

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0006390405-01

Generated on 13 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address 4 Loch Maree Place , Vaucluse , NSW , 2030

Lot/DP 7A/393749

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* 375.0	Suburban
Unconditioned* 79.0	NatHERS climate zone
Total 454.0	56
Garage 70.0	



Accredited assessor

Name Zoran Cvetkovski

Business name Sustainability-Z

Email sustainability-z@outlook.com

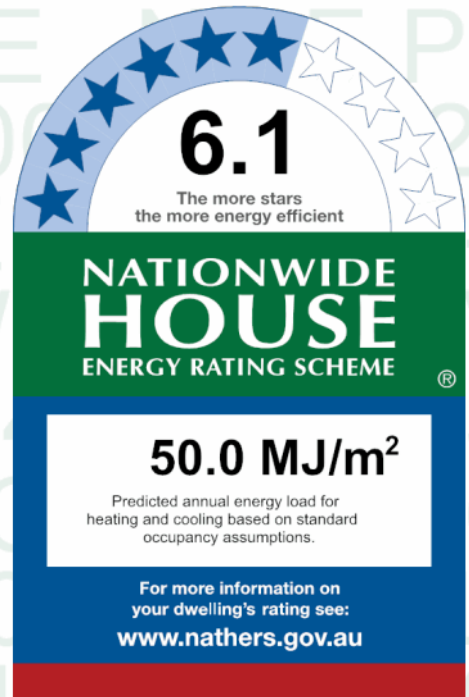
Phone 0414273176

Accreditation No. DMN/13/1641

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration not completed



Thermal performance

Heating	Cooling
27.7 MJ/m ²	22.3 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=nUXPjVqST. 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?

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.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-011-06 A	AWS-011-06 A 541/542 Al Sliding Door SG 6.38CP	4.4	0.45	0.43	0.47
AWS-013-08 A	AWS-013-08 A 541/542 Al Sliding Door DG 4SnClr/10Ar/4	3.4	0.44	0.42	0.46
AWS-005-07 A	AWS-005-07 A 514 Al Double Hung Window SG 6.38CP	4.4	0.45	0.43	0.47
AWS-066-02 A	AWS-066-02 A RES SERIES 516 FIXED WINDOW SG 638ComPlyNtl	3.9	0.47	0.45	0.49
AWS-020-01 A	AWS-020-01 A 548 HD Al French Door SG 5Clr	6.0	0.58	0.55	0.61

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-071-33 A	AWS-071-33 A RES SERIES 616 FIXED WINDOW DG 4mmLoE-366-12Ar-4mmClr	2.7	0.25	0.24	0.26

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
G.Bed-Bsm	AWS-011-06 A	n/a	2400	2735	n/a	45	E	No
Rumpus-GF	AWS-013-08 A	n/a	2750	2885	n/a	45	W	No
Rumpus-GF	AWS-013-08 A	n/a	2750	4910	n/a	45	N	No
Bed 3--1-GF	AWS-013-08 A	n/a	2750	3300	n/a	45	NE	No
Bed 2-GF	AWS-013-08 A	n/a	2750	3300	n/a	45	NE	No
M.Bed-GF	AWS-011-06 A	n/a	2750	3300	n/a	45	NE	No
M.Bed-GF	AWS-011-06 A	n/a	2750	2410	n/a	45	E	No
M.Bed-GF	AWS-011-06 A	n/a	2750	2440	n/a	10	E	No
Ens/M.Bed-GF	AWS-005-07 A	n/a	2750	780	n/a	45	N	Yes
Ens/M.Bed-GF	AWS-066-02 A	n/a	400	2250	n/a	00	E	No
Ens/M.Bed-GF	AWS-066-02 A	n/a	400	1975	n/a	00	E	No
Bed 4-GF	AWS-011-06 A	n/a	2750	2800	n/a	45	NW	No
Ens/Bed 4-GF	AWS-005-07 A	n/a	2750	550	n/a	45	SW	No
Laundry-GF	AWS-020-01 A	n/a	2750	1000	n/a	90	SW	No
Hall to Rump	AWS-066-02 A	n/a	2750	1200	n/a	00	NW	No
Entry/St-GF	AWS-066-02 A	n/a	1500	1550	n/a	00	SE	No
Ktch/Liv/Din	AWS-013-08 A	n/a	3000	5150	n/a	45	NW	No
Ktch/Liv/Din	AWS-013-08 A	n/a	3000	11535	n/a	45	NE	No
Ktch/Liv/Din	AWS-013-08 A	n/a	3000	3300	n/a	45	E	No
Ktch/Liv/Din	AWS-013-08 A	n/a	3000	3550	n/a	10	E	No
Ktch/Liv/Din	AWS-071-33 A	n/a	3000	2000	n/a	00	NW	No
Pantry-L1	AWS-071-33 A	n/a	3000	1500	n/a	00	NW	No
Pwdr-L1	AWS-005-07 A	n/a	3000	550	n/a	10	SW	No
St/Hwy-L1	AWS-066-02 A	n/a	3000	225	n/a	00	W	No
Void-L1	AWS-066-02 A	n/a	3000	400	n/a	00	NE	No
Void-L1	AWS-066-02 A	n/a	850	1550	n/a	00	SE	No
Void-L1	AWS-066-02 A	n/a	2150	2900	n/a	00	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
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-Bsm	2400	6700	90	NE
Entry/St-GF	1500	1350	90	SE
Void-L1	850	1350	90	SE

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, lined	0.50	Medium	Bulk Insulation R2	No
EW-3	Tilt up concrete, lined	0.30	Light	Bulk Insulation R2	No
EW-4	Tilt up concrete, lined	0.30	Light	Bulk Insulation R2	No
EW-5	Tilt up concrete, linedZ:24W2:11	0.30	Light	Bulk Insulation R2	No

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-6	Tilt up concrete, lined	0.50	Medium	Bulk Insulation R2	No
EW-7	Tilt up concrete, linedZ:25W2:6	0.50	Medium	Bulk Insulation R2	No
EW-8	Tilt up concrete, linedZ:25W2:7	0.30	Light	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage-Bsm	EW-1	2400	5200	NE	450	YES
Garage-Bsm	EW-1	2400	400	NW	3125	YES
Garage-Bsm	EW-1	2400	6745	NE	1400	NO
Garage-Bsm	EW-1	2400	3445	SW	100	NO
Garage-Bsm	EW-1	2400	4600	NW	100	YES
Garage-Bsm	EW-1	2400	5334	W	112	YES
G.Bed-Bsm	EW-2	2400	3245	NE	1400	NO
G.Bed-Bsm	EW-3	2400	3754	E	584	NO
G.Bed-Bsm	EW-2	2400	645	SE	1950	NO
Bath-Bsm	EW-2	2400	1890	SE	3475	YES
Cellar-Bsm	EW-2	2400	1990	SW	100	NO
Theatre-Bsm	EW-2	2550	1300	NE	3075	YES
Theatre-Bsm	EW-2	2750	3000	NE	1525	NO
Theatre-Bsm	EW-2	2400	4100	SE	300	NO
Theatre-Bsm	EW-2	2750	3000	SW	100	NO
Theatre-Bsm	EW-2	2550	2000	SW	100	NO
Theatre-Bsm	EW-2	2400	1945	SW	100	NO
Hwy-Bsm	EW-2	2400	4890	SW	100	NO
Stairs/Hall-Bsm	EW-2	2400	1690	SW	100	NO
Rumpus-GF	EW-4	2750	4472	W	112	NO
Rumpus-GF	EW-4	2750	4999	N	1152	NO
Rumpus-GF	EW-4	2750	1100	SW	4700	YES
Bed 3--1-GF	EW-4	2750	3390	NE	1300	NO
Bed 2-GF	EW-4	2750	3390	NE	1300	NO
M.Bed-GF	EW-4	2750	3245	NE	1300	NO
M.Bed-GF	EW-4	2750	2419	E	1008	YES
M.Bed-GF	EW-4	2750	2445	E	875	YES
Ens/M.Bed-GF	EW-4	2750	726	N	6693	YES
Ens/M.Bed-GF	EW-4	2750	2263	E	177	YES
Ens/M.Bed-GF	EW-4	2750	2140	E	250	YES
Ens/M.Bed-GF	EW-4	2750	1245	SE	1700	YES
Bed 4-GF	EW-4	2750	4045	SW	100	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bed 4-GF	EW-4	2750	3045	NW	1000	NO
Ens/Bed 4-GF	EW-4	2750	1690	SW	100	NO
Laundry-GF	EW-4	2750	1690	SW	100	NO
Hall to Rump	EW-4	2750	1390	NW	1000	YES
Stairs/Hwy-GF	EW-3	400	4790	SW	0	NO
Stairs/Hwy-GF	EW-5	2350	4790	SW	100	NO
Entry/St-GF	EW-4	2750	200	NE	1475	YES
Entry/St-GF	EW-6	1200	3100	SE	0	NO
Entry/St-GF	EW-7	1550	3100	SE	100	NO
Entry/St-GF	EW-3	600	5845	SW	0	NO
Entry/St-GF	EW-8	2150	5845	SW	100	NO
Ktch/Liv/Din	EW-4	3000	5300	NW	2350	YES
Ktch/Liv/Din	EW-4	3000	11600	NE	2500	NO
Ktch/Liv/Din	EW-4	3000	3329	E	1643	YES
Ktch/Liv/Din	EW-4	3000	3607	E	1697	YES
Ktch/Liv/Din	EW-4	3000	1445	S	6340	YES
Ktch/Liv/Din	EW-4	3000	1945	NW	100	NO
Ktch/Liv/Din	EW-4	3000	900	NE	6825	YES
Pantry-L1	EW-4	3000	4545	SW	100	NO
Pantry-L1	EW-4	3000	1845	NW	100	NO
Pwdr-L1	EW-4	3000	2090	SW	100	YES
St/Hwy-L1	EW-4	3000	445	W	285	YES
St/Hwy-L1	EW-4	3000	8845	SW	100	NO
Void-L1	EW-4	3000	3345	NE	2775	YES
Void-L1	EW-4	3000	3100	SE	2400	NO
Void-L1	EW-4	3000	3345	SW	100	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		37.00	Bulk Insulation, No Air Gap R2
IW-2 - Single Skin Brick		354.00	No insulation
IW-3 - Tilt Concrete		54.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage-Bsm	Concrete Slab on Ground 100mm	69.90	None	No Insulation	Bare

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
G.Bed-Bsm	Concrete Slab on Ground 100mm	16.10	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath-Bsm	Concrete Slab on Ground 100mm	8.60	None	No Insulation	Ceramic Tiles 8mm
Cellar-Bsm	Concrete Slab on Ground 100mm	5.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Theatre-Bsm	Concrete Slab on Ground 100mm	28.30	None	No Insulation	Carpet+Rubber Underlay 18mm
Lift-Bsm	Concrete Slab on Ground 100mm	2.10	None	No Insulation	Carpet+Rubber Underlay 18mm
Hwy-Bsm	Concrete Slab on Ground 100mm	17.40	None	No Insulation	Carpet+Rubber Underlay 18mm
Stairs/Hall-Bsm	Concrete Slab on Ground 100mm	10.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Rumpus-GF/Garage-Bsm	Concrete Above Plasterboard 150mm	16.00		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Rumpus-GF	Suspended Concrete Slab 150mm	2.80	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Bed 3--1-GF/Garage-Bsm	Concrete Above Plasterboard 150mm	9.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 3--1-GF	Suspended Concrete Slab 150mm	4.30	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Ens/Bed3--1-GF/Garage-Bsm	Concrete Above Plasterboard 100mm	5.30		Bulk Insulation R2	Ceramic Tiles 8mm
Bed 3--1-GF/Garage-Bsm	Concrete Above Plasterboard 100mm	2.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 2-GF/Garage-Bsm	Concrete Above Plasterboard 150mm	9.20		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 2-GF/G.Bed-Bsm	Concrete Above Plasterboard 150mm	0.50		No Insulation	Carpet+Rubber Underlay 18mm
Bed 2-GF	Suspended Concrete Slab 150mm	4.30	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Ens/Bed 2-GF/Garage-Bsm	Concrete Above Plasterboard 100mm	5.00		Bulk Insulation R2	Ceramic Tiles 8mm
Hall/Bed2-GF/Garage-Bsm	Concrete Above Plasterboard 100mm	2.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
M.Bed-GF/G.Bed-Bsm	Concrete Above Plasterboard 150mm	13.50		No Insulation	Carpet+Rubber Underlay 18mm
M.Bed-GF/Bath-Bsm	Concrete Above Plasterboard 150mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
M.Bed-GF	Suspended Concrete Slab 150mm	7.70	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Wir/M.Bed-GF/G.Bed-Bsm	Concrete Above Plasterboard 100mm	1.80		No Insulation	Carpet+Rubber Underlay 18mm
Wir/M.Bed-GF/Bath-Bsm	Concrete Above Plasterboard 100mm	6.00		No Insulation	Carpet+Rubber Underlay 18mm
Wir/M.Bed-GF/Stairs/Hall-Bsm	Concrete Above Plasterboard 100mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
Ens/M.Bed-GF/Theatre-Bsm	Concrete Above Plasterboard 100mm	3.50		No Insulation	Ceramic Tiles 8mm
Ens/M.Bed-GF	Concrete Slab on Ground 100mm	6.50	None	No Insulation	Ceramic Tiles 8mm
Bed 4-GF/Garage-Bsm	Concrete Above Plasterboard 100mm	7.20		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 4-GF/Cellar-Bsm	Concrete Above Plasterboard 100mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bed 4-GF/Hwy-Bsm	Concrete Above Plasterboard 100mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
Ens/Bed 4-GF/Hwy-Bsm	Concrete Above Plasterboard 100mm	4.80		No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Laundry-GF/Hwy-Bsm	Concrete Above Plasterboard 100mm	5.10		No Insulation	Ceramic Tiles 8mm
Lift-GF/Lift-Bsm	Concrete Above Plasterboard 100mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
Hall to Rump/Garage-Bsm	Concrete Above Plasterboard 100mm	2.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall to Rump/Cellar-Bsm	Concrete Above Plasterboard 100mm	1.20		No Insulation	Carpet+Rubber Underlay 18mm
Hall to Rump/Hwy-Bsm	Concrete Above Plasterboard 100mm	4.00		No Insulation	Carpet+Rubber Underlay 18mm
Hall to Rump/Stairs/Hall-Bsm	Concrete Above Plasterboard 100mm	1.40		No Insulation	Carpet+Rubber Underlay 18mm
Stairs/Hwy-GF/Theatre-Bsm	Concrete Above Plasterboard 100mm	7.70		No Insulation	Carpet+Rubber Underlay 18mm
Stairs/Hwy-GF/Hwy-Bsm	Concrete Above Plasterboard 100mm	2.40		No Insulation	Carpet+Rubber Underlay 18mm
Stairs/Hwy-GF/Stairs/Hall-Bsm	Concrete Above Plasterboard 100mm	6.90		No Insulation	Carpet+Rubber Underlay 18mm
Entry/St-GF/Theatre-Bsm	Concrete Above Plasterboard 100mm	16.50		No Insulation	Carpet+Rubber Underlay 18mm
Entry/St-GF	Concrete Slab on Ground 100mm	0.60	None	No Insulation	Carpet+Rubber Underlay 18mm
Ktch/Liv/Din/Rumpus-GF	Concrete Above Plasterboard 150mm	6.90		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Bed 3--1-GF	Concrete Above Plasterboard 150mm	10.10		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Ens/Bed3--1-GF	Concrete Above Plasterboard 150mm	5.70		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Bed 3--1-GF	Concrete Above Plasterboard 150mm	3.30		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Bed 2-GF	Concrete Above Plasterboard 150mm	10.00		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Ens/Bed 2-GF	Concrete Above Plasterboard 150mm	5.50		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Hall/Bed2-GF	Concrete Above Plasterboard 150mm	3.60		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/M.Bed-GF	Concrete Above Plasterboard 150mm	17.00		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Wir/M.Bed-GF	Concrete Above Plasterboard 150mm	10.40		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Ens/M.Bed-GF	Concrete Above Plasterboard 150mm	1.90		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Bed 4-GF	Concrete Above Plasterboard 150mm	3.20		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Ens/Bed 4-GF	Concrete Above Plasterboard 150mm	1.40		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Laundry-GF	Concrete Above Plasterboard 150mm	1.40		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Hall to Rump	Concrete Above Plasterboard 150mm	10.40		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din/Stairs/Hwy-GF	Concrete Above Plasterboard 150mm	5.10		No Insulation	60/40 Carpet 10mm/Ceramic
Ktch/Liv/Din	Suspended Concrete Slab 150mm	1.70	Totally Open	Bulk Insulation in Contact with Floor R2.5	60/40 Carpet 10mm/Ceramic
Pantry-L1/Bed 4-GF	Concrete Above Plasterboard 150mm	6.70		No Insulation	Ceramic Tiles 8mm
Pantry-L1	Suspended Concrete Slab 150mm	1.60	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Pwdr-L1/Bed 4-GF	Concrete Above Plasterboard 150mm	0.70		No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Pwdr-L1/Ens/Bed 4-GF	Concrete Above Plasterboard 150mm	3.20		No Insulation	Ceramic Tiles 8mm
Lift-L1/Lift-GF	Concrete Above Plasterboard 150mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
St/Hwy-L1/Laundry-GF	Concrete Above Plasterboard 150mm	3.90		No Insulation	Carpet+Rubber Underlay 18mm
St/Hwy-L1/Stairs/Hwy-GF	Concrete Above Plasterboard 150mm	12.20		No Insulation	Carpet+Rubber Underlay 18mm
St/Hwy-L1/Entry/St-GF	Concrete Above Plasterboard 150mm	6.70		No Insulation	Carpet+Rubber Underlay 18mm
Void-L1/Entry/St-GF	Concrete Above Plasterboard 150mm	10.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage-Bsm	Concrete, Plasterboard	No insulation	No
Garage-Bsm	Concrete Above Plasterboard	Bulk Insulation R2	No
G.Bed-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
G.Bed-Bsm	Concrete Above Plasterboard	No Insulation	No
Bath-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
Bath-Bsm	Concrete Above Plasterboard	No Insulation	No
Cellar-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
Cellar-Bsm	Concrete Above Plasterboard	No Insulation	No
Theatre-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
Theatre-Bsm	Concrete Above Plasterboard	No Insulation	No
Lift-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
Lift-Bsm	Concrete Above Plasterboard	No Insulation	No
Hwy-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
Hwy-Bsm	Concrete Above Plasterboard	No Insulation	No
Stairs/Hall-Bsm	Concrete, Plasterboard	Bulk Insulation R3.5	No
Stairs/Hall-Bsm	Concrete Above Plasterboard	No Insulation	No
Rumpus-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Rumpus-GF	Concrete Above Plasterboard	No Insulation	No
Bed 3--1-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Bed 3--1-GF	Concrete Above Plasterboard	No Insulation	No
Ens/Bed3--1-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Ens/Bed3--1-GF	Concrete Above Plasterboard	No Insulation	No
Bed 3--1-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Bed 3--1-GF	Concrete Above Plasterboard	No Insulation	No
Bed 2-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Bed 2-GF	Concrete Above Plasterboard	No Insulation	No
Ens/Bed 2-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Ens/Bed 2-GF	Concrete Above Plasterboard	No Insulation	No
Hall/Bed2-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Hall/Bed2-GF	Concrete Above Plasterboard	No Insulation	No
M.Bed-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
M.Bed-GF	Concrete Above Plasterboard	No Insulation	No
Wir/M.Bed-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Wir/M.Bed-GF	Concrete Above Plasterboard	No Insulation	No
Ens/M.Bed-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Ens/M.Bed-GF	Concrete Above Plasterboard	No Insulation	No
Bed 4-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Bed 4-GF	Concrete Above Plasterboard	No Insulation	No
Ens/Bed 4-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Ens/Bed 4-GF	Concrete Above Plasterboard	No Insulation	No
Laundry-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Laundry-GF	Concrete Above Plasterboard	No Insulation	No
Lift-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Lift-GF	Concrete Above Plasterboard	No Insulation	No
Hall to Rump	Concrete, Plasterboard	Bulk Insulation R3.5	No
Hall to Rump	Concrete Above Plasterboard	No Insulation	No
Stairs/Hwy-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Stairs/Hwy-GF	Concrete Above Plasterboard	No Insulation	No
Entry/St-GF	Concrete, Plasterboard	Bulk Insulation R3.5	No
Entry/St-GF	Concrete Above Plasterboard	No Insulation	No
Ktch/Liv/Din	Concrete, Plasterboard	Bulk Insulation R3.5	No
Pantry-L1	Concrete, Plasterboard	Bulk Insulation R3.5	No
Pwdr-L1	Concrete, Plasterboard	Bulk Insulation R3.5	No
Lift-L1	Concrete, Plasterboard	Bulk Insulation R3.5	No
St/Hwy-L1	Concrete, Plasterboard	Bulk Insulation R3.5	No
Void-L1	Concrete, Plasterboard	Bulk Insulation R3.5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
G.Bed-Bsm	4	Downlights - LED	50	Sealed
Bath-Bsm	2	Downlights - LED	50	Sealed
Bath-Bsm	1	Exhaust Fans	300	Sealed
Cellar-Bsm	2	Downlights - LED	50	Sealed
Theatre-Bsm	7	Downlights - LED	50	Sealed
Lift-Bsm	1	Downlights - LED	50	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Hwy-Bsm	4	Downlights - LED	50	Sealed
Stairs/Hall-Bsm	3	Downlights - LED	50	Sealed
Rumpus-GF	5	Downlights - LED	50	Sealed
Bed 3--1-GF	3	Downlights - LED	50	Sealed
Ens/Bed3--1-GF	1	Downlights - LED	50	Sealed
Bed 3--1-GF	1	Downlights - LED	50	Sealed
Bed 2-GF	3	Downlights - LED	50	Sealed
Ens/Bed 2-GF	1	Downlights - LED	50	Sealed
Hall/Bed2-GF	1	Downlights - LED	50	Sealed
M.Bed-GF	6	Downlights - LED	50	Sealed
Wir/M.Bed-GF	2	Downlights - LED	50	Sealed
Ens/M.Bed-GF	2	Downlights - LED	50	Sealed
Bed 4-GF	3	Downlights - LED	50	Sealed
Ens/Bed 4-GF	1	Downlights - LED	50	Sealed
Laundry-GF	1	Downlights - LED	50	Sealed
Lift-GF	1	Downlights - LED	50	Sealed
Hall to Rump	2	Downlights - LED	50	Sealed
Stairs/Hwy-GF	4	Downlights - LED	50	Sealed
Entry/St-GF	4	Downlights - LED	50	Sealed
Ktch/Liv/Din	24	Downlights - LED	50	Sealed
Ktch/Liv/Din	1	Exhaust Fans	300	Sealed
Pantry-L1	3	Downlights - LED	50	Sealed
Pwdr-L1	1	Downlights - LED	50	Sealed
Lift-L1	1	Downlights - LED	50	Sealed
St/Hwy-L1	6	Downlights - LED	50	Sealed
Void-L1	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
Waterproofing Membrane	No Insulation, Only an Air Gap	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).