

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0009085960-01

Generated on 21 Feb 2024 using BERS Pro v4.4.1.5 (3.21)

Property

Address Unit MH, 10 Braesmere Road,
Panania , NSW , 2213

Lot/DP 13/35471

NCC Class* 1A

Type New Dwelling

Plans

Main plan 209694

Prepared by ITS / AES

Construction and environment

Assessed floor area (m²)*	Exposure type
Conditioned* 372.0	Suburban
Unconditioned* 51.0	NatHERS climate zone
Total 423.0	56
Garage 33.0	



Accredited assessor

Name Ian Fry

Business name Frys Energywise

Email comply@frysenergywise.com.au

Phone 02 9899 2825

Accreditation No. DMN/12/1441

Assessor Accrediting Organisation

Design Matters National

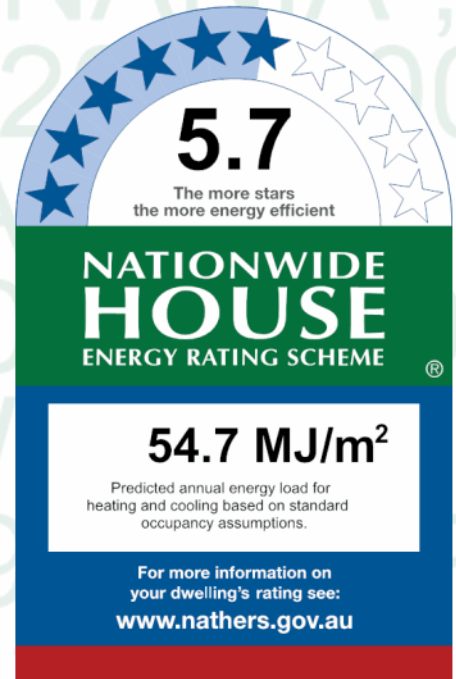
Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.



Thermal performance

Heating	Cooling
30.4	24.2
MJ/m²	MJ/m²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=htljBSxAz. When using either link, ensure you are visiting hstar.com.au



Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

Where not noted on plans, default selections to floor coverings and external colours have been used in this

assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor

coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
TND-002-01 A	TND-002-01 A Trend AI Awning Window SG 3Clr	6.5	0.66	0.63	0.69
TND-024-01 A	TND-024-01 A Trend AI Internal offset glazed window SG 5Clr	6.1	0.75	0.71	0.79

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
TND-001-01 A	TND-001-01 A Trend AI Sliding Window SG 3Clr	6.4	0.73	0.69	0.77
TND-017-13 A	TND-017-13 A Trend AI Sliding Door DG LB_ClrS0_4-10-4	2.9	0.47	0.45	0.49
TND-031-05 A	TND-031-05 A Trend AI Internal offset glazed window DG LightBridge_ClrS0_4-10-4	2.3	0.52	0.49	0.55
TND-002-19 A	TND-002-19 A Trend AI Awning Window DG LightBridge_ClrS0_4-10-4	3.3	0.45	0.43	0.47
TND-017-01 A	TND-017-01 A Trend AI Sliding Door SG 4Clr	6.2	0.73	0.69	0.77
TND-001-21 A	TND-001-21 A Trend AI Sliding Window DG LightBridge_ClrS0_4-10-4	3.2	0.46	0.44	0.48

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
LIVING	TND-002-01 A	n/a	2450	850	n/a	65	E	No
LIVING	TND-024-01 A	n/a	2450	2530	n/a	00	S	No
GUEST BED	TND-001-01 A	n/a	900	2410	n/a	45	E	No
BATH 1	TND-001-01 A	n/a	2035	1510	n/a	34	E	No
ENTRY GF HALL	TND-001-01 A	n/a	2340	1100	n/a	90	S	No
BUTLERS	TND-001-01 A	n/a	700	2110	n/a	45	W	No
LEISURE KITCHEN	TND-024-01 A	n/a	1370	2530	n/a	00	W	No
LEISURE KITCHEN	TND-017-13 A	n/a	2400	2170	n/a	45	S	No
LEISURE KITCHEN	TND-031-05 A	n/a	2400	5050	n/a	00	N	No
LEISURE KITCHEN	TND-017-13 A	n/a	2400	3220	n/a	63	E	No
LEISURE KITCHEN	TND-017-13 A	n/a	2400	4250	n/a	62	N	No
LEISURE KITCHEN	TND-031-05 A	n/a	2400	3130	n/a	00	E	No
LEISURE KITCHEN	TND-002-19 A	n/a	910	1510	n/a	35	E	No
UPPER LOUNGE	TND-017-01 A	n/a	2400	4250	n/a	62	S	No
BED 2	TND-001-01 A	n/a	900	1810	n/a	10	W	No
UF BATH	TND-001-01 A	n/a	900	1210	n/a	45	W	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
BED 3	TND-001-21 A	n/a	1500	2110	n/a	10	S	No
BED 3	TND-001-21 A	n/a	1500	3010	n/a	10	N	No
ENSUITE 3	TND-001-01 A	n/a	1500	850	n/a	45	N	No
BED 4	TND-001-21 A	n/a	1500	3010	n/a	10	N	No
DINING VOID	TND-024-01 A	n/a	2300	3130	n/a	00	E	No
DINING VOID	TND-002-19 A	n/a	2260	1510	n/a	35	E	No
ENSUITE 1	TND-002-01 A	n/a	1370	610	n/a	90	E	No
ENSUITE 1	TND-001-01 A	n/a	1500	1570	n/a	45	E	No
MASTER SUITE	TND-002-01 A	n/a	2450	850	n/a	10	E	No
MASTER SUITE	TND-024-01 A	n/a	2450	2530	n/a	00	S	No
MASTER SUITE	TND-001-01 A	n/a	2340	900	n/a	90	S	No

Roof window type and performance

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
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
GARAGE	2400	4800	90	S

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Bulk Insulation R2	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R2	No
EW-3	Brick Veneer	0.50	Medium	No insulation	No
EW-4	Single Skin Brick	0.50	Medium	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
LIVING	EW-1	2740	1100	W	7400	YES
LIVING	EW-1	2740	2495	E	100	NO
LIVING	EW-2	2740	900	E	100	NO
LIVING	EW-2	2740	2600	S	100	NO
LIVING	EW-1	2740	600	S	1400	NO
GUEST BED	EW-1	2740	5190	E	100	NO
BATH 1	EW-1	2740	2090	E	100	NO
ENTRY GF HALL	EW-1	2740	1690	S	3000	YES
BUTLERS	EW-1	2740	3295	W	100	NO
LEISURE KITCHEN	EW-1	2740	3195	W	100	YES
LEISURE KITCHEN	EW-1	2740	3100	S	100	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
LEISURE KITCHEN	EW-1	2740	5300	W	100	NO
LEISURE KITCHEN	EW-1	2740	7500	N	100	NO
LEISURE KITCHEN	EW-1	2740	4000	E	6100	YES
LEISURE KITCHEN	EW-1	2740	6100	N	4600	YES
LEISURE KITCHEN	EW-1	2740	6795	E	100	NO
GARAGE	EW-3	2825	1100	E	5000	YES
GARAGE	EW-4	2825	5600	S	1900	NO
GARAGE	EW-3	2825	5995	W	100	NO
UPPER LOUNGE	EW-2	2740	5295	S	2000	NO
BED 2	EW-1	2740	4395	W	600	NO
UF BATH	EW-1	2740	2090	W	600	YES
BED 3	EW-1	2740	3100	S	600	YES
BED 3	EW-1	2740	5300	W	500	NO
BED 3	EW-1	2740	4495	N	600	NO
ENSUITE 3	EW-1	2740	3095	N	600	YES
ENSUITE 3	EW-1	2740	600	W	8100	YES
ENSUITE 3	EW-1	2740	695	N	600	NO
BED 4	EW-1	2740	5295	N	600	NO
BED 4	EW-1	2740	4595	E	600	NO
DINING VOID	EW-1	2740	6790	E	600	NO
ENSUITE 1	EW-1	2740	3390	E	600	NO
MASTER WIR	EW-1	2740	2590	E	600	NO
MASTER SUITE	EW-1	2740	3795	E	600	NO
MASTER SUITE	EW-2	2740	900	E	600	NO
MASTER SUITE	EW-2	2740	2600	S	2000	NO
MASTER SUITE	EW-1	2740	800	S	2000	NO
MASTER SUITE	EW-2	2740	1795	S	2000	NO

Internal wall type

Wall ID

Wall type Area (m²) Bulk insulation

IW-1 - Cavity wall, direct fix plasterboard, single gap	168.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap	164.00	Bulk Insulation, No Air Gap R2.5
IW-3 - Cavity wall, direct fix plasterboard, single gap	45.00	Bulk Insulation, No Air Gap R2
IW-4 - Shaft liner party wall with plaster	37.00	Bulk Insulation both sides of shaft liner R2.7

Floor type

Location	Construction	Area Sub-floor (m ²)	Added insulation (R-value)	Covering
LIVING	Waffle pod slab 300 mm 100mm	10.60 None	Waffle Pod 300mm	Carpet+Rubber Underlay 18mm
GUEST BED	Waffle pod slab 300 mm 100mm	17.10 None	Waffle Pod 300mm	Carpet+Rubber Underlay 18mm
BATH 1	Waffle pod slab 300 mm 100mm	6.70 None	Waffle Pod 300mm	Ceramic Tiles 8mm
ENTRY GF HALL	Waffle pod slab 300 mm 100mm	23.50 None	Waffle Pod 300mm	Ceramic Tiles 8mm
GARAGE POWDER	Waffle pod slab 225 mm 100mm	3.00 None	Waffle Pod 225mm	Ceramic Tiles 8mm
LAUNDRY	Waffle pod slab 300 mm 100mm	7.90 None	Waffle Pod 300mm	Ceramic Tiles 8mm
PANTRY	Waffle pod slab 300 mm 100mm	4.00 None	Waffle Pod 300mm	Ceramic Tiles 8mm
BUTLERS	Waffle pod slab 300 mm 100mm	11.20 None	Waffle Pod 300mm	Ceramic Tiles 8mm
LEISURE KITCHEN	Waffle pod slab 300 mm 100mm	93.40 None	Waffle Pod 300mm	20/80 Carpet 10mm/Ceramic
GARAGE	Waffle pod slab 225 mm 100mm	33.10 None	Waffle Pod 225mm	Bare
UPPER LOUNGE/ENTRY GF HALL	Timber Above Plasterboard 100mm	3.70	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
UPPER LOUNGE/GARAGE POWDER	Timber Above Plasterboard 100mm	3.30	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
UPPER LOUNGE/LAUNDRY	Timber Above Plasterboard 100mm	8.30	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
UPPER LOUNGE/GARAGE	Timber Above Plasterboard 100mm	31.70	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
BED 2/ENTRY GF HALL	Timber Above Plasterboard 19mm	3.60	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
BED 2/PANTRY	Timber Above Plasterboard 19mm	4.30	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
BED 2/BUTLERS	Timber Above Plasterboard 19mm	11.20	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
BED 2/LEISURE KITCHEN	Timber Above Plasterboard 19mm	7.10	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
UF BATH/LEISURE KITCHEN	Timber Above Plasterboard 19mm	8.20	Bulk Insulation R2.5	Ceramic Tiles 8mm
BED 3/LEISURE KITCHEN	Timber Above Plasterboard 19mm	23.50	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
BED 3 WIR/LEISURE KITCHEN	Timber Above Plasterboard 19mm	3.10	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
ENSUITE 3/LEISURE KITCHEN	Timber Above Plasterboard 19mm	6.30	Bulk Insulation R2.5	Ceramic Tiles 8mm
ENSUITE 3	Suspended Timber Floor 19mm	2.10	Totally Open	No Insulation Ceramic Tiles 8mm
BED 4 WIR/LEISURE KITCHEN	Timber Above Plasterboard 19mm	1.80	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
BED 4 WIR	Suspended Timber Floor 19mm	1.30	Totally Open	No Insulation Carpet+Rubber Underlay 18mm
BED 4	Suspended Timber Floor 19mm	23.90	Totally Open	No Insulation Carpet+Rubber Underlay 18mm
DINING VOID/LEISURE KITCHEN	Timber Above Plasterboard 19mm	25.90	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
UF HALL/ENTRY GF HALL	Timber Above Plasterboard 19mm	8.10	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
UF HALL/LEISURE KITCHEN	Timber Above Plasterboard 19mm	14.80	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
ENSUITE 1/GUEST BED	Timber Above Plasterboard 19mm	4.30	Bulk Insulation R2.5	Ceramic Tiles 8mm
ENSUITE 1/BATH 1	Timber Above Plasterboard 19mm	6.90	Bulk Insulation R2.5	Ceramic Tiles 8mm
ENSUITE 1/ENTRY GF HALL	Timber Above Plasterboard 19mm	1.60	Bulk Insulation R2.5	Ceramic Tiles 8mm
MASTER WIR/GUEST BED	Timber Above Plasterboard 19mm	8.40	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
MASTER WIR/ENTRY GF HALL	Timber Above Plasterboard 19mm	1.20	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
MASTER SUITE/LIVING	Timber Above Plasterboard 19mm	10.70	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
MASTER SUITE/GUEST BED	Timber Above Plasterboard 19mm	4.30	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
MASTER SUITE/ENTRY GF HALL	Timber Above Plasterboard 19mm	5.80	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
MASTER SUITE/GARAGE	Timber Above Plasterboard 19mm	1.40	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm

Location	Construction	Area Sub-floor (m ²)	ventilation	Added insulation (R-value)	Covering
MASTER SUITE	Suspended Timber Floor 19mm	1.80	Totally Open	No Insulation	Carpet+Rubber Underlay 18mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
LIVING	Timber Above Plasterboard	Bulk Insulation R2.5	No
GUEST BED	Timber Above Plasterboard	Bulk Insulation R2.5	No
BATH 1	Timber Above Plasterboard	Bulk Insulation R2.5	No
ENTRY GF HALL	Timber Above Plasterboard	Bulk Insulation R2.5	No
GARAGE POWDER	Timber Above Plasterboard	Bulk Insulation R2.5	No
LAUNDRY	Timber Above Plasterboard	Bulk Insulation R2.5	No
PANTRY	Timber Above Plasterboard	Bulk Insulation R2.5	No
BUTLERS	Timber Above Plasterboard	Bulk Insulation R2.5	No
LEISURE KITCHEN	Timber Above Plasterboard	Bulk Insulation R2.5	No
GARAGE	Timber Above Plasterboard	Bulk Insulation R2.5	No
UPPER LOUNGE	Plasterboard	Bulk Insulation R6	No
BED 2	Plasterboard	Bulk Insulation R6	No
UF BATH	Plasterboard	Bulk Insulation R6	No
BED 3	Plasterboard	Bulk Insulation R6	No
BED 3 WIR	Plasterboard	Bulk Insulation R6	No
ENSUITE 3	Plasterboard	Bulk Insulation R6	No
BED 4 WIR	Plasterboard	Bulk Insulation R6	No
BED 4	Plasterboard	Bulk Insulation R6	No
DINING VOID	Plasterboard	Bulk Insulation R6	No
UF HALL	Plasterboard	Bulk Insulation R6	No
ENSUITE 1	Plasterboard	Bulk Insulation R6	No
MASTER WIR	Plasterboard	Bulk Insulation R6	No
MASTER SUITE	Plasterboard	Bulk Insulation R6	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
BATH 1	1	Exhaust Fans	300	Sealed
GARAGE POWDER	1	Exhaust Fans	300	Sealed
UF BATH	1	Exhaust Fans	300	Sealed
ENSUITE 3	1	Exhaust Fans	300	Sealed
ENSUITE 1	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
GUEST BED	1	1200
LEISURE KITCHEN	1	1200
UPPER LOUNGE	1	1200
BED 2	1	1200
BED 3	1	1200
BED 4	1	1200
MASTER SUITE	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.30	Light

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

Not all assumptions that may have been 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.

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 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, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
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.
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	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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
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 device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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).