Nationwide House Energy Rating Scheme®
Multiple Class 1 dwellings Summary
NatHERS® Certificate No. 0011959270

Generated on 03 Jun 2025 using BERS Pro v5.2.4 (3.23)

Property

Address	33 Market St, MUDGEE , NSW , 2850
Lot/DP	Lot 1 DP 829128
NatHERS Climate Zone	65 Orange

Accredited assessor

Name	marc kiho
Business name	kiho building consulting
Email	energy_rating@bigpond.com
Phone	0400 680 815
Accreditation No.	20094
Assessor Accrediting Organisation	

ABSA

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=eflSUojHn .
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 www.abcb.gov.au.

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

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m^2/p.a.]	Cooling load (load limit) [MJ/m^2/p.a.]	Total load [MJ/m^2/p.a.]	Star Rating	Whole of Home Rating
0011959251	1	128.6 (N/A)	3.9 (N/A)	132.6	7.5	0
0011959269	2	96.5 (N/A)	4.4 (N/A)	100.9	8.3	0

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.
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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.
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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. 0011959251

Generated on 03 Jun 2025 using BERS Pro v5.2.4 (3.23)

Property

Address	Unit 1, 33 Market St, MUDGEE , NSW , 2850
Lot/DP	Lot 1 DP 829128
NCC class*	1a
Floor/all Floors	G of 1 floors
Type	New Home

Plans

Main plan	Leal
Prepared by	Enfilade Architects

Construction and environment

Assessed floor area [m2]*	
Conditioned*	159.6
Unconditioned*	12.4
Total	172.0
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
65 Orange

Accredited assessor

Name	marc kiho
Business name	kiho building consulting
Email	energy_rating@bigpond.com
Phone	0400 680 815
Accreditation No.	20094

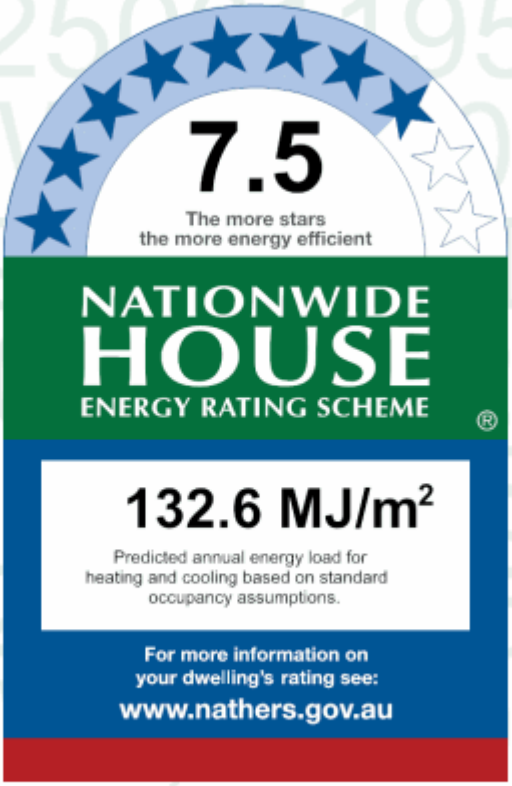
Assessor Accrediting Organisation
ABSA

Declaration of interest Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

Thermal performance Star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	128.6	3.9
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
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.

National Construction Code (NCC) requirements

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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

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

* Refer to glossary.

Certificate check

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

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

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

* Refer to glossary.

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home 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 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

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m^2]
Kitchen/Living1	Kitchen/Living	65.09
Bedroom 1	Bedroom	19.82
Night Time 1	Nighttime	8.04
Night Time 2	Nighttime	9.93
Bedroom 2	Bedroom	17.24
Living 1	Living	20.76
Unconditioned 1	Unconditioned	6.28
Unconditioned 2	Unconditioned	6.09
Day Time 1	Daytime	5.86
Day Time 2	Daytime	4.49
Day Time 3	Daytime	8.39

Window and glazed door *type and performance*

Default windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
PVC-005-01 W	uPVC A DG Argon Fill Clear-Clear	2.6	0.50	0.48	0.53

Custom windows*

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living1	PVC-005-01 W	W16	1600	2400	Tilt 'n' Turn	90	E	No
Kitchen/Living1	PVC-005-01 W	W18	2200	1500	Casement	90	N	No
Kitchen/Living1	PVC-005-01 W	W3	1200	800	Tilt 'n' Turn	90	S	No
Kitchen/Living1	PVC-005-01 W	W4	1200	800	Tilt 'n' Turn	90	S	No
Kitchen/Living1	PVC-005-01 W	W19	2200	2400	Sliding	45	S	No
Bedroom 1	PVC-005-01 W	W10	1800	750	Tilt 'n' Turn	90	N	No

* Refer to glossary.

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	PVC-005-01 W	W15	1600	1600	Tilt 'n' Turn	90	S	No
Night Time 1	PVC-005-01 W	W11	1500	800	Tilt 'n' Turn	90	E	No
Night Time 2	PVC-005-01 W	W12	1500	800	Tilt 'n' Turn	90	E	No
Night Time 2	PVC-005-01 W	W13	1600	800	Tilt 'n' Turn	90	S	No
Bedroom 2	PVC-005-01 W	W7	1800	750	Tilt 'n' Turn	90	N	No
Bedroom 2	PVC-005-01 W	W8	1800	750	Tilt 'n' Turn	90	N	No
Living 1	PVC-005-01 W	W17	1600	2400	Tilt 'n' Turn	90	N	No
Living 1	PVC-005-01 W	W14	1600	800	Tilt 'n' Turn	90	S	No
Unconditioned 1	PVC-005-01 W	W9	1800	750	Tilt 'n' Turn	90	N	No
Unconditioned 2	PVC-005-01 W	W1	1200	800	Tilt 'n' Turn	90	W	No
Day Time 1	PVC-005-01 W	W5	2300	500	Fixed	00	W	No
Day Time 1	PVC-005-01 W	W6	2300	500	Fixed	00	W	No
Day Time 3	PVC-005-01 W	W2	1200	800	Tilt 'n' Turn	90	W	No

Roof window* *type and performance value*

Default roof windows*

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

Custom roof windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				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 Available								

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

* Refer to glossary.

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
Unconditioned 2	2040	820	90	S
Day Time 1	2300	970	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Fibro Timber Stud Frame Panel on Battens	0.50		Bulk Insulation, Air Gap R2.7	No
EW-2	Timber Stud Frame Brick Veneer	0.50		Bulk Insulation, Air Gap R2.7	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living1	EW-1	2700	5200	E	400	No
Kitchen/Living1	EW-1	2700	3800	N	400	No
Kitchen/Living1	EW-1	2700	8200	S	400	No
Bedroom 1	EW-1	2700	4200	N	400	No
Bedroom 1	EW-1	2700	3400	S	400	No
Night Time 1	EW-1	2700	3800	N	400	No
Night Time 1	EW-2	2700	2400	E	200	No
Night Time 2	EW-2	2700	2400	E	200	No
Night Time 2	EW-1	2700	3800	S	400	No
Bedroom 2	EW-1	2700	800	S	10600	No
Bedroom 2	EW-2	2700	5600	W	200	No
Bedroom 2	EW-1	2700	3600	N	400	No
Living 1	EW-1	2700	3600	N	400	No
Living 1	EW-1	2700	5800	E	400	No
Living 1	EW-1	2700	3600	S	400	No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Unconditioned 1	EW-1	2700	2000	N	400	No
Unconditioned 2	EW-1	2700	2000	S	400	No
Unconditioned 2	EW-2	2700	3200	W	4600	No
Day Time 1	EW-1	2700	3000	W	1000	No
Day Time 3	EW-2	2700	2600	W	4600	No
Day Time 3	EW-1	2700	800	N	10400	No
Day Time 3	EW-1	2700	1400	W	1000	No

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	29.16	Bulk Insulation, No Air Gap R2.7
IW-002	Timber Stud Frame, Direct Fix Plasterboard	92.34	No insulation

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living1	Waffle pod slab 225 mm 100mm	65.03	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1	Waffle pod slab 225 mm 100mm	19.82	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Night Time 1	Waffle pod slab 225 mm 100mm	8.04	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Night Time 2	Waffle pod slab 225 mm 100mm	9.93	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Bedroom 2	Waffle pod slab 225 mm 100mm	17.24	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Living 1	Waffle pod slab 225 mm 100mm	20.76	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Unconditioned 1	Waffle pod slab 225 mm 100mm	6.28	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Unconditioned 2	Waffle pod slab 225 mm 100mm	6.09	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Day Time 1	Waffle pod slab 225 mm 100mm	5.86	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Day Time 2	Waffle pod slab 225 mm 100mm	4.49	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Day Time 3	Waffle pod slab 225 mm 100mm	8.39	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm

* Refer to glossary.

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living1	Plasterboard on Timber	Bulk Insulation R5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R5	
Night Time 1	Plasterboard on Timber	Bulk Insulation R5	
Night Time 2	Plasterboard on Timber	Bulk Insulation R5	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R5	
Living 1	Plasterboard on Timber	Bulk Insulation R5	
Unconditioned 1	Plasterboard on Timber	Bulk Insulation R5	
Unconditioned 2	Plasterboard on Timber	Bulk Insulation R5	
Day Time 1	Plasterboard on Timber	Bulk Insulation R5	
Day Time 2	Plasterboard on Timber	Bulk Insulation R5	
Day Time 3	Plasterboard on Timber	Bulk Insulation R5	

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Night Time 2	1	Exhaust Fans	300	Sealed
Unconditioned 1	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Corrugated Iron Timber Frame	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance *schedule*

* Refer to glossary.

(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				

Heating system

Appliance/ system type	Location	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	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
					lower limit	upper limit	
No Data Available							

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
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.

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

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

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

Glossary

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.
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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.
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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.
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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.
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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. 0011959269

Generated on 03 Jun 2025 using BERS Pro v5.2.4 (3.23)

Property

Address	Unit 2, 33 Market St, MUDGEE , NSW , 2850
Lot/DP	Lot 1 DP 829128
NCC class*	1a
Floor/all Floors	G of 1 floors
Type	New Home

Plans

Main plan	Leal
Prepared by	Enfilade Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*	38.6
Unconditioned*	5.7
Total	44.3
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
65 Orange

Accredited assessor

Name	marc kiho
Business name	kiho building consulting
Email	energy_rating@bigpond.com
Phone	0400 680 815
Accreditation No.	20094

Assessor Accrediting Organisation
ABSA

Declaration of interest Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

National Construction Code (NCC) requirements

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	96.5	4.4
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
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=xyYnYPIUe . 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

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

* Refer to glossary.

Certificate check

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

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

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

* Refer to glossary.

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home 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 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

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m^2]
Kitchen/Living1	Kitchen/Living	24.89
Bedroom 1	Bedroom	13.71
Unconditioned 1	Unconditioned	5.71

Window and glazed door *type and performance*

Default windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
PVC-005-01 W	uPVC A DG Argon Fill Clear-Clear	2.6	0.50	0.48	0.53

Custom windows*

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living1	PVC-005-01 W	W1	1350	1600	Tilt 'n' Turn	90	N	No
Kitchen/Living1	PVC-005-01 W	W4	600	1800	Tilt 'n' Turn	90	S	No
Bedroom 1	PVC-005-01 W	W2	1350	1600	Tilt 'n' Turn	90	N	No
Bedroom 1	PVC-005-01 W	W3	600	1800	Tilt 'n' Turn	90	S	No
Unconditioned 1	PVC-005-01 W	W5	1600	700	Tilt 'n' Turn	90	S	No

Roof window* *type and performance value*

Default roof windows*

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

Custom roof windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				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 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/Living1	2040	820	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Fibro Timber Stud Frame Panel on Battens	0.50		Bulk Insulation, Air Gap R2.7	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living1	EW-1	2700	1600	W	2400	No
Kitchen/Living1	EW-1	2700	6800	N	450	No
Kitchen/Living1	EW-1	2700	4800	S	450	No
Bedroom 1	EW-1	2700	3000	N	450	No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 1	EW-1	2700	4600	E	450	No
Bedroom 1	EW-1	2700	3000	S	450	No
Unconditioned 1	EW-1	2700	2000	S	450	No
Unconditioned 1	EW-1	2700	3000	W	2400	No

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	5.40	Bulk Insulation, No Air Gap R2.7
IW-002	Timber Stud Frame, Direct Fix Plasterboard	0.00	No insulation

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living1	Waffle pod slab 225 mm 100mm	24.83	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1	Waffle pod slab 225 mm 100mm	13.71	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Unconditioned 1	Waffle pod slab 225 mm 100mm	5.71	None	Waffle Pod 225mm	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living1	Plasterboard on Timber	Bulk Insulation R5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R5	
Unconditioned 1	Plasterboard on Timber	Bulk Insulation R5	

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Unconditioned 1	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

* Refer to glossary.

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Corrugated Iron Timber Frame	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.50	Medium

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
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				

Heating system

Appliance/ system type	Location	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	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
					lower limit	upper limit	
No Data Available							

Pool/spa equipment

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

* Refer to glossary.

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).
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Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
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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)

* Refer to glossary.