	15.9
oad limits	N/A	N/A

Features determining load limits

M

L

Floor Type	csoc
(lowest conditioned area)	0300
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=MPInRhVQL When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



7.1 Star Rating as of 11 Dec 2023

······································					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupai
Genuine certificate check		r			
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					

1

7.1 Star Rating as of 11 Dec 2023

HOUSE

	Approva	I Stage	Construe Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	27.8
Bedroom 1	Bedroom	11.98
Bath 1	Unconditioned	9.02

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges			
window iD	Description	U-value*	SHOC	SHGC lower limit SHGC upper limit			
ALM-003-01 A	Aluminium A DG Air Fill	4.8	0.51	0.48	0.54		
ALIVI-003-01 A	Clear-Clear	4.0	0.51	0.40	0.04		
	Aluminium B DG Air Fill						
ALM-004-03 A	High Solar Gain low-E -	4.3	0.53	0.50	0.56		
	Clear						

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*		SHGC lower limit	SHGC upper limit
VEL-011-02 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 10.5mm Argon Gap / 3mm Clear	2.7	0.24	0.23	0.25

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W16	2400	2360	Awning	45	E	No
Kitchen/Living	ALM-004-03 A	W15	1320	1200	Awning	45	W	No
Bedroom 1	ALM-004-03 A	W14	1370	1800	Awning	45	W	No
Bath 1	ALM-003-01 A	W17	750	800	Awning	90	E	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
Window ID	Description U-value*		3160	SHGC lower limit	SHGC upper limit
No Data Available					



Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
window ID	Description	U-value*		SHGC lower limit	SHGC upper limit
	VEL-011-02 W VELUX			0.23	0.25
	FS - Fixed Skylight DG				
VEL-011-02 W	3mm LoE 366 /	2.7	0.24		
	10.5mm Argon Gap /				
	3mm Clear				

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	VEL-011-02 W	S1	0	800	1300	Ν	No	No

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Availa	able					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living	2040	820	90	W

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Timber Stud Frame Brick Veneer	0		Bulk Insulation R2.5	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4650	E	2475	No
Kitchen/Living	EW-1	2700	7250	S	250	No

* Refer to glossary. Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 3, 47-49 Close Street , Parkes , NSW , 2870 0009121807 NatHERS Certificate

7.1 Star Rating as of 11 Dec 2023



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	
Kitchen/Living	EW-1	2700	2350	W	650	No	
Kitchen/Living	EW-1	2700	1500	Ν	5000	No	
Kitchen/Living	EW-1	2700	1795	W	2150	No	
Bedroom 1	EW-1	2700	3195	W	950	No	
Bath 1	EW-1	2700	2700	Е	300	No	
Bath 1	EW-1	2700	2195	S	4900	No	

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	14.99	No insulation
IW-002	Cavity brick	10.67	No Insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	27.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 200mm	11.98	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath 1	Concrete Slab on Ground 200mm	9.02	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R3.5	
Bath 1	Plasterboard on Timber	Bulk Insulation R3.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed

0009121807 NatHERS Certi	ficate	7.1 Star Rating as of 11 Dec 2023			HOUSE
Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Bath 1	4	Downlights - LED	150	Sealed	
Bath 1	4	Exhaust Fans	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptan	ce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation	Fuel type	eff	inimum iciency/ formance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation	Fuel type	eff	inimum iciency/ formance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water	Minimum efficiency	Zone 3 STC		ibstitution e ranges	Assessed daily load
No Data Available		CER Zon	e /STC	010	lower limit	upper limit	[litres]

ool/spa equipment				
Appliance/ system ty	ре	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				
No Data Available Onsite Renewa	able Energy	y Schedule		
	able Energy Orientation		System Size Or Generati	ion Capacity

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

Annual energy load the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions. Assessed floor area the floor area modelied in the software for the purpose of the NatFLERS assessment. Nock, this may note consistent with the floor area in the design documents. Ceiling penetrations Eleatures that require a penetration to the calling, including downlights, verits, exhaust fans, range hoods, chimmey's and flues. Eleatures that requires a penetration to the calling with shall holes through the calling of wiring, e.g. celling fans, pendant lights, and cooling based on standard occupancy assumptions. In some circumstances it will include garages. Custom windows windows listed in NatFLERS software that are available on the market in Australia and have a WERS (Window Energy Rating windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. ERR Energy Efficiency Ratio, measure of how much cooling can be achived by an air conditioner for a single KWh of electricity input file in the modeling in software and must not be modeled as a door when opening to a minimally verificated control to a class 2 building. Exposure category – exposed Errain with no obstructions e.g. flid garaging lind, cocean-fortage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – souted Errain with numerous, closely papaed obstructions below. Errain with provide signal gard, closen-fortage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – soutected <therain closely="" numerous,="" pap<="" th="" with=""><th>AFRC</th><th>Australian Fenestration Rating Council</th></therain>	AFRC	Australian Fenestration Rating Council
Assessed floor area The floor area modelled in the software for the purpose of the NatHERS assessment. Nole, this may not be consistent with the floor area in the design documents. Ceiling penetrations Eastures that require a penetration to the ceiling (in cluid) downlights, wrise, schaust fans, range hoods, chimmeys and flues. Conditioned Zone within a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages. Custom windows Windows lister in NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows Mindows floor area may window lister in a penetration to the cooling can be achieved by an air conditioner for a single kWh of electricity input. EER Energy value The set your homes rating without solar or batteries. Energy value The set your homes rating without solar or batteries. Energy value Exposure category – exposed The exposure list will include garages. Cell garages with the workstructures as a similar height e.g. garaslands with few wells cattered obstructions set, light wegetated bush block and with a weak as a door when opening to a minimally were within a garastructure obstructions set. Standard. Exposure category – open Errain with numerous, closely papeed obstructions low or 10m e.g. clist and industructures. Cell advice with the workstructures as a simalar height e.g. gasalands with few wells cattered ob		M. A Contract of the second seco
COP Coefficient of performance Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupacy assumptions. In some control to performance is within chube garages. Custom windows Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. Default windows Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. ERR Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. Entrance door Thes is your homes rating without solar or batteries. 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 category - porent terrain with no obstructions e.g., flat grazing land, ocean-fontage, desert, exposed high-rise unti (usually above 10 floors). Exposure category - ported terrain with worbstructions e.g., flat grazing land, ocean-fontage, desert, exposed, obstruction below 10m, fammad with scattered sheed, lightly vegetated bushind areas. Exposure category - suburban terrain with numerous, closely spaced obstructions below 10m (armalmad with scattered sheed). Exposure category - ported. terrain with numerous, closely spaced obstructions below.		the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
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. 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. ERR Energy Lificiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity. Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure category – exposed terrain with no obstructions a c.g. flat grazing land, occen-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions below 10m e.g. abuvas floors). terrain with numerous, closely spaced obstructions over 01m e.g. abuvas housing, heavily vegetated bush hlad areas. Exposure category – protected terrain with numerous, closely spaced obstructions over 01m e.g. abuvas housing, heavily vegetated bush hlad areas. Reviour a domain frame data devices a net zero energy value. Device of theaving and tatached Class 10a buildings. Definitions can be fout	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.
Curronitational circumstances it will include garages. Custom windows windows their of NATERS 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 input. ERR Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input. Energy use 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). Exposure category – exposed Errain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions below flore, g. suburban housing, heavily vegetated bushland areas. Horizontal shafing feature then NCC groups building in the horizontal plane, e.g. eaves, vermadhas, pergolas, caprots, or overhangs or balconies from upper levels. Provisional value an me that achieves a net zero energy value ² . Refective wrap (also known as solution of version and value of medaling, of the was all stabed Closes 10 ab ubility as the openability percentage pervisional value of medaling of the measure of version and value of medaling of the main with numerous, closely spaced obstructions as using a flore on the sestos thorizon table. <th>COP</th> <th>Coefficient of performance</th>	COP	Coefficient of performance
Classion windows Scheme) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. ERE Energy UEficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. 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 ABCE Housing Provisions Standard). Entrance door the net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). 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 – ponel terrain with numerous; closely spaced obstructions below 10m e.g. subwrah nousing, heavily vegetated bushhand areas. Exposure category – suburban terrain with numerous; closely spaced obstructions town 10m e.g. (gi and industrial areas. Noticotal shading feature the openability percentage or operable (moveable) area of doors or windows that is used in venilation calculations. Not zona a home that cahleves a net zero energy value?. Opening percentage the openability percentage or operable (moveable) area of do	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.
Details windows methods. EER Energy use Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure terrain with no obstructions e.g. fat grazing land, ocean-frontage. desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with no obstructions e.g. fat grazing land, ocean-frontage. desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with no obstructions e.g. fat grazing land, ocean-frontage. desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Exposure category – use to the exposed costructions or to e.g. a city and industrial areas. terrain with numerous, closely spaced obstructions areas gras a classification code. NatHERS toftware models NCC Class 1, 2 or 4 buildings. Definitions and use, and easigns a classification code. NatHERS toftware models NCC Class 1, 2 or 4 buildings. Definitions can be found at www.abcd.gova.u. Net zero home the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. An other that calcivers an at zero energy value? the openability percentage or operable (moveable) area of door	Custom windows	
Etch input ² The is your homes rating without solar or batteries. Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Entrance door these signify vertilation 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 category – expose see exposure categories below. Exposure category – open terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m.e.g. suburban housing, heavily vegetated bushand areas. Provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels. Net zero home a home that achieves a net zero energy value*. Opening percentage a home that achieves a net zero energy value*. Provisional value can be capacity or zero energy value*. Opening percentage the open	Default windows	
Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined on the ABCB Housing Provisions Standard). Entrance door The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined corridor in a Class 2 building. Exposure see exposure categories below. Exposure category – open 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 no work class 2 building. Standard Constructions a set in the modelled building with evel and building. Standard Construction and the ABCB Weyled units (e.g. above 3 floors). Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m e.g. cuburban housing, heavily vegetated bushlanda areas. Exposure category – suburban freating 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 the NCC groups buildings and attached Class 10 buildings. Definitions can be found at www.abcb. gov.au. National Construction Code the openability percentage or operable (moveabile) area of doors or windows that is used in ventilation calculations. Provisional value or mediating of the dual difference on trandis on a dub foreas and a www.abcb gov.au. a assu	EER	
Entry value defined in the ABCB Housing Provisions Standard). Entry 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 category – exposed terrain with no obstructions et a similar height e.g. grasslands with few well scattered obstructions below 10m, familand with the scattered shead, lightly vegetated bush blocks, elevated uning (e.g. above 3 floors). Exposure category – opentected terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Exposure category – protected terrain with numerous, closely spaced obstructions explains below 10m e.g. suburban housing, heavily vegetated bushland areas. National Construction Code (NCC) Class the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (NCC) Class 1, 2 or 4 buildings and attached Class 10a building. Definitions can be found at www.abcb.gov.au. Net zero home a home that achieves you and attached Class 10a building. Definitions can be found at www.abcb.gov.au. Recommended capacity an assumed value that does not represent an actual value. Acceptable provisional values are outlined in the NatHERS to achieve the Assifter control values are outlined in the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended tow NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended and wile. Acceptable provi	Energy use	
Enhance door ventilated corridor in a Class 2 building. Exposure see 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 no obstructions sel as inihar 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 – open terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Noticol Sa terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. National Construction Code (NCC) Class the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Not zero home a home that achieves a net zero energy value*. on the stachieves a net zero energy value*. Recommended capacity assumed value that does not represent an actual value. For example, if the wall colur is unspecified in the documentation, a provisional value or visize of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by the fuel so sing should be confirmed by a s	Energy value	defined in the ABCB Housing Provisions Standard).
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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions over 10 m.e.g. uburban housing, heavily vegetated bushland areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m.e.g. elubran housing, heavily vegetated bushland areas. 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 10 a buildings. Definitions can be found at www.abcb.gov.au. Not zero home a home that achieves a net zero energy value*. Opening percentage the one to repreable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value Reflective wrap (also known as foil) can be dound at www.nathers.gov.au this is the capacity or size of equipment that is 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 cellings. When combined with an appropriate airgap and emissivity value,	Entrance door	ventilated corridor in a Class 2 building.
Exposure category – open terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Exposure category – suburban terrain with numerous, closely spaced obstructions below 10m 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 National Construction Code 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 10 buildings. Definitions can be found at www.abcb.gov.au. Net zero home a home that achieves a net zero energy value*. 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 undeitor www.nathers.gov.au Nis 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 spress. Reflective wrap (also known as roof lights) for NatHERS this is typically a noperable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does for holve a olfituser. Stading features includes ne	· · ·	
Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas. Exposure category – suburban 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 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. 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 ones serviced. This is a recommended with an appropriate airgap and emissivity value, it provides space, and generally does not have a diffuser. Rof 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	Exposure category – exposed	
Exposure category - suburban 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.abct.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 zize 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 foll) 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, fenc	Exposure category – open	
Horizontal shading feature provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies 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. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the doutmentation, 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 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 includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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 subage ound generally does and radifuser. StrCs Small-scale Technology Certificates, certificates, certificates, certificates, certificates, certificates, certified window is bard of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the clading. This includes, but is n	Exposure category – protected	
National Construction Code (NCC) Class 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. 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 zero f 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 foll) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides includes neighbouring buildings, fonces, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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, fonces, and wing walls, but excludes eaves. Skylight (also known as ro	Exposure category – suburban	
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 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. 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. Stocs Small-scale Technology Certificates. certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Smal-scale Renewable En	Horizontal shading feature	from upper levels.
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 foll) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) for NatHERS this is typically a noulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. Solar heat gain coefficient (SHGC) the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and weage and show as part of the Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sol as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) Thermal breaks Small-scale Technology Certificates, certificates created by the RE	National Construction Code (NCC) Class	
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 recommended by NatHERS to achieve the desired comfort conditions in the insulative properties. 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. 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. StGs 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 Regulator (CER) 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 no subating ability. U-value the rate of heat transfer t		67 67
Provisional value 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. 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. Solar heat gain coefficient 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 ransmits. 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 Regulator (CER) Thermal breaks <th>Opening percentage</th> <th></th>	Opening percentage	
Recommended capacity zone or zone's 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. 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. Solar heat gain coefficient (SHGC) 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u.conditioned a zone within a dwelling that is assumed to not requir	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
foil) insulativé 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. 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. 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. 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 Regulator (CER) u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-value a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions. provides shading features provides shading to the building (wing walls), fences, other building, wegetation (protected or listed heritage heres). window schading device <th>Recommended capacity</th> <th>zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified</th>	Recommended capacity	zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
Rtoch window space, and generally does not have a diffuser. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. 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. STCs Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER) Thermal breaks Small-scale Technology Certificates, certificates created by the Clean Energy Regulator (CER) u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-conditioned 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 (wing walls), fences, other building, wegetation (protected or listed heritage trees). window chading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Reflective wrap (also known as foil)	
Skylight (also known as roof lights) for NatHERŠ this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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), fonces, other building, vegetation (protected or listed heritage reces). device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading <th>Roof window</th> <th>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.</th>	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.
Solar heat gain coefficient 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. ucconditioned a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions. provides shading to the building (wing walls), fences, other building, vegetation (protected or listed heritage trees). Window chading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Shading features	
String and contribution 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. ucconditioned a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions. vertical shading features privacy screens, other walls in the building (wing walls), fences, other building, vegetation (protected or listed heritage trees). Window chading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Skylight (also known as roof lights)	
Sites bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) ⁺ 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 polystyrene insulation sheeting or plastic strips 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 device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Solar heat gain coefficient (SHGC)	subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
Thermal breaks but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips. 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 building, vegetation (protected or listed heritaget heres). Window shading dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	STCs	bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
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 dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Thermal breaks	but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such
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 dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Window shading dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	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).
reatures (eg eaves and balconies)	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121815

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 4, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 70.4 Unconditioned* 0.0 Total 70.4 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

56.3 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	49.1	7.2
oad limits	N/A	N/A

Features determining load limits

L

Floor Type	CSOG
(lowest conditioned area)	0306
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=cbRjUTpvF When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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
- 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

Energy use



Greenhouse gas emissions



Cost



7.9 Star Rating as of 11 Dec 2023

					HOUSE
Certificate check	Approval Stage		Construction Stage		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder o	Consent Surveyo	Occupar
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					

1

7.9 Star Rating as of 11 Dec 2023

Ë		•
н с	ໍ່ມີບໍ່ອ	SE -

		Approval Stage		Construction Stage	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in tl	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	nent)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
	e		4		Second and a

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	33.4
Bed 1	Bedroom	12.38
Bed 2	Bedroom	12.99
Bath 1	Daytime	6.71
Hall/Ldy	Daytime	4.88

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
WINDOW ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
	Aluminium B DG Air Fill					
ALM-004-03 A	High Solar Gain low-E -	4.3	0.53	0.50	0.56	
	Clear					

Custom windows*

Window ID	Window	indow Maximum		Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Avail	able					

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W10	1350	1200	Awning	45	W	No
Kitchen/Living	ALM-004-03 A	W9	600	1800	Awning	45	Ν	No
Kitchen/Living	ALM-004-03 A	W13	2400	2360	Awning	45	E	No
Bed 1	ALM-004-03 A	W11	1450	1800	Awning	45	W	No
Bed 2	ALM-004-03 A	W12	1460	1800	Awning	45	E	No

Roof window* type and performance value

Default roof windows*

Window ID	Window			Substitution tolerance ranges		
	Description			SHGC lower limit	SHGC upper limit	
No Data Available						

* Refer to glossary. Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 4, 47-49 Close Street , Parkes , NSW , 2870



Custom roof windows*

Window ID	Window	Maximum	mum SHGC*	Substitution tolerance ranges		
	Description	scription U-value*		SHGC lower limit	SHGC upper limit	
No Data Avai	lable					

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Avai	lable							

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Avai	lable					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living	2400	900	90	W

External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Timber Stud Frame Brick Veneer	0	Bulk Insulation R2.5	No
EW-2 Weatherboard Timber Stud Frame Panel Direct Fix	0	Bulk Insulation R2.5	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1995	W	2400	No
Kitchen/Living	EW-1	2700	700	S	5800	No
Kitchen/Living	EW-1	2700	2400	W	400	No

0009121815 NatHERS Certificate

7.9 Star Rating as of 11 Dec 2023

HOUSE	

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	8700	Ν	400	No
Kitchen/Living	EW-1	2700	4395	E	1300	No
Bed 1	EW-2	940	1700	Ν	0	No
Bed 1	EW-1	1760	1700	Ν	4800	No
Bed 1	EW-2	940	1600	S	0	No
Bed 1	EW-1	1760	1600	S	300	No
Bed 1	EW-2	940	3500	W	0	No
Bed 1	EW-1	1760	3500	W	700	No
Bed 2	EW-2	940	3500	E	0	No
Bed 2	EW-1	1760	3500	E	400	No
Bed 2	EW-2	940	900	S	0	No
Bed 2	EW-1	1760	900	S	300	No
Bed 2	EW-2	940	900	Ν	0	No
Bed 2	EW-1	1760	900	Ν	4800	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	46.44	No insulation
IW-002	Cavity brick	16.20	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	33.40	None	No Insulation	Ceramic Tiles 8mm
Bed 1	Concrete Slab on Ground 200mm	12.38	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2	Concrete Slab on Ground 200mm	12.99	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath 1	Concrete Slab on Ground 200mm	6.71	None	No Insulation	Ceramic Tiles 8mm
Hall/Ldy	Concrete Slab on Ground 200mm	4.88	None	No Insulation	Ceramic Tiles 8mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bed 1	Plasterboard on Timber	Bulk Insulation R3.5	
Bed 2	Plasterboard on Timber	Bulk Insulation R3.5	
Bath 1	Plasterboard on Timber	Bulk Insulation R3.5	
Hall/Ldy	Plasterboard on Timber	Bulk Insulation R3.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Bed 1	5	Downlights - LED	150	Sealed
Bed 2	5	Downlights - LED	150	Sealed
Bath 1	2	Downlights - LED	150	Sealed
Bath 1	2	Exhaust Fans	150	Sealed
Hall/Ldy	2	Downlights - LED	150	Sealed
Hall/Ldy	2	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bed 1	1	1200
Bed 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance Roof shade[colour]	
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				



Recommended

capacity

Recommended

capacity

upper limit

Recommended

capacity

Assessed

daily load

[litres]

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system Minimum Appliance/ system type Location Fuel type efficiency/ performance No Data Available Heating system Minimum Appliance/ system type Location Fuel type efficiency/ performance No Data Available Hot water system **Zone 3 Substitution** Hot Minimum Zone 3 Water tolerance ranges Appliance/ system type Fuel type efficiency STC **CER Zone** /STC lower limit No Data Available Pool/spa equipment Minimum Appliance/ system type Fuel type efficiency/ performance No Data Available

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]	
No Data Available		



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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.
COP	Coefficient of performance
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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
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.
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.
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 Regulator (CER)
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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121500

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 5, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 44.2 Unconditioned* 6.6 Total 50.8 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au 8544 1683 Phone Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

52.4 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	48.9	3.5
oad limits	N/A	N/A

Features determining load limits

L

Floor Type	CSOG
(lowest conditioned area)	0500
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=yJRKPXLVE When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



8.1 Star Rating as of 11 Dec 2023

					HOUSE
Certificate check	Approva	l Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder o	Consent Surveyo	Occupar
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					

<u>.</u>

8.1 Star Rating as of 11 Dec 2023

Ê		1
L HO	öÙ	SE

	Approva	l Stage	Construction Stage		
Certificate check	ecked	hority/ scked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	nent)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	27.69
Bedroom 1	Bedroom	11.05
Entry	Daytime	5.46
Bath	Unconditioned	6.64

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges			
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit		
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54		
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E - Clear	4.3	0.53	0.50	0.56		

Custom windows*

Window ID	Window	Maximum	SHCC*	Substitution tolerance ranges		
	Description U-value*		SHGC* -	SHGC lower limit	SHGC upper limit	
No Data Avai	lable					

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W4	2400	2360	Awning	45	Ν	No
Kitchen/Living	ALM-004-03 A	W3	1350	1200	Awning	45	Ν	No
Bedroom 1	ALM-004-03 A	W1	1470	1800	Awning	45	S	No
Bath	ALM-003-01 A	W2	800	900	Awning	90	S	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	laximum SHGC*	Substitution tolerance ranges			
	Description U-value*		3660	SHGC lower limit	SHGC upper limit		
No Data Available							



Custom roof windows*

Window ID	Window	Maximum	SHCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Avai	lable					

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Avai	lable					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Entry	2400	900	90	S

External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Timber Stud Frame Brick Veneer	0	Bulk Insulation R2.5	No
EW-2 Weatherboard Timber Stud Frame Panel Direct Fix	0	Bulk Insulation R2.5	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4700	Ν	2400	Yes
Kitchen/Living	EW-2	1050	800	W	0	No
Kitchen/Living	EW-1	1650	800	W	5200	No

0009121500 NatHERS Certificate

8.1 Star Rating as of 11 Dec 2023



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-2	1050	2400	Ν	0	No
Kitchen/Living	EW-1	1650	2400	Ν	500	No
Kitchen/Living	EW-1	2700	3695	W	500	No
Bedroom 1	EW-2	1050	3200	S	0	No
Bedroom 1	EW-1	1650	3200	S	1000	No
Bedroom 1	EW-2	1050	1100	W	0	No
Bedroom 1	EW-1	1650	1100	W	4400	No
Entry	EW-1	2700	1490	S	2100	No
Bath	EW-1	2700	495	S	2100	No
Bath	EW-1	2700	900	E	5500	No
Bath	EW-1	2700	1900	S	400	Yes
Bath	EW-1	2700	3695	W	500	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	10.53	No Insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	33.48	No insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	27.69	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 200mm	11.05	None	No Insulation	Carpet+Rubber Underlay 18mm
Entry	Concrete Slab on Ground 200mm	5.46	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 200mm	6.64	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R3.5	

* Refer to glossary. Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 5, 47-49 Close Street , Parkes , NSW , 2870

0009121500 NatHEF	S Certificate 8.1 Star F	8.1 Star Rating as of 11 Dec 2023				
Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]			
Entry	Plasterboard on Timber	Bulk Insulation R3.5				
Bath	Plasterboard on Timber	Bulk Insulation R3.5				

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	11	Downlights - LED	150	Sealed
Kitchen/Living	11	Exhaust Fans	150	Sealed
Bedroom 1	4	Downlights - LED	150	Sealed
Entry	2	Downlights - LED	150	Sealed
Entry	2	Exhaust Fans	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	2	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance Roof shade[colour]		
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

0009121500 NatHERS Certificate	8.1 Star Rating as of 11 Dec 2023						HOUSE	
Cooling system								
Appliance/ system type	Lo	cation	Fuel type	eff	nimum iciency/ ormance		mended acity	
No Data Available				•				
Heating system								
Appliance/ system type		cation	on Fuel type		Minimum efficiency/ performance		Recommended capacity	
No Data Available								
Hot water system								
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ibstitution e ranges upper limit	Assessed daily load [litres]	
No Data Available								
Pool/spa equipment								
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac		
No Data Available								
Onsite Renewable E	nergy Sch	edule						
System Type Orie	ntation		Syst	em Size O	r Generation	Capacity		

Battery Schedule

No Data Available

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

an Fenestration Rating Council icted amount of energy required for heating and cooling, based on standard occupancy assumptions. area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the a in the design documents. that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. s fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and and cooling ducts. ent of performance within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some ances it will include garages. I isted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating) rating.
area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the a in the design documents. that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. s fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and and cooling ducts. ent of performance vithin a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some ances it will include garages. I listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating) rating.
that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. s fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and and cooling ducts. ent of performance within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some ances it will include garages. I isted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating) rating.
ent of performance vithin a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some ances it will include garages. I listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating) rating.
ances it will include garages. Isted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating) rating.
) rating.
that are representative of a specific type of window product and whose properties have been derived by statistical
Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity
our homes rating without solar or batteries.
cost to society including, but not limited to, costs to the building user, the environment and energy networks (as in the ABCB Housing Provisions Standard).
gnify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally d corridor in a Class 2 building.
osure categories below.
ith no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
rith few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with d sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
ith numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
/ith numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies per levels.
c groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
that achieves a net zero energy value*.
ability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
med value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, onal value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note be found at www.nathers.gov.au
e capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
pplied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides e properties.
ERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic ind generally does not have a diffuser.
neighbouring buildings, fences, and wing walls, but excludes eaves.
ERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
ion of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and iently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar ansmits.
cale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
srials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, t limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such tyrene insulation sheeting or plastic strips
of heat transfer through a window. The lower the U-value, the better the insulating ability.
vithin a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
schading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
xed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading * (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121484

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 6, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 43.5 Unconditioned* 6.2 Total 49.6 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

52.9 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	48.0	4.9
oad limits	N/A	N/A

Features determining load limits

M

L

Floor Type	CSOG
(lowest conditioned area)	0000
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=RwFuqHsrk When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



8.1 Star Rating as of 11 Dec 2023

Certificate check	Approva	I Stage	Constru Stage	HOUSE	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Surveyo	Builder	Consen Surveyo	Occupa
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					

<u>.</u>

8.1 Star Rating as of 11 Dec 2023

Ê		1
L HO	öÙ	SE

	Approva	I Stage	Construe Stage		
Certificate check	ecked	hority/ scked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not incl	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	26.73
Bedroom 1	Bedroom	11.42
Entry	Daytime	5.31
Bath	Unconditioned	6.18

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges			
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit		
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54		
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E - Clear	4.3	0.53	0.50	0.56		

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	plerance ranges
	ndow ID SHG		3660	SHGC lower limit	SHGC upper limit
No Data Avai	lable				

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W4	2400	2360	Awning	45	Ν	No
Kitchen/Living	ALM-004-03 A	W3	1350	1200	Awning	45	Ν	No
Bedroom 1	ALM-004-03 A	W1	1470	1800	Awning	45	S	No
Bath	ALM-003-01 A	W2	800	900	Awning	90	S	No

Roof window* type and performance value

Default roof windows*

Window ID	Window Maximum Description U-value*		SHGC*	Substitution tolerance ranges		
			3660	SHGC lower limit	SHGC upper limit	
No Data Available						



Custom roof windows*

Window ID	Window	Maximum		Substitution to	ution tolerance ranges	
	Description U-value*		SHGC*	SHGC lower limit	SHGC upper limit	
No Data Available						

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Ava	ilable							

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Avai	lable					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Entry	2400	900	90	S

External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Timber Stud Frame Brick Veneer	0	Bulk Insulation R2.5	No
EW-2 Weatherboard Timber Stud Frame Panel Direct Fix	0	Bulk Insulation R2.5	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4600	Ν	2500	Yes
Kitchen/Living	EW-1	2700	800	W	4600	No
Kitchen/Living	EW-1	2700	2400	Ν	500	No

0009121484 NatHERS Certificate

8.1 Star Rating as of 11 Dec 2023



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4395	E	300	No
Bedroom 1	EW-1	2700	3995	E	300	No
Bedroom 1	EW-1	2700	3300	S	900	No
Bedroom 1	EW-1	2700	1200	W	3700	No
Entry	EW-1	2700	1390	S	2100	No
Bath	EW-1	2700	495	S	2100	No
Bath	EW-2	1050	900	E	0	No
Bath	EW-1	1650	900	E	5500	No
Bath	EW-2	1050	1800	S	0	Yes
Bath	EW-1	1650	1800	S	500	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	33.48	No insulation
IW-002	Cavity brick	9.99	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	26.73	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 200mm	11.42	None	No Insulation	Carpet+Rubber Underlay 18mm
Entry	Concrete Slab on Ground 200mm	5.31	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 200mm	6.18	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R3.5	
Entry	Plasterboard on Timber	Bulk Insulation R3.5	
Bath	Plasterboard on Timber	Bulk Insulation R3.5	

* Refer to glossary. Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 6, 47-49 Close Street , Parkes , NSW , 2870



Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	11	Downlights - LED	150	Sealed	
Kitchen/Living	11	Exhaust Fans	150	Sealed	
Bedroom 1	4	Downlights - LED	150	Sealed	
Entry	2	Downlights - LED	150	Sealed	
Entry	2	Exhaust Fans	150	Sealed	
Bath	2	Downlights - LED	150	Sealed	
Bath	2	Exhaust Fans	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction Added insulation [R-value]		Solar absorptance Roof shade[colour]			
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of $5W/m^2$ is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

0009121484 NatHERS Certificate	8.1 Sta	r Rating as of 11	Dec 2023				HOUS
Heating system							
Appliance/ system type	Lo	cation Fu	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		Ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							
Onsite Renewable E	nergy Sch	edule					
System Type Orie	ntation		Syst	em Size O	r Generation	Capacity	

Battery Schedule

No Data Available

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

Annual energy load the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions. Assessed floor area the floor area modelied in the software for the purpose of the NatFLERS assessment. Nock, this may note consistent with the floor area in the design documents. Ceiling penetrations Eleatures that require a penetration to the calling, including downlights, verits, exhaust fans, range hoods, chimmey's and flues. Eleatures that requires a penetration to the calling with shall holes through the calling of wiring, e.g. celling fans, pendant lights, and cooling based on standard occupancy assumptions. In some circumstances it will include garages. Custom windows windows listed in NatFLERS software that are available on the market in Australia and have a WERS (Window Energy Rating windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. ERR Energy Efficiency Ratio, measure of how much cooling can be achived by an air conditioner for a single KWh of electricity input file in the modeling in software and must not be modeled as a door when opening to a minimally verificated control to a class 2 building. Exposure Case actigories below. Exposure category – exposed Errain with numerous, closely apaced obstructions below. Carling and could areas. Exposure category – souted Errain with numerous, closely apaced obstructions below. Carlina areas. Carlina areas. Exposure category – souted Errain with numero	AFRC	Australian Fenestration Rating Council
Assessed floor area The floor area modelled in the software for the purpose of the NatHERS assessment. Nole, this may not be consistent with the floor area in the design documents. Ceiling penetrations Eastures that require a penetration to the ceiling (in cluid) downlights, wrise, schaust fans, range hoods, chimmeys and flues. Conditioned Zone within a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages. Custom windows Windows lister in NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows Mindows floor area may window lister in a penetration to the cooling can be achieved by an air conditioner for a single kWh of electricity input. EER Energy value The set your homes rating without solar or batteries. Energy value The set your homes rating without solar or batteries. Energy value Exposure category – exposed The exposure last the obstructions set, the home colling software and must not be modelled as a door when opening to a minimally within the floor in a categor state software in a similar height e.g. gasalands with few wells categor down of the NatHERS Software works, and the weak state of the software and with set of a software on the software and the set of a software and		M. A Contract of the second seco
COP Coefficient of performance Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupacy assumptions. In some control to performance is within chube garages. Custom windows Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. Default windows Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. ERR Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. Entrance door Thes is your homes rating without solar or batteries. 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 category - porent terrain with no obstructions e.g., flat grazing land, ocean-fontage, desert, exposed high-rise unti (usually above 10 floors). Exposure category - ported terrain with worbstructions e.g., flat grazing land, ocean-fontage, desert, exposed, obstruction below 10m, fammad with scattered sheed, lightly vegetated bushind areas. Exposure category - suburban terrain with numerous, closely spaced obstructions below 10m (armalmad with scattered sheed). Exposure category - ported. terrain with numerous, closely spaced obstructions below.		the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
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. 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. ERR Energy Lificiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity. Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure category – exposed terrain with no obstructions a c.g. flat grazing land, occen-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions below 10m e.g. abuvas floors). terrain with numerous, closely spaced obstructions over 01m e.g. abuvas housing, heavily vegetated bush hlad areas. Exposure category – protected terrain with numerous, closely spaced obstructions over 01m e.g. abuvas housing, heavily vegetated bush hlad areas. Reviour a domain frame data devices a net zero energy value. Device on theas a dintere on the set on the set on tenergy value. <	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.
Curronitational circumstances it will include garages. Custom windows windows their of NATERS 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 input. ERR Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input. Energy use 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). Exposure category – exposed Errain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions below flore, g. suburban housing, heavily vegetated bushland areas. Horizontal shafing feature then NCC groups building in the horizontal plane, e.g. eaves, vermadhas, pergolas, caprots, or overhangs or balconies from upper levels. Provisional value an me that achieves a net zero energy value ² . Refective wrap (also known as solution of version and value of medaling, of the was all stabed Closes 10 ab ubility as the openability percentage pervisional value of medaling of the measure of version and value of medaling of the main with numerous, closely spaced obstructions as using a flore on the sestos thorizon table. <th>COP</th> <th>Coefficient of performance</th>	COP	Coefficient of performance
Classion windows Scheme) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. ERE Energy UEficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input. 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 ABCE Housing Provisions Standard). Entrance door the net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). 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 – ponel terrain with numerous; closely spaced obstructions below 10m e.g. subwrah nousing, heavily vegetated bushhand areas. Exposure category – suburban terrain with numerous; closely spaced obstructions town 10m e.g. (gi and industrial areas. Noticotal shading feature the openability percentage or operable (moveable) area of doors or windows that is used in venilation calculations. Not zona a home that cahleves a net zero energy value?. Opening percentage the openability percentage or operable (moveable) area of do	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.
Details windows methods. EER Energy use Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure terrain with no obstructions e.g. fat grazing land, ocean-frontage. desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with no obstructions e.g. fat grazing land, ocean-frontage. desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with no obstructions e.g. fat grazing land, ocean-frontage. desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Exposure category – use to the exposed costructions or to e.g. a dispose a costing or overhangs or balconies for the expose terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. National Construction Code the vector parable (moveable) area of doors or windows that is used in ventilation calculations. Antient Charter and value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value to or medium must be modelled. Acceptable provisional values are outlined in the NatHERS to flow area anot wale the documentation. a provisional value of medium must b	Custom windows	
Etch input ² The is your homes rating without solar or batteries. Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Entrance door these signify vertilation 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 category – expose see exposure categories below. Exposure category – open terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m.e.g. suburban housing, heavily vegetated bushand areas. Provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels. Net zero home a home that achieves a net zero energy value*. Opening percentage a home that achieves a net zero energy value*. Provisional value can be capacity or zero energy value*. Opening percentage the open	Default windows	
Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined on the ABCB Housing Provisions Standard). Entrance door The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined corridor in a Class 2 building. Exposure see exposure categories below. Exposure category – open 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 no work class 2 building. Standard Constructions a set in the modelled building with evel and building. Standard Construction and the ABCB Weyled units (e.g. above 3 floors). Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m e.g. cuburban housing, heavily vegetated bushlanda areas. Exposure category – suburban freating feature the NCC groups buildings in dattached Class 10 buildings. Definitions can be found at www.abcb. gov.au. National Construction Code the NCC groups buildings and attached Class 10 buildings. Definitions can be found at www.abcb. gov.au. Provisional value a home that achieves a net zero energy value*. Cost and a sected on struction at a set on energy value*. Opening percentage cubilding in the docide and wew.abcb cova.uu. a home that achieves on terpresent an actual value, fore example, if the wa	EER	
Entry value defined in the ABCB Housing Provisions Standard). Entry 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 category – exposed terrain with no obstructions et a similar height e.g. grasslands with few well scattered obstructions below 10m, familand with the scattered shead, lightly vegetated bush blocks, elevated uning (e.g. above 3 floors). Exposure category – opentected terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Exposure category – protected terrain with numerous, closely spaced obstructions explains below 10m e.g. suburban housing, heavily vegetated bushland areas. National Construction Code (NCC) Class the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (NCC) Class 1, 2 or 4 buildings and attached Class 10a building. Definitions can be found at www.abcb.gov.au. Net zero home a home that achieves you and attached Class 10a building. Definitions can be found at www.abcb.gov.au. Recommended capacity an assumed value that does not represent an actual value. Acceptable provisional values are outlined in the NatHERS to achieve the Assifter control values are outlined in the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended tow NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended and wile. Acceptable provi	Energy use	
Enhance door ventilated corridor in a Class 2 building. Exposure see 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 no obstructions sel as inihar 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 – open terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Noticol Sa terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. National Construction Code (NCC) Class the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Not zero home a home that achieves a net zero energy value*. on the stachieves a net zero energy value*. Recommended capacity assumed value that does not represent an actual value. For example, if the wall colur is unspecified in the documentation, a provisional value or visize of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by the flash selection sizing should be confir	Energy value	defined in the ABCB Housing Provisions Standard).
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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions over 10 m.e.g. uburban housing, heavily vegetated bushland areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m.e.g. elubran housing, heavily vegetated bushland areas. 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 10 a buildings. Definitions can be found at www.abcb.gov.au. Not zero home a home that achieves a net zero energy value*. Opening percentage the one ability percentage or operable (moves) that use. For example, if the wall colour is unspecified in the documentation, an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, and can be found at www.nathers.gov.au. Reflective wrap (also known as foil) can be dound at www.nathers.gov.au. file is the capacity or size of equipment that is 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 cellings. When combined w	Entrance door	ventilated corridor in a Class 2 building.
Exposure category – open terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Exposure category – suburban terrain with numerous, closely spaced obstructions below 10m 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 National Construction Code 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 10 buildings. Definitions can be found at www.abcb.gov.au. Net zero home a home that achieves a net zero energy value*. 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 undeitor www.nathers.gov.au Nis 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 spress. Reflective wrap (also known as roof lights) for NatHERS this is typically a noperable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does for holve a olfituser. Stading features includes ne	· · ·	
Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas. Exposure category – suburban 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 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. 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 ones serviced. This is a recommended with an appropriate airgap and emissivity value, it provides space, and generally does not have a diffuser. Rof 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	Exposure category – exposed	
Exposure category - suburban 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.abct.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 zize 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 foll) 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, fenc	Exposure category – open	
Horizontal shading feature provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies 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. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the doutmentation, 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 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 includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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 subage ound generally does and radifuser. StrCs Small-scale Technology Certificates, certificates, certificates, certificates, certificates, certificates, certified window is bard of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the clading. This includes, but is n	Exposure category – protected	
National Construction Code (NCC) Class 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. 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 zero f 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 foll) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides includes neighbouring buildings, fonces, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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, fonces, and wing walls, but excludes eaves. Skylight (also known as ro	Exposure category – suburban	
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 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. 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. Stocs Small-scale Technology Certificates. certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Smal-scale Renewable En	Horizontal shading feature	from upper levels.
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 foll) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) for NatHERS this is typically a noulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. Solar heat gain coefficient (SHGC) the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and weage and show as part of the Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sol as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) Thermal breaks Small-scale Technology Certificates, certificates created by the RE	National Construction Code (NCC) Class	
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 recommended by NatHERS to achieve the desired comfort conditions in the insulative properties. 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. 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. StGs 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 Regulator (CER) 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 no subating ability. U-value the rate of heat transfer t		67 67
Provisional value 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. 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. Solar heat gain coefficient 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 ransmits. 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 Regulator (CER) Thermal breaks <th>Opening percentage</th> <th></th>	Opening percentage	
Recommended capacity zone or zone's 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. 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. Solar heat gain coefficient (SHGC) 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u.conditioned a zone within a dwelling that is assumed to not requir	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
foil) insulativé 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. 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. 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. 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 Regulator (CER) u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-value a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions. provides shading features provides shading to the building (wing walls), fences, other building, wegetation (protected or listed heritage heres). window schading device <th>Recommended capacity</th> <th>zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified</th>	Recommended capacity	zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
Rtoch window space, and generally does not have a diffuser. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. 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. STCs Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER) Thermal breaks Small-scale Technology Certificates, certificates created by the Clean Energy Regulator (CER) u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. u-conditioned 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 (wing walls), fences, other building, wegetation (protected or listed heritage trees). window chading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Reflective wrap (also known as foil)	
Skylight (also known as roof lights) for NatHERŠ this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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), fonces, other building, vegetation (protected or listed heritage reces). device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading <th>Roof window</th> <th>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.</th>	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.
Solar heat gain coefficient 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. ucconditioned a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions. provides shading to the building (wing walls), fences, other building, vegetation (protected or listed heritage trees). Window chading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Shading features	
String and contribution 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. ucconditioned a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions. vertical shading features privacy screens, other walls in the building (wing walls), fences, other building, vegetation (protected or listed heritage trees). Window chading dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Skylight (also known as roof lights)	
Sites bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) ⁺ 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 polystyrene insulation sheeting or plastic strips 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 device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Solar heat gain coefficient (SHGC)	subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
Thermal breaks but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips. 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 building, vegetation (protected or listed heritaget heres). Window shading dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	STCs	bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
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 dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Thermal breaks	but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such
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 dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Window shading dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	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).
reatures (eg eaves and balconies)	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121518

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 7, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 62.3 Unconditioned* 6.5 Total 68.8 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

58.4 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	53.4	5.0
oad limits	N/A	N/A

Features determining load limits

Floor Type	csoo
(lowest conditioned area)	0300
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=ImSZINLtS When using either link, ensure you are visiting hstar.com.au



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 & 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 2022: 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

Energy use



Greenhouse gas emissions



Cost



7.9 Star Rating as of 11 Dec 2023

-					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder o	Consent Surveyo	Occupar
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					

<u>.</u>

7.9 Star Rating as of 11 Dec 2023

Ë		•
н с	ໍ່ມີບໍ່ອ	SE -

		l Stage	Construction Stage			
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other	
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not inclu	uded in tl	he NatHE	RS asse	ssment)		
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)						
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	nent)			
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						
	e		4		Second and a	

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	28.89
Bed 1	Bedroom	11.31
Bed 2	Bedroom	12.48
Bath 1	Unconditioned	6.49
Hall/Ldy	Daytime	9.6

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
WINdow ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill	4.8	0.51	0.48	0.54	
	Clear-Clear	4.0	0.01	0.40	0.04	
	Aluminium B DG Air Fill					
ALM-004-03 A	High Solar Gain low-E -	4.3	0.53	0.50	0.56	
	Clear					

Custom windows*

Window ID	Window	S		Substitution tolerance ranges		
willdow iD	Description	U-value*	SHGC*	SHGC lower limit SHGC upp		
No Data Avail	able					

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W8	1350	1200	Awning	45	W	No
Kitchen/Living	ALM-004-03 A	W12	600	1800	Awning	45	Ν	No
Kitchen/Living	ALM-004-03 A	W11	2400	2360	Awning	45	E	No
Bed 1	ALM-004-03 A	W13	1350	1800	Awning	45	W	No
Bed 2	ALM-004-03 A	W10	1470	1800	Awning	45	E	No
Bath 1	ALM-003-01 A	W9	800	900	Awning	90	E	No



Roof window* type and performance value

Default roof windows*

Description U-value* SHGC lower limit SHGC up No Data Available Custom roof windows* Window ID Window ID Substitution tolerance rang	Window ID	Window	Maximum	01100*	Substitution tolerance ranges		
Custom roof windows* Window ID Window Maximum SHGC* Substitution tolerance rang	window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
Window ID Window Maximum SHGC* Substitution tolerance rang	No Data Availa	able					
Window ID SHGC*	Custom roof w	vindows*					
Window ID Description U-value* SHGC SHGC lower limit SHGC up		Window	Maximum	0UCC*	Substitution to	lerance ranges	
Description 0-value 31100 lower mint 31100 up		Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Available	No Data Avail:	able					

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser	
No Data Available							

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Hall/Ldy	2400	900	90	W

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Timber Stud Frame Brick Veneer	0		Bulk Insulation R2.5	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4100	W	500	No
Kitchen/Living	EW-1	2700	7400	Ν	537.5	No
Kitchen/Living	EW-1	2700	4095	Е	3400.02297786353	No
Kitchen/Living	EW-1	2700	1000	S	5500	No
Bed 1	EW-1	2700	1000	Ν	7012.5	No
Bed 1	EW-1	2700	3100	W	900	No
Bed 2	EW-1	2700	3095	E	1300	No
Bath 1	EW-1	2700	800	Ν	4687.5	No
Bath 1	EW-1	2700	2395	E	1300	No
Hall/Ldy	EW-1	2700	2390	W	1900	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	45.90	No insulation
IW-002	Cavity brick	11.61	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	28.89	None	No Insulation	Ceramic Tiles 8mm
Bed 1	Concrete Slab on Ground 200mm	11.31	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2	Concrete Slab on Ground 200mm	12.48	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath 1	Concrete Slab on Ground 200mm	6.49	None	No Insulation	Ceramic Tiles 8mm
Hall/Ldy	Concrete Slab on Ground 200mm	9.60	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction	Bulk insulation R-value	Reflective
	material/type	(may include edge batt values)	wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	

0009121518 NatH	ERS Certificate 7.9 Star R	ating as of 11 Dec 2023	HOUSE
Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bed 1	Plasterboard on Timber	Bulk Insulation R3.5	
Bed 2	Plasterboard on Timber	Bulk Insulation R3.5	
Bath 1	Plasterboard on Timber	Bulk Insulation R3.5	
Hall/Ldy	Plasterboard on Timber	Bulk Insulation R3.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bed 1	4	Downlights - LED	150	Sealed
Bed 2	5	Downlights - LED	150	Sealed
Bath 1	2	Downlights - LED	150	Sealed
Bath 1	2	Exhaust Fans	150	Sealed
Hall/Ldy	4	Downlights - LED	150	Sealed
Hall/Ldy	4	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bed 1	1	1200
Bed 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptan	ce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)



Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	eff	inimum iciency/ [:] ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	eff	inimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ubstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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.
COP	Coefficient of performance
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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
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.
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.
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 Regulator (CER)
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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121492

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 8, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 41.2 Unconditioned* 8.6 Total 49.8 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

54.5 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	47.9	6.6
oad limits	N/A	N/A

Features determining load limits

Floor Type	CSOG
(lowest conditioned area)	0306
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=hXiNIUoTL When using either link, ensure you are visiting hstar.com.au





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 & 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 2022: 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

Energy use



Greenhouse gas emissions



Cost



8 Star Rating as of 11 Dec 2023

Certificate check	Approva	I Stage	Constru Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Surveyo	Builder	Consen Surveyo	Occupa
Genuine certificate check		л	Т		
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					

0009121492 NatHERS Certificate8 Star Rating as of 11 Dec 2023			1		HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	checked	iority/ cked	ted	lority cked	ther
Continued	or che	Auth	check	Auth r che	O/Jcy/O
	Assessor	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	nent)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. Addi but are not limited to: condensation, structural and fire safety requirements and any st requirements.					

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	23.53
Bedroom 1	Bedroom	12.4
Entry	Daytime	5.25
Bath	Unconditioned	8.61

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum		m SHGC* Substitution tolerar		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E - Clear	4.3	0.53	0.50	0.56	

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description U-value*		3660	SHGC lower limit	SHGC upper limit	
VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.6	0.24	0.23	0.25	

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W5	2400	2360	Awning	45	E	No
Kitchen/Living	ALM-004-03 A	W3	1350	1200	Awning	45	W	No
Bedroom 1	ALM-004-03 A	W4	1500	1800	Awning	45	E	No
Bath	ALM-003-01 A	W2	800	900	Awning	90	W	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Avail	able					



Custom roof windows*

Window ID	Window	Maximum U-value* SHGC* -		Substitution to	lerance ranges
	Description			SHGC lower limit	SHGC upper limit
	VEL-011-01 W VELUX				
	FS - Fixed Skylight DG				
VEL-011-01 W	3mm LoE 366 / 8.5mm	2.6	0.24	0.23	0.25
	Argon Gap / 5.36mm				
	Clear La				

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	VEL-011-01 W	S1	0	840	1470	W	No	No

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] C	Orientation	Outdoor shade	Diffuser
No Data Available							

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Entry	2400	900	90	W

External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Timber Stud Frame Brick Veneer	0	Bulk Insulation R2.5	No
EW-2 Weatherboard Timber Stud Frame Panel Direct Fix	0	Bulk Insulation R2.5	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3600	E	2600	No

0009121492 NatHERS Certificate

8 Star Rating as of 11 Dec 2023



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	300	S	3400	No
Kitchen/Living	EW-1	2700	1000	S	4600	No
Kitchen/Living	EW-1	2700	2400	W	500	No
Bedroom 1	EW-2	950	3195	E	0	Yes
Bedroom 1	EW-1	1750	3195	E	1600	No
Entry	EW-1	2700	1990	W	1900	No
Bath	EW-2	950	1000	Ν	0	No
Bath	EW-1	1750	1000	Ν	4500	No
Bath	EW-2	950	900	S	0	No
Bath	EW-1	1750	900	S	200	No
Bath	EW-2	950	2400	W	0	No
Bath	EW-1	1750	2400	W	900	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	18.90	No Insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	27.00	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	23.53	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 200mm	12.40	None	No Insulation	Carpet+Rubber Underlay 18mm
Entry	Concrete Slab on Ground 200mm	5.25	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 200mm	8.61	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R3.5	

* Refer to glossary. Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 8, 47-49 Close Street , Parkes , NSW , 2870

0009121492 NatHERS Certificate		8 Star Rating as of 11 Dec 2023				
Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]			
Entry	Plasterboard on Tim	ber Bulk Insulation R3.5				
Bath	Plasterboard on Tim	ber Bulk Insulation R3.5				

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	10	Downlights - LED	150	Sealed
Kitchen/Living	10	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Entry	2	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptan	ce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of $5W/m^2$ is used for lighting, therefore lighting is not included in the appliance schedule.

0009121492 NatHERS Certificate	8 Star I	Rating as of 11	Dec 2023				HOUS
Cooling system							
Appliance/ system type	Lo	cation F	Fuel type	eff	inimum iciency/ ^c ormance		mended acity
No Data Available							
leating system							
Appliance/ system type	Lo	cation F	Fuel type	eff	inimum iciency/ formance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		Ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							
Onsite Renewable Er	nergy Sch	edule					
System Type Orie	ntation		Syst	em Size O	r Generation	Capacity	

Battery Schedule

No Data Available

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

Annual energy load the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions. Assessed floor area the floor area modelied in the software for the NaIHERS assessment. Note, this may not be consistent with the floor area in the design documents. Ceiling penetrations Excludes futures attached to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes futures attached to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Code Coefficient of performance Coefficient of performance Custom windows windows listed in NaHERS 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 fleargy use. 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 ACC Hoxing Provisions Standard). Exposure category – exposed The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ACC Hoxing Provisions Standard). Exposure category – exposed The net cost to society including, but not limited to, costs the building user, the environment and energy networks (as defined in the ACC Hoxing Provisions Standard). Exposure category – exposed <	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 invition downlights, exclusing thans, range hoods, chimneys and flues. Cool Coefficient of performance azone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages. Custom windows Software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows Energy value The representative of a specific type of window product and whose properties have been derived by statistical methods. Energy value The representative of a specific type of window product and whose properties have been derived by statistical methods. Energy value The representative of specific type of window product and whose properties have been derived by statistical methods. Experime category use This is your homes rating without solar or batteries. Energy value The representative set society functioning, but not limited to cost to the building user, the environment and energy networks (as direct or the cost society noticing, but not limited to cost to the building user, the environment and energy networks (as direct or eacting or eases as direct or ease to society environment and energy networks (as direct or ease 2building. Dest or a solie type asod as door when o		
Colling penetrations features that require a penetration to the celling, including downlights, exituals fans, range hoods, chimneys and flues. Excludes futures attached to the celling with small holes through the celling for winds, e.g. celling fans, pendant lights, and healing and cooling ducts. COP Coefficient of performance Conditioned a zone within a dwelling that is expected to require healing and cooling based on standard occupancy assumptions. In some a zone within a dwelling that is expected to require healing and cooling based on standard occupancy assumptions. In some a zone within a dwelling that is expected to require healing and cooling based on standard occupancy assumptions. In some a zone within a dwelling that is expected to require healing and cooling based on standard occupancy assumptions. In some 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 wur homes rating without solita or batteries. Energy value The is social methoding both on tilleng software and must not be modelled as a door when opening to a minimally vehilated corridor in a class 2 building. Exposure eate social methoding base below. Exposure category – protected terrain with no obstructions eg. flat grazing land, ceean-frontage, desert, exposed high-rise unit (usually above 10 floors). terrain with the obstructions or g. flat grazing land, ceean-frontage, desert, exposed high-rise unit (usually above 00 floors). <t< th=""><th></th><th>the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the</th></t<>		the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
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. Custom windows windows listed in NaHERS 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 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). Energy value The is youth homes rating without solar or batteries. Exposure category – exposed terrain with no obstructions at a similar height e.g. grasslands with few well scattered obstructions below 100 foors). Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. dity and this (e.g. above 3 floors). terrain with numerous, closely spaced obstructions below 10m e.g. dity and the condition acting and tached based in the work of the solitory of the solitory. Reposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. dity and thuskinal areas. Reposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. dity anditubutal areas. National Co	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
Custom windows circumstances it will include garages. 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 use This is your homes rating without solar or batteries. Energy value The is your homes rating without solar or batteries. Energy value The is your homes rating without solar or batteries. Entrance door these signify vertilation costs to solely by reget your homes fait in modelling software and must not be modelled as a door when opening to a minimally vertilated corridor in a Class 2 building. Exposure see exposure categories below. Exposure category – protect terrain with no obstructions e a flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protect terrain with numerous, closely spaced obstructions below 10m e.g. subvarial areas. Exposure category – protect terrain with numerous, closely spaced obstructions below 10m e.g. elve and industrial areas. Exposure category – protect terrain with numerous, closely spaced obstructions below 10m e.g. elve and industrial areas. Exposure category – protect terrain with num	COP	
Classion windows 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 use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the Abhiltabulan, but not limited to, costs to the building user, the environment and energy networks (as defined in the Abhiltabulan, but not limited to, costs to the building user, the environment and energy networks (as defined in the Abhiltabulan, but not limited to, costs to the building user, the environment and energy networks (as defined in the Abhiltabulan, but not limited to, costs to the building user, the environment and energy networks (as defined in the Abhiltabulan and the as a door when opening to a minimally vegetated control in a Class 2 building. Exposure estegory – protected terrain with no obstructions e.g. flat grazing land, cean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushholds, elevated units (e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels. National Construction Code (NCC) Class 1, 2 or 4 building and attached Class 10 buildings. Definitions can be found at www.abcb.gov.au. Not zon home the openability percentage or operable (moveable) are a doors windows that is used in ventilation	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.
Default withows methods. EER Energy Value This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Entrance door these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building. Exposure category – exposure categories below. Exposure category – exposure category = open Exposure category – open 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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m.g. guidy 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 the NCC groups buildings of attached Class 10a buildings. Definiton: all all energities and the doce nort represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium 'must's the medium' must's value and provindes shading to the duellings. Offinindings. Definiton si	Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Lth input Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Entrance door these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building. Exposure category – exposure categories below. Exposure category – exposed terrain with neotstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with neotstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushand 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. Net Zero home a home that achieves a net zero energy value*. Opening percentage the openability percentage or openable (moveable) area of doors or windows that is used in ventilation calculations. Provisional value an sumed value that does not represent an actual value, - for example, if the wall colour is unspecified in the documentation, a provisional value	Default windows	
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 ABCE 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 category – exposed terrain with no obstructions at a similar height e.g. greaslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 foors). Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Horizontal shading feature Drovides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels. 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. An a nome that achieves, and zero energy value*. Devisional value The stace 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. Refective wrap (also known as foll) Generality operation with regression an actual value. For example, if the wall coour is unspecified in the documentator, and cow	EER	
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 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 scatarend with on software as similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blooks, elevated units (e.g. above 3 floors). Exposure category – open terrain with nomerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m e.g. ally and industrial areas. National Construction Code 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 a samed value that does not represent an actual value. For example, if the wail cloour is unspecified in the doctumentation, a provisional value of medium must be modelled. Acceptable provisional values are outlined in the NatHERS toreal Note shading features	Energy use	
Entraine duol ventilatéd córridor in a Class 2 building. Provisional Exposure see 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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). 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 10 a buildings. Opening percentage the NCC groups buildings or perable (moveable) area of doors or windows that is used in ventilation calculations. Provisional value a home that achieves a nel zero energy value ⁻ . Provisional value a nassumed value find does not represent an actual value. For example, if the wall colour is unspecified in the documentation. Reflective wrap (also known as can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insidative properiols. Solar heat gain coefficient	Energy value	
Exposure category – exposed terrain with no obstructions e.g. flat grazing land, ceean-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 sheads, lightly vegetated bush blocks, elevated units (e.g. above 3 floors). 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. an asymed 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 utilined in the NatHERS technical Note and can be found at www.abch.gov.au. Recommended capacity this is the capacity or size of equipment that is recommended by NatHERS to chrice with a subaby qualified person.		ventilatěd córridor in a Class 2 building.
Exposure category – open terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with Exposure category – protected 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 below 10m e.g. suburban housing, heavily vegetated bushland 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 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. an assumed value of medium must be modelled. Acceptable provisional values are cullined in the NatHERS Technical Note and can be found at www.nathers gov.au Reflective wrap (also known as 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 to thave a diffuser. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. <t< th=""><th></th><th></th></t<>		
Exposure category - protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland 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 (Dass 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 modeled. Acceptable provisional values are outlined in the NatHERS technical Note and can be found at www.abct.gov.au Recommended capacity can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Rof 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. Stading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) for NatH	Exposure category – exposed	
Exposure category – suburban 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 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 10 a 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. an assumed value that does not represent an actual value. For example, if the well colour is unspecified in the documentation, a provisional value of fmedium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.anthers.gov.au Recommended capacity 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 a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) for NatHERS this is typically a moulded uni with flexible reflective tubing (light well) and a diffuser at		scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
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. 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 foil) can be applied to walls, roofs and cellings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Reof window generally does not incident wait 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. Skylight (also known as roof lights) for NatHERS this is typically a moulded uni with flexible reflective tubing (light well) and a diffuser at ceiling level. Shading features includes neighbouring buildings, f		
Notice 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. an assumed value of 'meduium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au Recommended capacity can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Reflective wrap (also known as foil) 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. 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. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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.	Exposure category – suburban	
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 for) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. Store Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER) Resolution and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) And the fraction of incident solar radiation admitted through a window, beth directly transmitted as well as absorbed and subsequen		from upper levels.
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 imedium' 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. 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. Stoar 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.	(NCC) Class	
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 recommended by NatHERS to achieve the desired comfort conditions in the 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. 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. Solar heat gain coefficient (SHGC) 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 Regulator (CER) Thermal breaks are tarials 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 b		67
Provisional value 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. 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. Stores Shading features StrCs 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 Regulator (CER) 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 or continuous thermal breaks such as pol	Opening percentage	
Recommended capacityzone or zone's 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 windowfor 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 featuresincludes neighbouring buildings, fences, and wing walls, but excludes eaves.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.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.STCsSmall-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 Regulator (CER)Thermal breakswith 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic stripsU-valuethe rate of heat transfer through a window. The lower the U-value, the better the insulating ability. a zone within a dwelling that is assumed to not require	Provisional value	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
foil) 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. 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. 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. 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 Regulator (CER) Thermal breaks but is not limited to, materials such as timber battens 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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.	Recommended capacity	zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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. Vorticel abading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes		insulative properties.
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. 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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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. vortices abading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	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.
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. 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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. Vorticel abading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes		
StrCs 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 Regulator (CER) 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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. Vorticel abading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	Skylight (also known as roof lights	
Original bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) ¹ 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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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 badding features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes		subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
Thermal breaks but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips 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. Verticel abdding features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	STCs	bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Unconditioned a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.	Thermal breaks	but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such
Vortical chading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Vertical shading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	Unconditioned	
privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).	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 device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009121476

Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 9, 47-49 Close Street Parkes, NSW, 2870 Lot 437-438 DP 750179 1a G of 1 floors New Home

Plans

Main plan Prepared by BGZQQ SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 62.9 Unconditioned* 7.2 Total 70.2 Garage 0.0

Exposure type Suburban NatHERS climate zone 48 Dubbo



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume Two

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 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.a

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

72.6 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

> For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	66.6	6.0
oad limits	N/A	N/A

Features determining load limits

L

Floor Type	csoo
(lowest conditioned area)	CSUG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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 hstar.com.au/QR/Generate? p=jCDkgGiTY When using either link, ensure you are visiting hstar.com.au



* Refer to glossary Generated on 11 Dec 2023 using BERS Pro v5.1.5 (3.22) for Unit 9, 47-49 Close Street , Parkes , NSW , 2870

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 & 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 2022: 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

Energy use



Greenhouse gas emissions



Cost



7.3 Star Rating as of 11 Dec 2023

Certificate check	Approva	Annroval Stado		Construction Stage	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Surveyo	Builder	Consen Surveyo	Occupa
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					

HOU	JSE

0009121476 NatHERS Certificate 7.3 Star Rating as of 11 Dec 2023					HOUSE	
	Approva	al Stage	Constru Stage	ction		
Certificate check	ecked	iority/ cked	fed	lority cked	ther	
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)		
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asse	ssment is i	not conduc	ted)	
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add but are not limited to: condensation, structural and fire safety requirements and any st requirements.						

Additional notes



Room schedule

Room	Zone Type	Area [m ²]	
Kitchen/Living	Kitchen/Living	35.3	
Bed 1	Bedroom	11.58	
Bed 2	Bedroom	11.58	
Bath 1	Unconditioned	7.24	
Hall/Ldy	Daytime	4.46	

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E - Clear	4.3	0.53	0.50	0.56	

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.6	0.24	0.23	0.25	

Window and glazed door schedule

Window ID	Window no.	Height [mm]			Opening %	Orientation	Window shading device*
ALM-004-03 A	W8	1350	1200	Awning	45	W	No
ALM-004-03 A	W7	2400	2360	Awning	45	E	No
ALM-004-03 A	W3	2400	2360	Awning	45	S	No
ALM-004-03 A	W6	1470	1800	Awning	45	S	No
ALM-003-01 A	W4	790	900	Awning	90	S	No
	ID ALM-004-03 A ALM-004-03 A ALM-004-03 A ALM-004-03 A	ID no. ALM-004-03 A W8 ALM-004-03 A W7 ALM-004-03 A W3 ALM-004-03 A W6	ID no. [mm] ALM-004-03 A W8 1350 ALM-004-03 A W7 2400 ALM-004-03 A W3 2400 ALM-004-03 A W6 1470	ID no. [mm] [mm] ALM-004-03 A W8 1350 1200 ALM-004-03 A W7 2400 2360 ALM-004-03 A W3 2400 2360 ALM-004-03 A W6 1470 1800	ID no. [mm] [mm] type ALM-004-03 A W8 1350 1200 Awning ALM-004-03 A W7 2400 2360 Awning ALM-004-03 A W3 2400 2360 Awning ALM-004-03 A W3 2400 1800 Awning	ID no. [mm] [mm] type % ALM-004-03 A W8 1350 1200 Awning 45 ALM-004-03 A W7 2400 2360 Awning 45 ALM-004-03 A W3 2400 2360 Awning 45 ALM-004-03 A W3 2400 1800 Awning 45 ALM-004-03 A W6 1470 1800 Awning 45	ID no. [mm] [mm] type % Orientation ALM-004-03 A W8 1350 1200 Awning 45 W ALM-004-03 A W7 2400 2360 Awning 45 E ALM-004-03 A W3 2400 2360 Awning 45 S ALM-004-03 A W3 2400 1800 Awning 45 S ALM-004-03 A W6 1470 1800 Awning 45 S



Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Available						

Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window ID	Window ID Description U-value* SH		SHGC	SHGC lower limit	SHGC upper limit	
	VEL-011-01 W VELUX					
	FS - Fixed Skylight DG					
VEL-011-01 W	3mm LoE 366 / 8.5mm	2.6	0.24	0.23	0.25	
	Argon Gap / 5.36mm					
	Clear La					

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	VEL-011-01 W	S1	0	840	1470	W	No	No

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Avail	able					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living	2400	900	90	W

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Timber Stud Frame Brick Veneer	0		Bulk Insulation R2.5	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	2495	W	400	No
Kitchen/Living	EW-1	2700	1100	Ν	2200	No
Kitchen/Living	EW-1	2700	2000	W	2000	No
Kitchen/Living	EW-1	2700	600	Ν	200	No
Kitchen/Living	EW-1	2700	4495	E	2300	No
Bed 1	EW-1	2700	3295	S	1250	No
Bed 1	EW-1	2700	3745	W	400	No
Bed 2	EW-1	2700	3750	E	400	No
Bed 2	EW-1	2700	3295	S	1250	No
Bed 2	EW-1	2700	500	Ν	4700	No
Bath 1	EW-1	2700	2600	S	300	No
Bath 1	EW-1	2700	950	W	3700.02111480462	No
Bath 1	EW-1	2700	950	E	3700.02111480462	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	0.00	No Insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	45.90	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 200mm	35.30	None	No Insulation	Ceramic Tiles 8mm
Bed 1	Concrete Slab on Ground 200mm	11.58	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2	Concrete Slab on Ground 200mm	11.58	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath 1	Concrete Slab on Ground 200mm	7.24	None	No Insulation	Ceramic Tiles 8mm
Hall/Ldy	Concrete Slab on Ground 200mm	4.46	None	No Insulation	Ceramic Tiles 8mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3.5	
Bed 1	Plasterboard on Timber	Bulk Insulation R3.5	
Bed 2	Plasterboard on Timber	Bulk Insulation R3.5	
Bath 1	Plasterboard on Timber	Bulk Insulation R3.5	
Hall/Ldy	Plasterboard on Timber	Bulk Insulation R3.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Bed 1	4	Downlights - LED	150	Sealed
Bed 2	4	Downlights - LED	150	Sealed
Bath 1	3	Downlights - LED	150	Sealed
Bath 1	3	Exhaust Fans	150	Sealed
Hall/Ldy	1	Downlights - LED	150	Sealed
Hall/Ldy	1	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bed 1	1	1200
Bed 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorpta	nce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	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]
No Data Available				



Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system Minimum Recommended Appliance/ system type Location Fuel type efficiency/ capacity performance No Data Available Heating system Minimum Recommended Appliance/ system type Location Fuel type efficiency/ capacity performance No Data Available Hot water system **Zone 3 Substitution** Hot Minimum Assessed Zone 3 Water tolerance ranges daily load Appliance/ system type Fuel type efficiency STC **CER Zone** upper limit /STC lower limit [litres] No Data Available Pool/spa equipment Minimum Recommended Appliance/ system type Fuel type efficiency/ capacity performance No Data Available

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]	
No Data Available		



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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.
COP	Coefficient of performance
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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
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.
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.
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 Regulator (CER)
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 or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eq eaves and balconies)