

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0006958813

Generated on 21 Dec 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address 14 Broughton Road , Strathfield , NSW ,
2135

Lot/DP 1/923396

NCC Class* 1A

Type New Dwelling

Plans

Main Plan n/a

Prepared by n/a

Construction and environment

Assessed floor area (m ²)*	Exposure Type
Conditioned* 291.0	Suburban
Unconditioned* 162.0	NatHERS climate zone
Total 453.0	56
Garage 143.0	

Accredited assessor

Name Zoran Cvetkovski

Business name Sustainability-Z

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Accreditation No. DMN/13/1641

Assessor Accrediting Organisation

Design Matters National

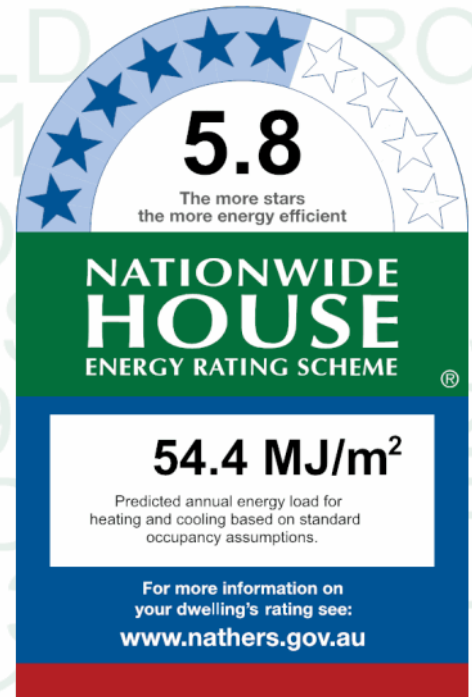
Declaration of interest Declaration not completed

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
31.5 MJ/m ²	22.8 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.

Verification

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



**STRATHFIELD COUNCIL
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DA2022.17

DATE 2 February 2022

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?

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

Rated with provisional values for downlights. Rated with AWS windows.

Rated with provisional colours and material type for building elements not shown on the colour (material) schedule.

Roof angle is rated provisionally, except where it is shown on the elevation (measured from elevation).

Raised part of the walls on the Principal Suite are rated as Fibro Cavity Panel on Battens. Basement zones are rated as a garage space.

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-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-001-01 A	AWS-001-01 A 502/504 Al Sliding Window SG 3Clr	6.4	0.73	0.69	0.77
AWS-066-08 A	AWS-066-08 A RES SERIES 516 FIXED WINDOW SG 5mmEnTech	4.0	0.64	0.61	0.67
AWS-011-05 A	AWS-011-05 A 541/542 Al Sliding Door SG 6.38Sct	4.4	0.59	0.56	0.62
AWS-007-06 A	AWS-007-06 A 516 Al Awining Window SG 6.38Sct	4.9	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
AWS-018-05 A	AWS-018-05 A 549 ED Al Entry Door SG 6.38Sct	4.4	0.46	0.44	0.48
AWS-001-19 A	AWS-001-19 A 502/504 Al Sliding Window SG 638CP	4.5	0.59	0.56	0.62
AWS-007-07 A	AWS-007-07 A 516 Al Awining Window SG 6.38CP	4.9	0.41	0.39	0.43

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	AWS-001-01 A	n/a	600	2650	n/a	10	W	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	970	n/a	00	N	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	610	n/a	00	E	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	610	n/a	00	E	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	610	n/a	00	E	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	2410	n/a	00	E	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	3010	n/a	00	S	No
Kt/Di/Fa/Ru	AWS-011-05 A	n/a	2900	2685	n/a	60	W	No
Kt/Di/Fa/Ru	AWS-011-05 A	n/a	2900	3715	n/a	60	S	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	700	3010	n/a	00	W	No
Kt/Di/Fa/Ru	AWS-066-08 A	n/a	2700	3610	n/a	00	E	No
Butlers Ptry-GF	AWS-066-08 A	n/a	700	2410	n/a	00	W	No
Ldry-GF	AWS-001-01 A	n/a	2150	850	n/a	30	W	No
Bath-GF	ALM-002-01 A	n/a	860	1210	n/a	10	W	No
Guest Bed-GF	AWS-007-06 A	n/a	2150	2410	n/a	30	N	No
Study-GF	AWS-007-06 A	n/a	2150	970	n/a	60	E	No
Study-GF	AWS-007-06 A	n/a	2150	970	n/a	60	S	No
Sitting/Entry-G	AWS-007-06 A	n/a	2150	2410	n/a	30	W	No
Sitting/Entry-G	AWS-018-05 A	n/a	2850	1500	n/a	90	N	No
Sitting/Entry-G	AWS-007-06 A	n/a	2150	2410	n/a	30	N	No
Principal S-FF	AWS-007-06 A	n/a	1200	850	n/a	90	E	No
Principal S-FF	AWS-007-06 A	n/a	1200	850	n/a	90	E	No
Principal S-FF	AWS-007-06 A	n/a	1800	3010	n/a	60	S	No
Principal S-FF	AWS-066-08 A	n/a	500	3610	n/a	00	N	No Shading
Bed 4-FF	AWS-001-19 A	n/a	1200	1810	n/a	10	E	No
Stairs/Void-FF	AWS-066-08 A	n/a	2700	3610	n/a	00	E	No
Stairs/Void-FF	AWS-066-08 A	n/a	2700	970	n/a	00	N	No
Stairs/Void-FF	AWS-066-08 A	n/a	2700	610	n/a	00	E	No
Stairs/Void-FF	AWS-066-08 A	n/a	2700	610	n/a	00	E	No
Stairs/Void-FF	AWS-066-08 A	n/a	2700	610	n/a	00	E	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bath-FF	AWS-001-01 A	n/a	860	1810	n/a	45	W	No
Bed 3-FF	AWS-001-19 A	n/a	1200	1810	n/a	10	W	No
Ens2/Bed2-FF	ALM-001-01 A	n/a	1800	850	n/a	60	W	No
Bed 2-FF	AWS-011-05 A	n/a	2700	2820	n/a	60	N	No
Void-FF	AWS-066-08 A	n/a	2400	1580	n/a	00	N	No
Retreat-FF	AWS-007-07 A	n/a	2400	2410	n/a	30	N	No
Retreat-FF	AWS-007-06 A	n/a	2150	970	n/a	60	S	No
Ens/P.S1-FF	ALM-002-01 A	n/a	1200	2170	n/a	10	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
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	3000	90	N

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Tilt up Concrete	0.50	Medium	No insulation	No
EW-2	Tilt up Concrete	0.50	Medium	No insulation	No
EW-3	Cavity Brick	0.50	Medium	Foil Sided Bubble Wrap, Anti-glare one side	No
EW-4	Fibro Cavity Panel on Battens	0.50	Medium	Bulk Insulation R2.5	No
EW-5	Fibro Cavity Panel on BattensZ:9W2:5	0.50	Medium	Bulk Insulation R2.5	No
EW-6	Fibro Cavity Panel on BattensZ:9W2:6	0.50	Medium	Bulk Insulation R2.5	No
EW-7	Cavity Brick	0.50	Medium	Foil Sided Bubble Wrap, Anti-glare one side	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	12600	W	100	NO
Garage	EW-1	2600	3800	N	1800	YES
Garage	EW-1	2600	6400	W	100	YES
Garage	EW-2	2600	5400	N	1200	NO
Garage	EW-1	2600	4500	E	100	NO
Garage	EW-1	2600	1500	S	100	YES
Garage	EW-1	2600	4900	E	100	YES
Garage	EW-1	2600	1500	N	100	YES
Garage	EW-1	2600	9600	E	100	NO
Garage	EW-1	2600	9200	S	2900	NO
Kt/Di/Fa/Ru	EW-3	2900	1500	N	100	YES
Kt/Di/Fa/Ru	EW-3	2900	12400	E	100	NO
Kt/Di/Fa/Ru	EW-3	2900	4700	S	100	NO
Kt/Di/Fa/Ru	EW-3	2900	2800	W	5100	YES
Kt/Di/Fa/Ru	EW-3	2900	4500	S	3300	YES
Kt/Di/Fa/Ru	EW-3	2900	4945	W	100	NO
Kt/Di/Fa/Ru	EW-3	2900	145	W	3900	YES
Kt/Di/Fa/Ru	EW-3	2900	4845	E	100	YES
Butlers Ptry-GF	EW-3	2900	2590	W	100	NO
Ldry-GF	EW-3	2900	1690	W	100	NO
Bath-GF	EW-3	2900	1490	W	100	NO
Guest Bed-GF	EW-3	2900	3145	W	100	NO
Guest Bed-GF	EW-3	2900	3745	N	6800	YES
Study-GF	EW-3	2900	1745	E	100	NO
Study-GF	EW-3	2900	1500	S	100	YES
Sitting/Entry-G	EW-3	2900	4445	W	3900	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Sitting/Entry-G	EW-3	2900	2000	N	2100	YES
Sitting/Entry-G	EW-3	2900	1100	W	5900	YES
Sitting/Entry-G	EW-3	2900	3400	N	100	NO
Sitting/Entry-G	EW-3	2900	3745	E	100	NO
Principal S-FF	EW-3	2750	5045	E	0	NO
Principal S-FF	EW-5	1250	5045	E	500	NO
Principal S-FF	EW-3	2750	5345	S	0	NO
Principal S-FF	EW-6	700	5345	S	500	NO
Bed 4-FF	EW-3	2750	3790	E	100	NO
Stairs/Void-FF	EW-3	2750	4845	E	1600	YES
Stairs/Void-FF	EW-3	2750	1500	N	11100	YES
Stairs/Void-FF	EW-3	2750	3345	E	100	NO
Bath-FF	EW-3	2750	2090	W	100	NO
Bed 3-FF	EW-3	2750	4590	W	100	NO
Ens2/Bed2-FF	EW-3	2750	1690	W	100	NO
Wir/Bed 2-FF	EW-3	2750	2090	W	100	NO
Bed 2-FF	EW-3	2750	4245	W	100	NO
Bed 2-FF	EW-3	2750	3745	N	1700	NO
Void-FF	EW-3	2750	1890	N	1700	YES
Retreat-FF	EW-3	2750	1100	W	5900	YES
Retreat-FF	EW-3	2750	3400	N	600	NO
Retreat-FF	EW-3	2750	5600	E	100	NO
Retreat-FF	EW-3	2750	1500	S	17800	YES
Ens/P.S1-FF	EW-7	2750	3745	S	500	NO
Ens/P.S1-FF	EW-7	2750	2645	W	500	NO
Wir/P.S1-FF	EW-7	2750	3790	W	500	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		309.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	143.10	None	No Insulation	Bare
Kt/Di/Fa/Ru/Garage	Concrete Above Plasterboard 100mm	91.90		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Kt/Di/Fa/Ru	Concrete Slab on Ground 100mm	13.00	None	No Insulation	Cork Tiles or Parquetry 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Butlers Ptry-GF/Garage	Concrete Above Plasterboard 100mm	8.30		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Ldry-GF/Garage	Concrete Above Plasterboard 100mm	5.70		Bulk Insulation R2.5	Ceramic Tiles 8mm
Bath-GF/Garage	Concrete Above Plasterboard 100mm	5.00		Bulk Insulation R2.5	Ceramic Tiles 8mm
Guest Bed-GF/Garage	Concrete Above Plasterboard 150mm	5.50		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Guest Bed-GF	Suspended Concrete Slab 150mm	6.30	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Study-GF/Garage	Concrete Above Plasterboard 100mm	5.60		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Sitting/Entry-G/Garage	Concrete Above Plasterboard 100mm	18.00		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Sitting/Entry-G	Concrete Slab on Ground 100mm	3.70	None	No Insulation	Cork Tiles or Parquetry 8mm
Principal S-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	26.30		No Insulation	Cork Tiles or Parquetry 8mm
Principal S-FF	Suspended Concrete Slab 150mm	1.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bed 4-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	14.60		No Insulation	Cork Tiles or Parquetry 8mm
Stairs/Void-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	22.30		No Insulation	Cork Tiles or Parquetry 8mm
Bath-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	5.60		No Insulation	Ceramic Tiles 8mm
Bath-FF/Butlers Ptry-GF	Concrete Above Plasterboard 150mm	2.20		No Insulation	Ceramic Tiles 8mm
Bed 3-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	1.20		No Insulation	Cork Tiles or Parquetry 8mm
Bed 3-FF/Butlers Ptry-GF	Concrete Above Plasterboard 150mm	6.20		No Insulation	Cork Tiles or Parquetry 8mm
Bed 3-FF/Ldry-GF	Concrete Above Plasterboard 150mm	5.90		No Insulation	Cork Tiles or Parquetry 8mm
Bed 3-FF/Bath-GF	Concrete Above Plasterboard 150mm	3.90		No Insulation	Cork Tiles or Parquetry 8mm
Ens2/Bed2-FF/Bath-GF	Concrete Above Plasterboard 150mm	1.30		No Insulation	Ceramic Tiles 8mm
Ens2/Bed2-FF/Guest Bed-GF	Concrete Above Plasterboard 150mm	4.90		No Insulation	Ceramic Tiles 8mm
Wir/Bed 2-FF/Guest Bed-GF	Concrete Above Plasterboard 150mm	5.40		No Insulation	Cork Tiles or Parquetry 8mm
Wir/Bed 2-FF	Suspended Concrete Slab 150mm	1.20	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bed 2-FF	Suspended Concrete Slab 150mm	15.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Void-FF/Sitting/Entry-G	Concrete Above Plasterboard 150mm	5.80		No Insulation	Cork Tiles or Parquetry 8mm
Retreat-FF/Study-GF	Concrete Above Plasterboard 150mm	5.80		No Insulation	Cork Tiles or Parquetry 8mm
Retreat-FF/Sitting/Entry-G	Concrete Above Plasterboard 150mm	12.90		No Insulation	Cork Tiles or Parquetry 8mm
Hwy-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	17.30		No Insulation	Cork Tiles or Parquetry 8mm
Hwy-FF/Guest Bed-GF	Concrete Above Plasterboard 150mm	1.00		No Insulation	Cork Tiles or Parquetry 8mm
Hwy-FF/Sitting/Entry-G	Concrete Above Plasterboard 150mm	2.60		No Insulation	Cork Tiles or Parquetry 8mm
Ens/P.S1-FF	Suspended Concrete Slab 150mm	9.90	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation (R-value)	Added insulation (R-value)	Covering
Wir/P.S1-FF/Kt/Di/Fa/Ru	Concrete Above Plasterboard 150mm	13.80		No Insulation	Cork Tiles or Parquetry 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Concrete, Plasterboard	No insulation	No
Garage	Concrete Above Plasterboard	Bulk Insulation R2.5	No
Kt/Di/Fa/Ru	Concrete, Plasterboard	Bulk Insulation R5	No
Kt/Di/Fa/Ru	Concrete Above Plasterboard	No Insulation	No
Butlers Ptry-GF	Concrete, Plasterboard	Bulk Insulation R5	No
Butlers Ptry-GF	Concrete Above Plasterboard	No Insulation	No
Ldry-GF	Concrete, Plasterboard	Bulk Insulation R5	No
Ldry-GF	Concrete Above Plasterboard	No Insulation	No
Bath-GF	Concrete, Plasterboard	Bulk Insulation R5	No
Bath-GF	Concrete Above Plasterboard	No Insulation	No
Guest Bed-GF	Concrete, Plasterboard	Bulk Insulation R5	No
Guest Bed-GF	Concrete Above Plasterboard	No Insulation	No
Study-GF	Concrete, Plasterboard	Bulk Insulation R5	No
Study-GF	Concrete Above Plasterboard	No Insulation	No
Sitting/Entry-G	Concrete, Plasterboard	Bulk Insulation R5	No
Sitting/Entry-G	Concrete Above Plasterboard	No Insulation	No
Principal S-FF	Plasterboard	Bulk Insulation R5	No
Bed 4-FF	Plasterboard	Bulk Insulation R5	No
Stairs/Void-FF	Plasterboard	Bulk Insulation R5	No
Bath-FF	Plasterboard	Bulk Insulation R5	No
Bed 3-FF	Plasterboard	Bulk Insulation R5	No
Ens2/Bed2-FF	Plasterboard	Bulk Insulation R5	No
Wir/Bed 2-FF	Plasterboard	Bulk Insulation R5	No
Bed 2-FF	Plasterboard	Bulk Insulation R5	No
Void-FF	Plasterboard	Bulk Insulation R5	No
Retreat-FF	Plasterboard	Bulk Insulation R5	No
Hwy-FF	Plasterboard	Bulk Insulation R5	No
Ens/P.S1-FF	Plasterboard	Bulk Insulation R5	No
Wir/P.S1-FF	Plasterboard	Bulk Insulation R5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
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Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kt/Di/Fa/Ru	26	Downlights - LED	50	Sealed
Kt/Di/Fa/Ru	1	Exhaust Fans	300	Sealed
Butlers Ptry-GF	2	Downlights - LED	50	Sealed
Ldry-GF	2	Downlights - LED	50	Sealed
Bath-GF	1	Downlights - LED	50	Sealed
Guest Bed-GF	3	Downlights - LED	50	Sealed
Study-GF	1	Downlights - LED	50	Sealed
Sitting/Entry-G	5	Downlights - LED	50	Sealed
Principal S-FF	7	Downlights - LED	50	Sealed
Bed 4-FF	4	Downlights - LED	50	Sealed
Stairs/Void-FF	6	Downlights - LED	50	Sealed
Bath-FF	2	Downlights - LED	50	Sealed
Bed 3-FF	4	Downlights - LED	50	Sealed
Ens2/Bed2-FF	2	Downlights - LED	50	Sealed
Wir/Bed 2-FF	2	Downlights - LED	50	Sealed
Bed 2-FF	4	Downlights - LED	50	Sealed
Void-FF	2	Downlights - LED	50	Sealed
Retreat-FF	5	Downlights - LED	50	Sealed
Hwy-FF	5	Downlights - LED	50	Sealed
Ens/P.S1-FF	2	Downlights - LED	50	Sealed
Wir/P.S1-FF	3	Downlights - LED	50	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	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 10m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies 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).