Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0007910912-04

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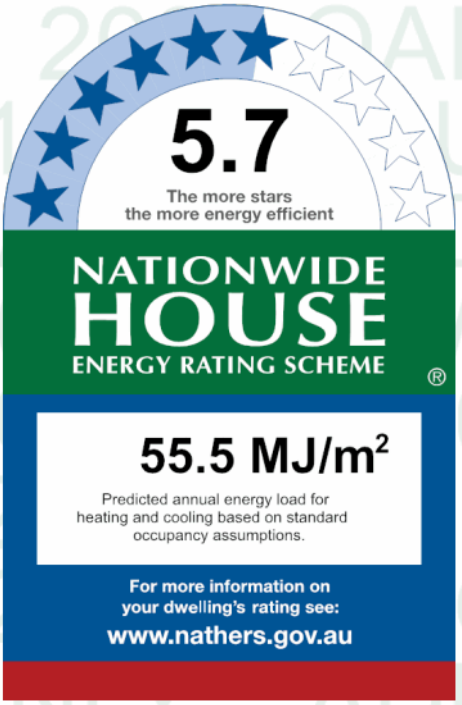

Property

Address	16 Addison Road , Manly , NSW , 2095
Lot/DP	2/325220
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	Rev A - Issued On - 08/07/2022
Prepared by	Patterson Associates LTD

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	280.0	Suburban
Unconditioned*	22.0	**NatHERS climate zone**
Total	302.0	56
Garage	0.0	

Thermal performance

Heating	**Cooling**
31.1 MJ/m^2	**24.3** MJ/m^2

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
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Phone	1300 443 674
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	None

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=mTeFGRZOV.
When using either link, ensure you are visiting hstar.com.au

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.

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

*The dwelling has been assessed without recessed light fittings as no lighting or electrical plan has been provided.

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
ALM-006-04 A	ALM-006-04 A Aluminium B DG Argon Fill Low Solar Gain low-E -Clear	4.8	0.34	0.32	0.36
ALM-005-04 A	ALM-005-04 A Aluminium A DG Argon Fill Low Solar Gain low-E -Clear	4.8	0.34	0.32	0.36

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*
Bedroom 3	ALM-006-04 A	n/a	2400	2450	n/a	45	NE	No
Bedroom 3	ALM-006-04 A	n/a	2400	800	n/a	00	SE	No
Bedroom 3	ALM-006-04 A	n/a	320	800	n/a	00	SE	No Shading
Bedroom 4	ALM-005-04 A	n/a	1000	1550	n/a	90	SW	No
Stairs LGF	ALM-006-04 A	n/a	2400	1100	n/a	00	SE	No
Stairs LGF	ALM-006-04 A	n/a	320	1100	n/a	00	SE	No Shading
Garden Room	ALM-006-04 A	n/a	2400	3800	n/a	65	NE	No
Garden Room	ALM-006-04 A	n/a	2400	4800	n/a	65	SE	No
Garden Room	ALM-006-04 A	n/a	2400	2699	n/a	45	SW	No
Garden Room	ALM-006-04 A	n/a	320	2699	n/a	00	SW	No Shading
Garden Room	ALM-006-04 A	n/a	320	4800	n/a	00	SE	No Shading
Garden Room	ALM-006-04 A	n/a	320	3800	n/a	00	NE	No Shading
Stairs GF	ALM-006-04 A	n/a	2800	800	n/a	00	SE	No
Stairs GF	ALM-006-04 A	n/a	430	800	n/a	00	SE	No Shading
Entry	ALM-005-04 A	n/a	2800	1350	n/a	90	NW	No
Kitchen/Living	ALM-006-04 A	n/a	2800	500	n/a	00	SE	No
Kitchen/Living	ALM-006-04 A	n/a	2800	3800	n/a	65	NE	No
Kitchen/Living	ALM-006-04 A	n/a	2800	4800	n/a	65	SE	No
Kitchen/Living	ALM-006-04 A	n/a	2800	2700	n/a	00	SW	No
Kitchen/Living	ALM-006-04 A	n/a	2800	4200	n/a	90	NW	No
Kitchen/Living	ALM-006-04 A	n/a	430	500	n/a	00	SE	No Shading
Kitchen/Living	ALM-006-04 A	n/a	430	3800	n/a	00	NE	No Shading
Kitchen/Living	ALM-006-04 A	n/a	430	4800	n/a	00	SE	No Shading
Kitchen/Living	ALM-006-04 A	n/a	430	2700	n/a	00	SW	No Shading
Bedroom 1	ALM-006-04 A	n/a	2800	2950	n/a	45	NW	Yes
Bedroom 2	ALM-006-04 A	n/a	2800	3050	n/a	45	NW	Yes
Void	ALM-006-04 A	n/a	2800	650	n/a	00	NW	Yes
Void	ALM-006-04 A	n/a	2550	1800	n/a	00	NE	No
Stairs FF	ALM-006-04 A	n/a	2800	800	n/a	00	SE	No
Landing	ALM-006-04 A	n/a	1670	2675	n/a	00	SW	No
Master Bed	ALM-006-04 A	n/a	2800	2900	n/a	45	NE	No
Master Bed	ALM-006-04 A	n/a	2800	4800	n/a	65	SE	No
Master Bed	ALM-006-04 A	n/a	2800	2700	n/a	00	SW	Yes
Master ENS	ALM-006-04 A	n/a	2800	300	n/a	00	SE	No
Master ENS	ALM-006-04 A	n/a	2800	899	n/a	10	NE	No

* Refer to glossary.

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
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Hallway	GEN-04-008a	n/a	50	0.90	SE	None	No	0.50
Master WIR	GEN-04-008a	n/a	50	0.80	NE	None	No	0.50
Master ENS	GEN-04-008a	n/a	50	0.30	SE	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Laundry	2800	820	90	NE
Store	2400	820	90	SW

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Stone, lined	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No
EW-2	Stone, lined	0.50	Medium	Anti-glare foil with bulk no 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)
AC Wine Cellar	EW-1	2400	1590	NW	0	NO
Store	EW-1	2400	3090	NW	0	NO
Laundry	EW-1	2400	2097	SW	25	NO
Laundry	EW-1	2400	1895	NW	0	NO
WIR 4	EW-1	2400	2092	SW	50	YES
Plant Room	EW-1	2400	1695	NW	0	NO
Plant Room	EW-1	2400	1395	NE	0	NO
WIR 3	EW-1	2400	2795	NE	0	NO
WIR 3	EW-1	2400	700	SE	5900	YES
Bedroom 3	EW-1	2400	2795	NE	700	YES
Bedroom 3	EW-1	2400	700	NW	7000	YES
Bedroom 3	EW-1	2400	3102	NE	0	NO
Bedroom 3	EW-1	2400	1695	SE	0	YES
Bedroom 4	EW-1	2400	3791	SW	50	YES
Stairs LGF	EW-1	2400	1400	SE	0	YES
Stairs LGF	EW-1	2400	4696	SW	25	NO
Garden Room	EW-1	2400	3900	NE	0	YES
Garden Room	EW-1	2400	4808	SE	0	NO
Garden Room	EW-1	2400	2700	SW	0	YES
Stairs GF	EW-2	2800	1400	SE	50	YES
Stairs GF	EW-2	2800	5496	SW	200	YES
Entry	EW-1	2800	7401	SW	200	YES
Entry	EW-2	2800	1800	NW	2000	NO
Laundry	EW-2	2800	2095	NE	250	NO
Laundry	EW-2	2800	200	NW	2000	YES
Store	EW-2	2800	1299	NE	376	YES
Store	EW-2	2800	1295	SW	6700	YES
Store	EW-2	2800	1500	NW	700	NO
Pantry	EW-2	2800	1690	NE	300	NO
Kitchen/Living	EW-2	2800	4595	NE	300	NO
Kitchen/Living	EW-2	2800	1992	E	206	NO
Kitchen/Living	EW-2	2800	1200	SE	0	YES
Kitchen/Living	EW-2	2800	3900	NE	0	YES
Kitchen/Living	EW-2	2800	4838	SE	0	NO
Kitchen/Living	EW-2	2800	2800	SW	0	YES
Kitchen/Living	EW-2	2800	4495	NW	2000	YES
Bedroom 1	EW-2	2800	5617	NE	0	YES

* 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-2	2800	2995	NW	400	NO
Bedroom 2	EW-2	2800	3190	NW	400	NO
Void	EW-2	2800	4996	SW	0	NO
Void	EW-2	2800	795	NW	400	NO
Void	EW-2	2800	2017	NE	0	YES
Void	EW-2	2800	300	SE	0	YES
Stairs FF	EW-2	2800	1195	SE	0	YES
Stairs FF	EW-2	2800	4296	SW	0	NO
Landing	EW-2	2800	5191	SW	0	NO
Master Bed	EW-1	2800	2995	NE	0	NO
Master Bed	EW-1	2800	4838	SE	0	NO
Master Bed	EW-2	2800	2800	SW	0	YES
Master ENS	EW-2	2800	2603	NE	0	YES
Master ENS	EW-2	2800	1772	E	0	NO
Master ENS	EW-2	2800	700	SE	0	YES
Master ENS	EW-2	2800	895	NE	0	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		246.00	Bulk Insulation, No Air Gap R1.8
IW-2 - Concrete Block		27.00	No insulation
IW-3 - Stone		47.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
AC Wine Cellar	Concrete Slab on Ground 300mm	3.10	None	Bulk Insulation in Contact with Floor R1.8	Bare
Store	Concrete Slab on Ground 300mm	6.20	None	Bulk Insulation in Contact with Floor R1.8	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 300mm	3.70	None	Bulk Insulation in Contact with Floor R1.8	Ceramic Tiles 8mm
WIR 4	Concrete Slab on Ground 300mm	2.70	None	Bulk Insulation in Contact with Floor R1.8	Carpet 10mm
ENS 3	Concrete Slab on Ground 300mm	4.70	None	Bulk Insulation in Contact with Floor R1.8	Ceramic Tiles 8mm
ENS 2	Concrete Slab on Ground 300mm	4.90	None	Bulk Insulation in Contact with Floor R1.8	Ceramic Tiles 8mm
Plant Room	Concrete Slab on Ground 300mm	2.20	None	Bulk Insulation in Contact with Floor R1.8	Bare
WIR 3	Concrete Slab on Ground 300mm	4.60	None	Bulk Insulation in Contact with Floor R1.8	Carpet 10mm
Bedroom 3	Concrete Slab on Ground 300mm	17.00	None	Bulk Insulation in Contact with Floor R1.8	Carpet 10mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 4	Concrete Slab on Ground 300mm	14.70	None	Bulk Insulation in Contact with Floor R1.8	Carpet 10mm
Stairs LGF	Concrete Slab on Ground 300mm	6.70	None	Bulk Insulation in Contact with Floor R1.8	Ceramic Tiles 8mm
Garden Room	Concrete Slab on Ground 300mm	29.50	None	Bulk Insulation in Contact with Floor R1.8	Ceramic Tiles 8mm
Stairs GF/Bedroom 4	Concrete Above Plasterboard 300mm	1.20		No Insulation	Ceramic Tiles 8mm
Stairs GF/Stairs LGF	Concrete Above Plasterboard 300mm	6.80		No Insulation	Ceramic Tiles 8mm
Entry/Laundry	Concrete Above Plasterboard 300mm	3.70		No Insulation	Ceramic Tiles 8mm
Entry/WIR 4	Concrete Above Plasterboard 300mm	2.80		No Insulation	Ceramic Tiles 8mm
Entry/ENS 3	Concrete Above Plasterboard 300mm	0.70		No Insulation	Ceramic Tiles 8mm
Entry/Bedroom 4	Concrete Above Plasterboard 300mm	4.70		No Insulation	Ceramic Tiles 8mm
Laundry/Plant Room	Concrete Above Plasterboard 300mm	2.20		No Insulation	Ceramic Tiles 8mm
Laundry/WIR 3	Concrete Above Plasterboard 300mm	0.80		No Insulation	Ceramic Tiles 8mm
Store	Suspended Concrete Slab 300mm	1.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Pantry/WIR 3	Concrete Above Plasterboard 300mm	2.70		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/AC Wine Cellar	Concrete Above Plasterboard 300mm	3.10		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/Store	Concrete Above Plasterboard 300mm	6.40		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/ENS 3	Concrete Above Plasterboard 300mm	4.30		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/ENS 2	Concrete Above Plasterboard 300mm	5.20		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/WIR 3	Concrete Above Plasterboard 300mm	1.10		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/Bedroom 3	Concrete Above Plasterboard 300mm	16.70		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/Bedroom 4	Concrete Above Plasterboard 300mm	8.80		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/Garden Room	Concrete Above Plasterboard 300mm	29.70		No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 300mm	3.10	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 1/Laundry	Concrete Above Plasterboard 300mm	2.30		No Insulation	Carpet 10mm
Bedroom 1/Store	Concrete Above Plasterboard 300mm	1.20		No Insulation	Carpet 10mm
Bedroom 1/Pantry	Concrete Above Plasterboard 300mm	2.10		No Insulation	Carpet 10mm
Bedroom 1/Kitchen/Living	Concrete Above Plasterboard 300mm	7.90		No Insulation	Carpet 10mm
Bedroom 1	Suspended Concrete Slab 300mm	3.70	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet 10mm
Bedroom 2/Entry	Concrete Above Plasterboard 300mm	2.30		No Insulation	Carpet 10mm
Bedroom 2/Kitchen/Living	Concrete Above Plasterboard 300mm	8.20		No Insulation	Carpet 10mm
Bedroom 2	Suspended Concrete Slab 300mm	4.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet 10mm

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Void/Entry	Concrete Above Plasterboard 300mm	2.40		No Insulation	Bare
Void	Suspended Concrete Slab 300mm	1.10	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare
Void/Kitchen/Living	Concrete Above Plasterboard 300mm	1.30		No Insulation	Bare
Bath 1/Kitchen/Living	Concrete Above Plasterboard 300mm	4.20		No Insulation	Ceramic Tiles 8mm
WC 1/Kitchen/Living	Concrete Above Plasterboard 300mm	2.10		No Insulation	Ceramic Tiles 8mm
Hallway/Kitchen/Living	Concrete Above Plasterboard 300mm	3.60		No Insulation	Carpet 10mm
Stairs FF/Stairs GF	Concrete Above Plasterboard 300mm	5.20		No Insulation	Carpet 10mm
Landing/Stairs GF	Concrete Above Plasterboard 300mm	1.60		No Insulation	Carpet 10mm
Landing/Entry	Concrete Above Plasterboard 300mm	5.30		No Insulation	Carpet 10mm
Landing/Kitchen/Living	Concrete Above Plasterboard 300mm	5.00		No Insulation	Carpet 10mm
Master Bed/Kitchen/Living	Concrete Above Plasterboard 300mm	17.00		No Insulation	Carpet 10mm
Master WIR/Kitchen/Living	Concrete Above Plasterboard 300mm	10.10		No Insulation	Carpet 10mm
Master ENS/Kitchen/Living	Concrete Above Plasterboard 300mm	14.30		No Insulation	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
AC Wine Cellar	Concrete, Plasterboard	Bulk Insulation R5	No
AC Wine Cellar	Concrete Above Plasterboard	No Insulation	No
Store	Concrete, Plasterboard	Bulk Insulation R5	No
Store	Concrete Above Plasterboard	No Insulation	No
Laundry	Concrete, Plasterboard	Bulk Insulation R5	No
Laundry	Concrete Above Plasterboard	No Insulation	No
WIR 4	Concrete, Plasterboard	Bulk Insulation R5	No
WIR 4	Concrete Above Plasterboard	No Insulation	No
ENS 3	Concrete, Plasterboard	Bulk Insulation R5	No
ENS 3	Concrete Above Plasterboard	No Insulation	No
ENS 2	Concrete, Plasterboard	Bulk Insulation R5	No
ENS 2	Concrete Above Plasterboard	No Insulation	No
Plant Room	Concrete, Plasterboard	Bulk Insulation R5	No
Plant Room	Concrete Above Plasterboard	No Insulation	No
WIR 3	Concrete, Plasterboard	Bulk Insulation R5	No
WIR 3	Concrete Above Plasterboard	No Insulation	No
Bedroom 3	Concrete, Plasterboard	Bulk Insulation R5	No
Bedroom 3	Concrete Above Plasterboard	No Insulation	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 4	Concrete, Plasterboard	Bulk Insulation R5	No
Bedroom 4	Concrete Above Plasterboard	No Insulation	No
Stairs LGF	Concrete, Plasterboard	Bulk Insulation R5	No
Stairs LGF	Concrete Above Plasterboard	No Insulation	No
Garden Room	Concrete, Plasterboard	Bulk Insulation R5	No
Garden Room	Concrete Above Plasterboard	No Insulation	No
Stairs GF	Concrete, Plasterboard	Bulk Insulation R5	No
Stairs GF	Concrete Above Plasterboard	No Insulation	No
Entry	Concrete, Plasterboard	Bulk Insulation R5	No
Entry	Concrete Above Plasterboard	No Insulation	No
Laundry	Concrete, Plasterboard	Bulk Insulation R5	No
Laundry	Concrete Above Plasterboard	No Insulation	No
Store	Concrete, Plasterboard	Bulk Insulation R5	No
Store	Concrete Above Plasterboard	No Insulation	No
Pantry	Concrete, Plasterboard	Bulk Insulation R5	No
Pantry	Concrete Above Plasterboard	No Insulation	No
Kitchen/Living	Concrete, Plasterboard	Bulk Insulation R5	No
Kitchen/Living	Concrete Above Plasterboard	No Insulation	No
Bedroom 1	Concrete, Plasterboard	Bulk Insulation R5	No
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R5	No
Void	Concrete, Plasterboard	Bulk Insulation R5	No
Void	Concrete, Plasterboard	Bulk Insulation R5	No
Bath 1	Concrete, Plasterboard	Bulk Insulation R5	No
WC 1	Concrete, Plasterboard	Bulk Insulation R5	No
Hallway	Concrete, Plasterboard	Bulk Insulation R5	No
Stairs FF	Concrete, Plasterboard	Bulk Insulation R5	No
Landing	Concrete, Plasterboard	Bulk Insulation R5	No
Master Bed	Concrete, Plasterboard	Bulk Insulation R5	No
Master WIR	Concrete, Plasterboard	Bulk Insulation R5	No
Master ENS	Concrete, Plasterboard	Bulk Insulation R5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Waterproofing Membrane	No Insulation, Only an Air Gap	0.30	Light
Waterproofing Membrane	No Insulation, Only an Air Gap	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).