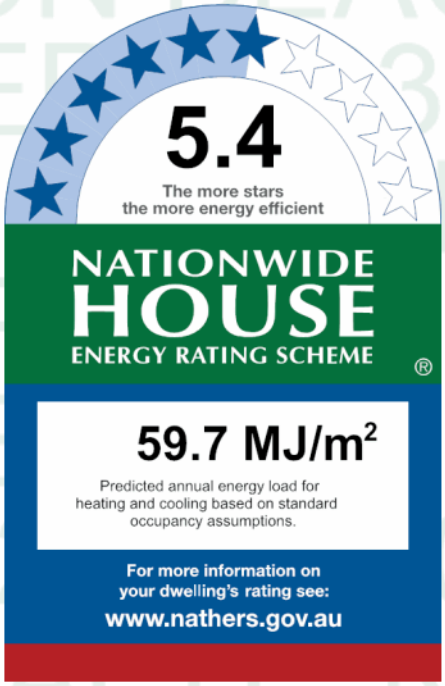
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0008950776

Generated on 27 Sep 2023 using BERS Pro v4.4.1.5d (3.21)



Property

Address	187 Riverview Rd, Avalon Beach , NSW , 2107
Lot/DP	B/381427
NCC Class*	1A
Type	New Dwelling

Plans

Main plan	DA_A
Prepared by	ABA

Construction and environment

Assessed floor area (m^2)*

Conditioned*	376.0
Unconditioned*	144.0
Total	520.0
Garage	40.0

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
33.7	**25.9**
MJ/m^2	MJ/m^2

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.

Accredited assessor

Name	Cameron McFadzean
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Accreditation No.	20758
Assessor Accrediting Organisation	
ABSA	
Declaration of interest	Declaration not completed

Verification

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

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-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E - Clear	4.3	0.53	0.50	0.56

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*
2Kitchen/Living	ALM-004-03 A	n/a	3150	4100	n/a	50	E	No
2Kitchen/Living	ALM-004-03 A	n/a	2350	900	n/a	30	E	No
2Kitchen/Living	ALM-004-03 A	n/a	2350	1250	n/a	30	S	No
2Kitchen/Living	ALM-004-03 A	n/a	3150	4360	n/a	50	W	No
2Kitchen/Living	ALM-004-03 A	n/a	3150	3700	n/a	50	W	No
2Kitchen/Living	ALM-004-03 A	n/a	3150	4300	n/a	50	W	No
2Kitchen/Living	ALM-004-03 A	n/a	2350	870	n/a	30	N	No
2Entry	ALM-004-03 A	n/a	3150	1999	n/a	50	N	No
2Entry	ALM-004-03 A	n/a	2350	1050	n/a	30	S	No
2Entry	ALM-004-03 A	n/a	3150	2000	n/a	50	S	No
2WC	ALM-004-03 A	n/a	500	1800	n/a	30	E	No
2WC	ALM-004-03 A	n/a	500	2400	n/a	30	S	No
2TVRoom	ALM-004-03 A	n/a	3150	3350	n/a	10	N	No
2TVRoom	ALM-004-03 A	n/a	3150	4650	n/a	10	E	No
2Stairs2	ALM-004-03 A	n/a	1410	1900	n/a	30	N	No
3Bedroom 1	ALM-004-03 A	n/a	2800	5200	n/a	30	W	Yes
3Bedroom 1	ALM-004-03 A	n/a	2800	2650	n/a	30	N	Yes
3Bed1Ensuite	ALM-004-03 A	n/a	1930	850	n/a	30	S	No
3Bed1Ensuite	ALM-004-03 A	n/a	1930	1120	n/a	30	S	No
3Bed1Ensuite	ALM-004-03 A	n/a	2800	2000	n/a	30	W	Yes
3Study	ALM-004-03 A	n/a	2800	3800	n/a	30	N	Yes
3Study	ALM-004-03 A	n/a	1930	3800	n/a	30	S	No
3Bedroom 2	ALM-004-03 A	n/a	2350	2300	n/a	30	N	Yes
3Bedroom 3	ALM-004-03 A	n/a	2350	2300	n/a	30	N	Yes
3Bedroom 4	ALM-004-03 A	n/a	2350	2300	n/a	30	N	Yes
3Bath1	ALM-004-03 A	n/a	1220	990	n/a	30	S	No
3Bath1	ALM-004-03 A	n/a	1220	990	n/a	30	S	No
3Bath1	ALM-004-03 A	n/a	700	3300	n/a	30	S	No
3Bath1	ALM-004-03 A	n/a	700	3300	n/a	30	S	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
3Ldry	ALM-004-03 A	n/a	1930	1800	n/a	30	S	No
4Entry	ALM-004-03 A	n/a	2670	2680	n/a	30	S	No
4Entry	ALM-004-03 A	n/a	1850	5150	n/a	30	W	No
4Entry	ALM-004-03 A	n/a	2670	1280	n/a	30	N	No
1Guest	ALM-004-03 A	n/a	3000	3800	n/a	50	W	No
1Guest	ALM-004-03 A	n/a	900	1800	n/a	30	N	No
1Rumpus	ALM-004-03 A	n/a	3000	4850	n/a	50	W	No
1Gym	ALM-004-03 A	n/a	900	1800	n/a	30	S	No
1Gym	ALM-004-03 A	n/a	3000	3000	n/a	50	W	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
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame

* Refer to glossary.

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
2Kitchen/Living	GEN-04-008a	n/a	50	2.70	N	None	No	0.50
4Entry	GEN-04-008a	n/a	50	11.20	N	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
3StairCorridor3	2040	820	90	E
4Entry	2040	820	90	E
4Garage	2040	5500	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Concrete Block	0.50	Medium	Bulk Insulation R1.7	No
EW-2	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
2Kitchen/Living	EW-1	3200	4200	E	600	YES
2Kitchen/Living	EW-1	3200	600	N	4800	YES
2Kitchen/Living	EW-1	3200	1000	E	14200	YES
2Kitchen/Living	EW-1	3200	995	E	7900	NO
2Kitchen/Living	EW-1	3200	8600	S	600	NO
2Kitchen/Living	EW-1	3200	12400	W	3700	NO
2Kitchen/Living	EW-1	3200	8000	N	600	NO
2Entry	EW-1	3200	1990	N	1800	YES
2Entry	EW-1	3200	3395	S	550	NO
2Entry	EW-1	3200	200	W	12725	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
2Entry	EW-1	3200	1995	S	800	YES
Pantry	EW-1	3200	195	E	14200	YES
2WC	EW-1	3200	2195	E	6400	NO
2WC	EW-1	3200	2395	S	500	NO
2TVRoom	EW-1	3200	3595	N	600	NO
2TVRoom	EW-1	3200	5195	E	6400	NO
2Stairs2	EW-1	3200	1200	W	14800	YES
2Stairs2	EW-1	3200	2195	N	600	NO
3Bedroom 1	EW-2	3200	5195	W	600	NO
3Bedroom 1	EW-2	3200	6395	N	600	NO
3Bed1Ensuite	EW-2	3200	6395	S	600	NO
3Bed1Ensuite	EW-2	3200	2195	W	600	NO
3Study	EW-2	3200	3790	N	600	NO
3Study	EW-2	3200	3790	S	600	NO
3StairCorridor3	EW-2	3200	2190	N	600	NO
3StairCorridor3	EW-2	3200	990	E	125	NO
3StairCorridor3	EW-2	3200	2190	S	600	NO
3Bedroom 2	EW-2	3200	3190	N	600	NO
3Bedroom 3	EW-2	3200	3390	N	600	NO
3Bedroom 4	EW-2	3200	3195	N	600	NO
3Bedroom 4	EW-2	3200	4195	E	75	NO
3Bath1	EW-2	3200	6390	S	600	NO
3Ldry	EW-2	3200	2195	E	150	NO
3Ldry	EW-2	3200	3395	S	600	NO
4Entry	EW-1	3200	5000	S	200	NO
4Entry	EW-1	3200	7400	W	200	NO
4Entry	EW-1	3200	4195	N	200	NO
4Entry	EW-1	3200	1200	E	7200	YES
4Garage	EW-1	3200	6795	N	200	NO
4Garage	EW-1	3200	6200	E	1200	NO

* Refer to glossary.
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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
4Garage	EW-1	3200	5995	S	1400	YES
1Guest	EW-1	3200	3725	W	6425	NO
1Guest	EW-1	3200	4600	N	600	NO
1Guest	EW-1	3200	3595	N	600	NO
1Rumpus	EW-1	3200	5050	W	5025	NO
1Gym	EW-1	3200	1995	S	600	NO
1Gym	EW-1	3200	4600	S	600	NO
1Gym	EW-1	3200	3325	W	3700	NO
1WC	EW-1	3200	1590	S	600	NO
1Plant	EW-1	3200	995	E	1225	NO
1Plant	EW-1	3200	2395	S	600	NO
1Stairs	EW-1	3200	990	S	600	NO
1Stairs	EW-1	3200	7390	E	1275	NO
1storeLdry	EW-1	3200	3395	N	600	NO
1storeLdry	EW-1	3200	3995	E	1350	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		385.00	Bulk Insulation, No Air Gap R1.5
IW-2 - Concrete Block		47.00	Bulk Insulation, Air Gap R1.5

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
2Kitchen/Living/1Guest	Concrete Above Plasterboard 100mm	24.90		No Insulation	Carpet 10mm
2Kitchen/Living/1Rumpus	Concrete Above Plasterboard 100mm	37.00		No Insulation	Carpet 10mm
2Kitchen/Living/1Gym	Concrete Above Plasterboard 100mm	17.90		No Insulation	Carpet 10mm
2Kitchen/Living/1WC	Concrete Above Plasterboard 100mm	0.80		No Insulation	Carpet 10mm

* Refer to glossary.

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
2Kitchen/Living	Concrete Slab on Ground 100mm	17.30	None	Bulk Insulation in Contact with Floor R2.5	Bare
2Entry/1Rumpus	Concrete Above Plasterboard 100mm	7.40		No Insulation	Carpet 10mm
2Entry/1WC	Concrete Above Plasterboard 100mm	2.10		No Insulation	Carpet 10mm
2Entry/1Stairs	Concrete Above Plasterboard 100mm	9.60		No Insulation	Carpet 10mm
2Entry	Concrete Slab on Ground 100mm	3.70	None	Bulk Insulation in Contact with Floor R2.5	Bare
Pantry/1Gym	Concrete Above Plasterboard 100mm	4.10		No Insulation	Carpet 10mm
Pantry/1WC	Concrete Above Plasterboard 100mm	1.10		No Insulation	Carpet 10mm
2WC	Concrete Slab on Ground 100mm	5.10	None	Bulk Insulation in Contact with Floor R2.5	Bare
2TVRoom/1Stairs	Concrete Above Plasterboard 100mm	0.80		No Insulation	Carpet 10mm
2TVRoom	Concrete Slab on Ground 100mm	15.70	None	Bulk Insulation in Contact with Floor R2.5	Bare
2Stairs2/1Stairs	Concrete Above Plasterboard 100mm	8.80		No Insulation	Carpet 10mm
3Bedroom 1/2Kitchen/Living	Concrete Above Plasterboard 150mm	32.80		No Insulation	Carpet 10mm
3Bed1Ensuite/2Kitchen/Living	Concrete Above Plasterboard 150mm	11.40		No Insulation	Carpet 10mm
3Bed1Ensuite/Pantry	Concrete Above Plasterboard 150mm	2.30		No Insulation	Carpet 10mm
3Study/2Kitchen/Living	Concrete Above Plasterboard 150mm	8.30		No Insulation	Carpet 10mm
3Study/2Entry	Concrete Above Plasterboard 150mm	12.30		No Insulation	Carpet 10mm
3Study/Pantry	Concrete Above Plasterboard 150mm	3.10		No Insulation	Carpet 10mm
3Study/2Stairs2	Concrete Above Plasterboard 150mm	0.80		No Insulation	Carpet 10mm
3Study	Suspended Concrete Slab 150mm	2.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare
3StairCorridor3/2Entry	Concrete Above Plasterboard 150mm	8.10		No Insulation	Carpet 10mm
3StairCorridor3/2TVRoom	Concrete Above Plasterboard 150mm	2.50		No Insulation	Carpet 10mm
3StairCorridor3/2Stairs2	Concrete Above Plasterboard 150mm	7.90		No Insulation	Carpet 10mm
3StairCorridor3	Suspended Concrete Slab 150mm	6.00	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
3Bedroom 2/2TVRoom	Concrete Above Plasterboard 150mm	12.90		No Insulation	Carpet 10mm
3Bedroom 3/2TVRoom	Concrete Above Plasterboard 150mm	0.80		No Insulation	Carpet 10mm
3Bedroom 3	Suspended Concrete Slab 150mm	12.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare
3Bedroom 4	Suspended Concrete Slab 150mm	13.10	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare
3Bath1/2Entry	Concrete Above Plasterboard 150mm	2.10		No Insulation	Carpet 10mm
3Bath1/2WC	Concrete Above Plasterboard 150mm	5.10		No Insulation	Carpet 10mm
3Bath1	Suspended Concrete Slab 150mm	6.40	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare
3Ldry	Suspended Concrete Slab 150mm	7.20	Totally Open	Bulk Insulation in Contact with Floor R2.5	Bare
4Entry/3Study	Concrete Above Plasterboard 150mm	1.50		No Insulation	Carpet 10mm
4Entry/3StairCorridor3	Concrete Above Plasterboard 150mm	18.70		No Insulation	Carpet 10mm
4Entry/3Bedroom 2	Concrete Above Plasterboard 150mm	7.50		No Insulation	Carpet 10mm
4Entry/3Bath1	Concrete Above Plasterboard 150mm	5.70		No Insulation	Carpet 10mm
4Garage/3StairCorridor3	Concrete Above Plasterboard 150mm	6.00		No Insulation	Carpet 10mm
4Garage/3Bedroom 2	Concrete Above Plasterboard 150mm	5.80		No Insulation	Carpet 10mm
4Garage/3Bedroom 3	Concrete Above Plasterboard 150mm	14.20		No Insulation	Carpet 10mm
4Garage/3Bedroom 4	Concrete Above Plasterboard 150mm	8.30		No Insulation	Carpet 10mm
4Garage/3Bath1	Concrete Above Plasterboard 150mm	3.80		No Insulation	Carpet 10mm
4Garage/3Ldry	Concrete Above Plasterboard 150mm	2.20		No Insulation	Carpet 10mm
1Guest	Concrete Slab on Ground 100mm	30.40	None	Bulk Insulation in Contact with Floor R2.5	Bare
1Rumpus	Concrete Slab on Ground 100mm	46.30	None	Bulk Insulation in Contact with Floor R2.5	Bare
1Gym	Concrete Slab on Ground 100mm	21.80	None	Bulk Insulation in Contact with Floor R2.5	Bare
1WC	Concrete Slab on Ground 100mm	5.10	None	Bulk Insulation in Contact with Floor R2.5	Bare
1Plant	Concrete Slab on Ground 100mm	2.20	None	Bulk Insulation in Contact with Floor R2.5	Bare

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
1Stairs	Concrete Slab on Ground 100mm	20.50	None	Bulk Insulation in Contact with Floor R2.5	Bare
1storeLdry	Concrete Slab on Ground 100mm	13.10	None	Bulk Insulation in Contact with Floor R2.5	Bare

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
2Kitchen/Living	Concrete, Plasterboard	Bulk Insulation R2.3	No
2Kitchen/Living	Concrete Above Plasterboard	No Insulation	No
2Entry	Concrete, Plasterboard	Bulk Insulation R2.3	No
2Entry	Concrete Above Plasterboard	No Insulation	No
Pantry	Concrete, Plasterboard	Bulk Insulation R2.3	No
Pantry	Concrete Above Plasterboard	No Insulation	No
2WC	Concrete, Plasterboard	Bulk Insulation R2.3	No
2WC	Concrete Above Plasterboard	No Insulation	No
2TVRoom	Concrete, Plasterboard	Bulk Insulation R2.3	No
2TVRoom	Concrete Above Plasterboard	No Insulation	No
2Stairs2	Concrete, Plasterboard	Bulk Insulation R2.3	No
2Stairs2	Concrete Above Plasterboard	No Insulation	No
3Bedroom 1	Plasterboard	Bulk Insulation R5	No
3Bed1Ensuite	Plasterboard	Bulk Insulation R5	No
3Study	Plasterboard	Bulk Insulation R5	No
3Study	Concrete Above Plasterboard	No Insulation	No
3StairCorridor3	Concrete, Plasterboard	Bulk Insulation R2.3	No
3StairCorridor3	Concrete Above Plasterboard	No Insulation	No
3Bedroom 2	Concrete, Plasterboard	Bulk Insulation R5	No
3Bedroom 2	Concrete Above Plasterboard	No Insulation	No
3Bedroom 3	Concrete, Plasterboard	Bulk Insulation R5	No
3Bedroom 3	Concrete Above Plasterboard	No Insulation	No
3Bedroom 4	Concrete, Plasterboard	Bulk Insulation R2.3	No
3Bedroom 4	Concrete Above Plasterboard	No Insulation	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
3Bath1	Concrete, Plasterboard	Bulk Insulation R2.3	No
3Bath1	Concrete Above Plasterboard	No Insulation	No
3Ldry	Concrete, Plasterboard	Bulk Insulation R2.3	No
3Ldry	Concrete Above Plasterboard	No Insulation	No
4Entry	Plasterboard	Bulk Insulation R5	No
4Garage	Plasterboard	No insulation	No
1Guest	Concrete, Plasterboard	Bulk Insulation R2.3	No
1Guest	Concrete Above Plasterboard	No Insulation	No
1Rumpus	Concrete, Plasterboard	Bulk Insulation R2.3	No
1Rumpus	Concrete Above Plasterboard	No Insulation	No
1Gym	Concrete, Plasterboard	Bulk Insulation R2.3	No
1Gym	Concrete Above Plasterboard	No Insulation	No
1WC	Concrete, Plasterboard	Bulk Insulation R2.3	No
1WC	Concrete Above Plasterboard	No Insulation	No
1Plant	Concrete, Plasterboard	Bulk Insulation R2.3	No
1Stairs	Concrete, Plasterboard	Bulk Insulation R2.3	No
1Stairs	Concrete Above Plasterboard	No Insulation	No
1storeLdry	Concrete, Plasterboard	Bulk Insulation R2.3	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
2Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
2Kitchen/Living	1	1400

* Refer to glossary.

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Concrete	Bulk Insulation, No Air Gap Above R3.4	0.50	Medium
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R0.7	0.50	Medium
Concrete	Bulk Insulation, No Air Gap Above R3.4	0.50	Medium

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).