

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008123184-01

Generated on 17 Oct 2022 using BERS Pro v4.4.1.5 (3.21)

Property

Address 46 Lane Cove Road , Ingleside , NSW , 2101
Lot/DP 1/1044346
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* 768.0	Open
Unconditioned* 95.0	NatHERS climate zone
Total 864.0	56
Garage 73.0	



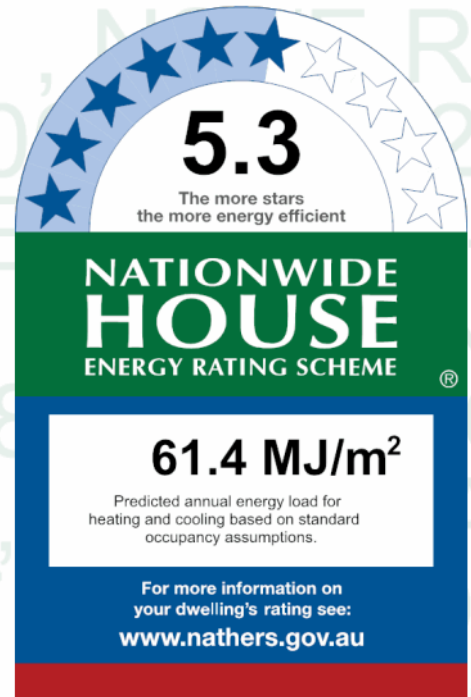
Accredited assessor

Name Zoran Cvetkovski
Business name Sustainability-Z
Email sustainability-z@outlook.com
Phone 0414273176
Accreditation No. DMN/13/1641

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration not completed



Thermal performance

Heating	Cooling
39.3 MJ/m ²	22.1 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=PAVFFpre.

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

Rated with provisional values for downlights.

Symbol on the plans (FW), on the wet areas, is rated as exhaust fan in the calculation.

All windows are rated as generic windows, except the Sliding doors on the Kitchen/Living thermal zone and

Sliding door/sliding windows on the Office 1-GF and Office 2-GF thermal zone.

Rated with medium coloured render (R1-Dulux-selected Beige) and light coloured cladding (Trims and Profiles).

Rated with dark coloured roof tiles.

Rated with solid entry door. Sidelights on the entry door are measured from the elevations.

Windows not clearly shown on the elevations are rated with provisional opening percentage, type, head height and offset.

All windows sizes, type and opening percentage that do not correspond with window schedule are rated as per the elevations.

Dimensions on Sliding doors are rated as per the door schedule.

All coffer ceiling verticals and walls against the roof-space, to be insulated, with the same insulation as the ceiling insulation.

All downlights IC-F / IC-4 / (insulation covered/including the control gears) rated as per AS/NZS standard 60598 and IP (sealed) rated as per BS EN 60529:1992, European IEC 60509:1989.

(Where the roof is extended over an open area such as deck or carport): A barrier to be installed within the roof space to separate the space above the zoned part of the house and the space above the open veranda.

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-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
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-001-19 A	AWS-001-19 A 502/504 Al Sliding Window SG 638CP	4.5	0.59	0.56	0.62

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Mud Rm-GF	ALM-002-03 A	n/a	900	910	n/a	45	NE	No
Pwd/Family-GF	ALM-001-03 A	n/a	1800	610	n/a	60	NE	No
Storage-GF	ALM-001-03 A	n/a	1800	610	n/a	60	NE	No
Bar-GF	ALM-002-03 A	n/a	2400	2410	n/a	45	NW	No
Prayer Rm-GF	ALM-002-03 A	n/a	1460	1810	n/a	45	NW	No
Bed 7-GF	ALM-002-03 A	n/a	1460	1810	n/a	45	NW	No
Ens/Bed 7-GF	ALM-002-03 A	n/a	1460	1450	n/a	45	NE	No
Office 2-GF	AWS-011-05 A	n/a	2400	3050	n/a	30	NE	No
Office 2-GF	AWS-001-19 A	n/a	2035	1210	n/a	30	SE	No
Office 2-GF	AWS-001-19 A	n/a	2035	1210	n/a	30	SE	No
Games-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Games-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Bed 6-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Bed 6-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Ens/Bed 6-GF	ALM-002-03 A	n/a	1200	1210	n/a	45	SE	No
Media-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Media-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Foyer/St/V-GF	ALM-002-03 A	n/a	2340	400	n/a	00	SE	No
Foyer/St/V-GF	ALM-002-03 A	n/a	2340	400	n/a	00	SE	No
Sitting-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Sitting-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Kch/M/Fa/Di	AWS-011-05 A	n/a	2400	4224	n/a	30	NW	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kch/M/Fa/Di	AWS-011-05 A	n/a	2400	5304	n/a	30	NW	No
Wip-GF	ALM-002-03 A	n/a	600	2650	n/a	45	SW	No
Pwd/Airlock-GF	ALM-002-03 A	n/a	1030	910	n/a	45	NW	No
Rumpus-GF	ALM-002-03 A	n/a	1500	1210	n/a	45	SE	No
Rumpus-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Rumpus-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Rumpus-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Rumpus-GF	ALM-002-03 A	n/a	2035	1210	n/a	30	SE	No
Bed 5-GF	ALM-002-03 A	n/a	1460	2410	n/a	45	NW	No
Ens/Bed 4-GF	ALM-002-03 A	n/a	1030	1210	n/a	45	NW	No
Bed 4-GF	ALM-002-03 A	n/a	2400	3050	n/a	30	NW	No
Office 1-GF	AWS-001-19 A	n/a	2035	1210	n/a	30	SE	No
Office 1-GF	AWS-001-19 A	n/a	2035	1210	n/a	30	SE	No
Office 1-GF	AWS-011-05 A	n/a	2400	3050	n/a	30	SW	No
Bed 2-FF	ALM-001-03 A	n/a	1800	910	n/a	60	NW	No
Bed 2-FF	ALM-002-03 A	n/a	2400	1570	n/a	45	NW	No
Bed 2-FF	ALM-002-03 A	n/a	1460	1210	n/a	10	SW	No
Bed 2-FF	ALM-002-03 A	n/a	1460	1210	n/a	10	SW	No
Bed 3-FF	ALM-002-03 A	n/a	2400	1570	n/a	45	NW	No
Bed 3-FF	ALM-001-03 A	n/a	1800	910	n/a	60	NW	No
Bed 3-FF	ALM-002-03 A	n/a	900	1510	n/a	10	NE	No
Bed 3-FF	ALM-002-03 A	n/a	900	1510	n/a	10	NE	No
Upp Lounge-FF	ALM-002-03 A	n/a	450	2650	n/a	00	NE	No
Upp Lounge-FF	ALM-002-03 A	n/a	900	2650	n/a	10	SW	No
Master Bed-FF	ALM-002-03 A	n/a	2035	1210	n/a	10	SE	No
Master Bed-FF	ALM-002-03 A	n/a	2035	1210	n/a	10	SE	No
Master Bed-FF	ALM-002-03 A	n/a	1200	1810	n/a	10	SE	No
Hall/M.Bed-FF	ALM-002-03 A	n/a	2035	1210	n/a	10	SE	No
Ens/M.Bed-FF	ALM-002-03 A	n/a	1200	850	n/a	10	NE	No
Ens/M.Bed-FF	ALM-002-03 A	n/a	2035	1210	n/a	10	SE	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
VEL-011-01 W	Glass	2.6	0.24	0.23	0.25

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Bath/B2-3-FF	VEL-011-01 W	n/a	0	700	1140	NW	No	No

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	2400	90	NE
Garage	2400	4850	90	NE
Ldry-GF	2340	820	90	NW
Foyer/St/V-GF	2340	1840	90	SE

External wall type

Wall ID	Wall type	Solar absorbance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Bulk Insulation R2.5	No
EW-2	Single Skin Brick	0.50	Medium	No insulation	No
EW-3	Brick Veneer	0.50	Medium	Bulk Insulation R2.5	No
EW-4	Fibro Cavity Panel on Battens	0.30	Light	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)
Garage	EW-1	3085	6100	NW	500	NO
Garage	EW-2	3085	3600	NE	500	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-2	3085	1000	NW	500	YES
Garage	EW-2	3085	7200	NE	500	NO
Garage	EW-1	3085	6900	SE	500	YES
Garage	EW-1	3085	3700	SW	500	YES
Ldry-GF	EW-3	3000	2495	NW	500	YES
Ldry-GF	EW-3	3000	2300	SW	14700	YES
Mud Rm-GF	EW-3	3000	2190	NE	500	YES
Pwd/Family-GF	EW-3	3000	2090	NE	500	NO
Storage-GF	EW-3	3000	995	NE	500	YES
Bar-GF	EW-3	3000	3790	NW	500	YES
Prayer Rm-GF	EW-3	3000	1000	SW	0	YES
Prayer Rm-GF	EW-3	3000	3295	NW	500	NO
Bed 7-GF	EW-3	3000	4490	NW	500	NO
Wir/Bed 7-GF	EW-3	3000	2595	NW	500	NO
Wir/Bed 7-GF	EW-3	3000	1495	NE	500	NO
Ens/Bed 7-GF	EW-3	3000	3390	NE	500	NO
Office 2-GF	EW-3	3000	4395	NE	500	NO
Office 2-GF	EW-3	3000	4895	SE	500	YES
Games-GF	EW-3	3000	800	NE	5400	YES
Games-GF	EW-3	3000	4495	SE	500	NO
Bed 6-GF	EW-3	3000	4695	SE	500	NO
Bed 6-GF	EW-3	3000	600	SW	14900	YES
Ens/Bed 6-GF	EW-3	3000	2790	SE	500	YES
Media-GF	EW-3	3000	900	NE	12500	YES
Media-GF	EW-3	3000	4295	SE	100	NO
Foyer/St/V-GF	EW-3	3000	3790	SE	9600	NO
Sitting-GF	EW-3	3000	3895	SE	100	NO
Sitting-GF	EW-3	3000	4000	SW	100	YES
Kch/M/Fa/Di	EW-3	3000	11990	NW	2600	YES
Wip-GF	EW-3	3000	2195	NW	2800	NO
Wip-GF	EW-3	3000	9095	SW	500	YES
Pwd/Airlock-GF	EW-3	3000	2190	NW	500	YES
Rumpus-GF	EW-3	3000	3295	SE	500	YES
Rumpus-GF	EW-3	3000	3600	NE	500	YES
Rumpus-GF	EW-3	3000	8900	SE	500	NO
Rumpus-GF	EW-3	3000	700	SW	5500	YES
Bed 5-GF	EW-3	3000	3890	NW	500	NO
Ens/Bed 4-GF	EW-3	3000	2390	NW	500	NO
Bed 4-GF	EW-3	3000	2300	SW	500	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bed 4-GF	EW-3	3000	4095	NW	500	NO
Wir/Bed 4-GF	EW-3	3000	2395	NW	500	YES
Wir/Bed 4-GF	EW-3	3000	2295	SW	500	NO
Office 1-GF	EW-3	3000	4995	SE	500	YES
Office 1-GF	EW-3	3000	4695	SW	500	NO
Bed 2-FF	EW-4	2740	2300	NW	500	NO
Bed 2-FF	EW-4	2740	2500	NE	10200	YES
Bed 2-FF	EW-4	2740	2495	NW	3000	YES
Bed 2-FF	EW-4	2740	10195	SW	500	NO
Bath/B2-3-FF	EW-4	2740	2490	NW	3000	NO
Bed 3-FF	EW-4	2740	2395	NW	3000	YES
Bed 3-FF	EW-4	2740	2500	SW	10200	YES
Bed 3-FF	EW-4	2740	2300	NW	500	NO
Bed 3-FF	EW-4	2740	10195	NE	500	NO
Wil-FF	EW-4	2740	1395	NE	500	NO
Wil-FF	EW-4	2740	2795	SE	500	YES
Upp Lounge-FF	EW-4	2740	3895	NE	1000	YES
Upp Lounge-FF	EW-4	2740	5290	SW	500	NO
Master Bed-FF	EW-1	2740	7095	SE	500	NO
Master Bed-FF	EW-1	2740	4000	SW	500	NO
Master Bed-FF	EW-4	2740	2495	SW	500	NO
Hall/M.Bed-FF	EW-1	2740	1690	SE	500	NO
Ens/M.Bed-FF	EW-4	2740	2795	NE	500	NO
Ens/M.Bed-FF	EW-1	2740	900	NE	500	NO
Ens/M.Bed-FF	EW-1	2740	3195	SE	500	NO
Wir/M.Bed-FF	EW-4	2740	2800	NW	500	YES
Wir/M.Bed-FF	EW-4	2740	2795	NE	500	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		22.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		730.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation (R-value)	Added insulation	Covering
Garage	Concrete Slab on Ground 100mm	72.80	None	No Insulation	Bare

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Ldry-GF	Concrete Slab on Ground 100mm	12.30	None	No Insulation	Ceramic Tiles 8mm
Hall to Garage	Concrete Slab on Ground 100mm	2.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Mud Rm-GF	Concrete Slab on Ground 100mm	7.50	None	No Insulation	Ceramic Tiles 8mm
Pwd/Family-GF	Concrete Slab on Ground 100mm	5.30	None	No Insulation	Ceramic Tiles 8mm
Storage-GF	Concrete Slab on Ground 100mm	20.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Bar-GF	Concrete Slab on Ground 100mm	28.30	None	No Insulation	Carpet+Rubber Underlay 18mm
Prayer Rm-GF	Concrete Slab on Ground 100mm	10.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 7-GF	Concrete Slab on Ground 100mm	21.40	None	No Insulation	Carpet+Rubber Underlay 18mm
Wir/Bed 7-GF	Concrete Slab on Ground 100mm	3.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Ens/Bed 7-GF	Concrete Slab on Ground 100mm	8.50	None	No Insulation	Ceramic Tiles 8mm
Office 2-GF	Concrete Slab on Ground 100mm	21.10	None	No Insulation	Carpet+Rubber Underlay 18mm
Games-GF	Concrete Slab on Ground 100mm	21.90	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 6-GF	Concrete Slab on Ground 100mm	20.10	None	No Insulation	Carpet+Rubber Underlay 18mm
Wir/Bed 6-GF	Concrete Slab on Ground 100mm	3.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Ens/Bed 6-GF	Concrete Slab on Ground 100mm	6.40	None	No Insulation	Ceramic Tiles 8mm
Media-GF	Concrete Slab on Ground 100mm	19.60	None	No Insulation	Carpet+Rubber Underlay 18mm
Foyer/St/V-GF	Concrete Slab on Ground 100mm	58.30	None	No Insulation	Carpet+Rubber Underlay 18mm
Sitting-GF	Concrete Slab on Ground 100mm	17.90	None	No Insulation	Carpet+Rubber Underlay 18mm
Kch/M/Fa/Di	Concrete Slab on Ground 100mm	131.10	None	No Insulation	60/40 Carpet 10mm/Ceramic
Wip-GF	Concrete Slab on Ground 100mm	19.50	None	No Insulation	Ceramic Tiles 8mm
Pwd/Airlock-GF	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
Airlock-GF	Concrete Slab on Ground 100mm	1.80	None	No Insulation	Ceramic Tiles 8mm
Rumpus-GF	Concrete Slab on Ground 100mm	56.60	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 5-GF	Concrete Slab on Ground 100mm	15.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Ens/Bed 4-GF	Concrete Slab on Ground 100mm	11.90	None	No Insulation	Ceramic Tiles 8mm
Bed 4-GF	Concrete Slab on Ground 100mm	20.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Wir/Bed 4-GF	Concrete Slab on Ground 100mm	5.30	None	No Insulation	Carpet+Rubber Underlay 18mm
Office 1-GF	Concrete Slab on Ground 100mm	21.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	32.40		No Insulation	Carpet+Rubber Underlay 18mm
Bed 2-FF	Suspended Timber Floor 19mm	5.70	Totally Open	Bulk Insulation, Gap to Floor R2.5	Carpet+Rubber Underlay 18mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Wir/Bed 2-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Ens/Bed 2-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	5.80		No Insulation	Ceramic Tiles 8mm
Bath/B2-3-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	4.20		No Insulation	Ceramic Tiles 8mm
Ens/Bed 3-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	5.80		No Insulation	Ceramic Tiles 8mm
Wir/Bed 3-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bed 3-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	32.20		No Insulation	Carpet+Rubber Underlay 18mm
Bed 3-FF	Suspended Timber Floor 19mm	5.70	Totally Open	Bulk Insulation, Gap to Floor R2.5	Carpet+Rubber Underlay 18mm
Wil-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	3.70		No Insulation	Carpet+Rubber Underlay 18mm
Upp Lounge-FF/Foyer/St/V-GF	Timber Above Plasterboard 19mm	20.30		No Insulation	Carpet+Rubber Underlay 18mm
Upp Lounge-FF/Kch/M/Fa/Di	Timber Above Plasterboard 19mm	27.60		No Insulation	Carpet+Rubber Underlay 18mm
Master Bed-FF/Foyer/St/V-GF	Timber Above Plasterboard 19mm	27.40		No Insulation	Carpet+Rubber Underlay 18mm
Master Bed-FF/Sitting-GF	Timber Above Plasterboard 19mm	18.10		No Insulation	Carpet+Rubber Underlay 18mm
Hall/M.Bed-FF/Media-GF	Timber Above Plasterboard 19mm	1.50		No Insulation	Carpet+Rubber Underlay 18mm
Hall/M.Bed-FF/Foyer/St/V-GF	Timber Above Plasterboard 19mm	0.80		No Insulation	Carpet+Rubber Underlay 18mm
Dress/M.Bed-FF/Media-GF	Timber Above Plasterboard 19mm	3.30		No Insulation	Carpet+Rubber Underlay 18mm
Dress/M.Bed-FF/Foyer/St/V-GF	Timber Above Plasterboard 19mm	4.60		No Insulation	Carpet+Rubber Underlay 18mm
Ens/M.Bed-FF/Media-GF	Timber Above Plasterboard 19mm	11.50		No Insulation	Ceramic Tiles 8mm
Wir/M.Bed-FF/Media-GF	Timber Above Plasterboard 19mm	3.10		No Insulation	Carpet+Rubber Underlay 18mm
Wir/M.Bed-FF/Foyer/St/V-GF	Timber Above Plasterboard 19mm	5.60		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R2.5	No
Ldry-GF	Plasterboard	Bulk Insulation R5	No
Hall to Garage	Plasterboard	Bulk Insulation R5	No
Mud Rm-GF	Plasterboard	Bulk Insulation R5	No
Pwd/Family-GF	Plasterboard	Bulk Insulation R5	No
Storage-GF	Plasterboard	Bulk Insulation R5	No
Bar-GF	Plasterboard	Bulk Insulation R5	No
Prayer Rm-GF	Plasterboard	Bulk Insulation R5	No
Bed 7-GF	Plasterboard	Bulk Insulation R5	No
Wir/Bed 7-GF	Plasterboard	Bulk Insulation R5	No
Ens/Bed 7-GF	Plasterboard	Bulk Insulation R5	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Office 2-GF	Plasterboard	Bulk Insulation R5	No
Games-GF	Plasterboard	Bulk Insulation R5	No
Bed 6-GF	Plasterboard	Bulk Insulation R5	No
Wir/Bed 6-GF	Plasterboard	Bulk Insulation R5	No
Ens/Bed 6-GF	Plasterboard	Bulk Insulation R5	No
Media-GF	Timber Above Plasterboard	No Insulation	No
Foyer/St/V-GF	Timber Above Plasterboard	No Insulation	No
Sitting-GF	Timber Above Plasterboard	No Insulation	No
Kch/M/Fa/Di	Plasterboard	Bulk Insulation R5	No
Kch/M/Fa/Di	Timber Above Plasterboard	No Insulation	No
Wip-GF	Plasterboard	Bulk Insulation R5	No
Pwd/Airlock-GF	Plasterboard	Bulk Insulation R5	No
Airlock-GF	Plasterboard	Bulk Insulation R5	No
Rumpus-GF	Plasterboard	Bulk Insulation R5	No
Bed 5-GF	Plasterboard	Bulk Insulation R5	No
Ens/Bed 4-GF	Plasterboard	Bulk Insulation R5	No
Bed 4-GF	Plasterboard	Bulk Insulation R5	No
Wir/Bed 4-GF	Plasterboard	Bulk Insulation R5	No
Office 1-GF	Plasterboard	Bulk Insulation R5	No
Bed 2-FF	Plasterboard	Bulk Insulation R5	No
Wir/Bed 2-FF	Plasterboard	Bulk Insulation R5	No
Ens/Bed 2-FF	Plasterboard	Bulk Insulation R5	No
Bath/B2-3-FF	Plasterboard	Bulk Insulation R5	No
Ens/Bed 3-FF	Plasterboard	Bulk Insulation R5	No
Wir/Bed 3-FF	Plasterboard	Bulk Insulation R5	No
Bed 3-FF	Plasterboard	Bulk Insulation R5	No
Wil-FF	Plasterboard	Bulk Insulation R5	No
Upp Lounge-FF	Plasterboard	Bulk Insulation R5	No
Master Bed-FF	Plasterboard	Bulk Insulation R5	No
Hall/M.Bed-FF	Plasterboard	Bulk Insulation R5	No
Dress/M.Bed-FF	Plasterboard	Bulk Insulation R5	No
Ens/M.Bed-FF	Plasterboard	Bulk Insulation R5	No
Wir/M.Bed-FF	Plasterboard	Bulk Insulation R5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
Ldry-GF	5	Downlights - LED	50	Sealed
Hall to Garage	1	Downlights - LED	50	Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Mud Rm-GF	2	Downlights - LED	50	Sealed
Pwd/Family-GF	1	Downlights - LED	50	Sealed
Pwd/Family-GF	1	Exhaust Fans	300	Sealed
Storage-GF	8	Downlights - LED	50	Sealed
Bar-GF	11	Downlights - LED	50	Sealed
Prayer Rm-GF	4	Downlights - LED	50	Sealed
Bed 7-GF	9	Downlights - LED	50	Sealed
Wir/Bed 7-GF	1	Downlights - LED	50	Sealed
Ens/Bed 7-GF	2	Downlights - LED	50	Sealed
Ens/Bed 7-GF	1	Exhaust Fans	300	Sealed
Office 2-GF	8	Downlights - LED	50	Sealed
Games-GF	9	Downlights - LED	50	Sealed
Bed 6-GF	8	Downlights - LED	50	Sealed
Wir/Bed 6-GF	1	Downlights - LED	50	Sealed
Ens/Bed 6-GF	2	Downlights - LED	50	Sealed
Ens/Bed 6-GF	1	Exhaust Fans	300	Sealed
Media-GF	8	Downlights - LED	50	Sealed
Foyer/St/V-GF	24	Downlights - LED	50	Sealed
Sitting-GF	7	Downlights - LED	50	Sealed
Kch/M/Fa/Di	53	Downlights - LED	50	Sealed
Kch/M/Fa/Di	1	Exhaust Fans	300	Sealed
Wip-GF	8	Downlights - LED	50	Sealed
Pwd/Airlock-GF	2	Downlights - LED	50	Sealed
Pwd/Airlock-GF	1	Exhaust Fans	300	Sealed
Airlock-GF	1	Downlights - LED	50	Sealed
Rumpus-GF	22	Downlights - LED	50	Sealed
Bed 5-GF	6	Downlights - LED	50	Sealed
Ens/Bed 4-GF	5	Downlights - LED	50	Sealed
Ens/Bed 4-GF	1	Exhaust Fans	300	Sealed
Bed 4-GF	8	Downlights - LED	50	Sealed
Wir/Bed 4-GF	2	Downlights - LED	50	Sealed
Office 1-GF	8	Downlights - LED	50	Sealed
Bed 2-FF	15	Downlights - LED	50	Sealed
Wir/Bed 2-FF	1	Downlights - LED	50	Sealed
Ens/Bed 2-FF	2	Downlights - LED	50	Sealed
Ens/Bed 2-FF	1	Exhaust Fans	300	Sealed
Bath/B2-3-FF	1	Downlights - LED	50	Sealed
Bath/B2-3-FF	1	Exhaust Fans	300	Sealed
Ens/Bed 3-FF	2	Downlights - LED	50	Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ens/Bed 3-FF	1	Exhaust Fans	300	Sealed
Wir/Bed 3-FF	1	Downlights - LED	50	Sealed
Bed 3-FF	15	Downlights - LED	50	Sealed
Wil-FF	1	Downlights - LED	50	Sealed
Upp Lounge-FF	19	Downlights - LED	50	Sealed
Master Bed-FF	18	Downlights - LED	50	Sealed
Hall/M.Bed-FF	1	Downlights - LED	50	Sealed
Dress/M.Bed-FF	2	Downlights - LED	50	Sealed
Ens/M.Bed-FF	5	Downlights - LED	50	Sealed
Wir/M.Bed-FF	2	Downlights - LED	50	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Roof Tiles	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.85	Dark
Roof Tiles	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.85	Dark

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).