

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0005460746-01

Generated on 03 Dec 2020 using BERS Pro v4.4.0.2 (3.21)

Property

Address 2 Cullen Street , Forestville , NSW , 2087
Lot/DP 1/758421
NCC Class* 1A
Type New Dwelling

Plans

Main Plan RPDC
Prepared by SH

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 398.0	Suburban
Unconditioned* 118.0	NatHERS climate zone
Total 516.0	56
Garage 91.0	



Accredited assessor

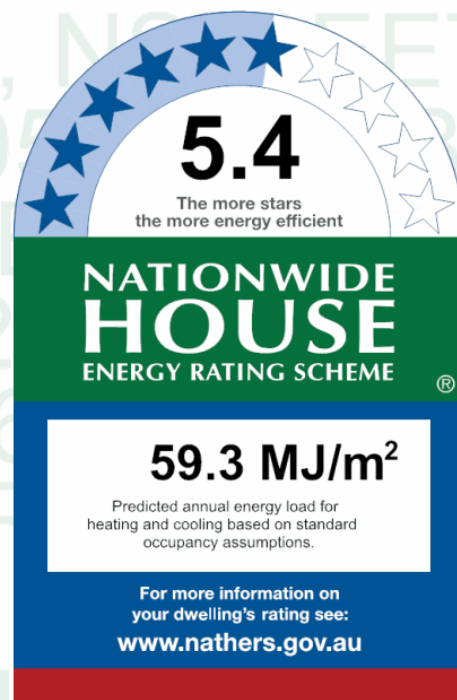
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Assessor Accrediting Organisation Design Matters National
Declaration of interest Declaration not completed

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
35.4	23.9
MJ/m²	MJ/m²

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



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

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
DOW-002-01 A	DOW-002-01 A Elite Al Awning Window SG 3Clr	6.4	0.65	0.62	0.68
DOW-002-03 A	DOW-002-03 A Elite Al Awning Window SG 4EA	4.8	0.54	0.51	0.57
DOW-021-01 B	DOW-021-01 B Thermally Broken Aluminium Awning Window DG 4Clr/12Ar/4LE	2.0	0.52	0.49	0.55
DOW-025-01 B	DOW-025-01 B TB Aluminium Sliding Door DG 5Clr/12Ar/5ET	2.0	0.56	0.53	0.59
DOW-023-01 B	DOW-023-01 B TB Al Fixed-DG with TPS Spacer 4Clr/12Ar/4ET	1.8	0.60	0.57	0.63

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
DOW-017-04 A	DOW-017-04 A Aluminium French Door DG 6.38CPClr/12/4	3.5	0.45	0.43	0.47

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	DOW-002-01 A	n/a	1300	2200	n/a	30	SE	No
Laundry	DOW-002-03 A	n/a	1300	2200	n/a	30	SE	No
Bath Bass	DOW-002-03 A	n/a	2000	900	n/a	30	SE	No
Bedroom 1	DOW-021-01 B	n/a	2000	3000	n/a	15	SW	No
Bedroom 2	DOW-021-01 B	n/a	2000	3000	n/a	15	SW	No
Media Bass	DOW-021-01 B	n/a	1300	2200	n/a	30	NW	No
Snooker	DOW-025-01 B	n/a	2200	3000	n/a	60	SW	No
Bedroom 3	DOW-021-01 B	n/a	1300	2200	n/a	30	NE	No
E/S Bed 3	DOW-002-03 A	n/a	2000	900	n/a	45	NW	No
Lounge/Dining	DOW-021-01 B	n/a	1300	2200	n/a	30	NE	No
Lounge/Dining	DOW-021-01 B	n/a	2000	900	n/a	45	SE	No
Lounge/Dining	DOW-021-01 B	n/a	2000	900	n/a	45	SE	No
Lounge/Dining	DOW-021-01 B	n/a	2000	900	n/a	45	NE	No
Lounge/Dining	DOW-021-01 B	n/a	2000	3000	n/a	15	SE	No
Lounge/Dining	DOW-025-01 B	n/a	2500	3000	n/a	60	SW	No
Kitchen	DOW-021-01 B	n/a	1300	2200	n/a	30	SE	No
Bath GF	DOW-002-03 A	n/a	600	1200	n/a	90	SE	No
Bedroom 4	DOW-021-01 B	n/a	2000	3000	n/a	15	SW	No
E/S Bed 4	DOW-002-03 A	n/a	600	1200	n/a	90	SE	No
HWY GF	DOW-025-01 B	n/a	2500	3000	n/a	60	NW	No
Family	DOW-025-01 B	n/a	2500	3000	n/a	60	SW	No
Family	DOW-025-01 B	n/a	2500	3000	n/a	60	NE	No
Bedroom 5	DOW-021-01 B	n/a	2000	3000	n/a	15	SW	No
Bedroom 5	DOW-021-01 B	n/a	2000	900	n/a	45	NW	No
Bedroom 6	DOW-021-01 B	n/a	2000	900	n/a	45	NW	No
Bedroom 6	DOW-021-01 B	n/a	2000	900	n/a	45	NW	No
Bedroom 6	DOW-021-01 B	n/a	1300	2200	n/a	30	SE	No
Bedroom 6	DOW-021-01 B	n/a	1300	2200	n/a	30	SE	No
E/S Bed 6	DOW-002-03 A	n/a	2000	900	n/a	45	NW	No
WC FF	DOW-002-03 A	n/a	600	1200	n/a	90	NW	No
Sun Room	DOW-023-01 B	n/a	1600	900	n/a	00	NE	No
Sun Room	DOW-023-01 B	n/a	1600	900	n/a	00	NE	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Sun Room	DOW-025-01 B	n/a	2200	1800	n/a	45	NE	No
Sun Room	DOW-023-01 B	n/a	1600	900	n/a	00	NE	No
Sun Room	DOW-023-01 B	n/a	1600	900	n/a	00	NE	No
Sun Room	DOW-021-01 B	n/a	2000	900	n/a	45	SE	No
Sun Room	DOW-021-01 B	n/a	2000	900	n/a	45	SE	No
Sun Room	DOW-025-01 B	n/a	2200	3000	n/a	60	SW	No
Sun Room	DOW-017-04 A	n/a	2100	820	n/a	90	SE	Yes
Sun Room	DOW-023-01 B	n/a	2000	800	n/a	00	SW	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	2100	2500	90	NE

Location	Height (mm)	Width (mm)	Opening %	Orientation
Laundry	2400	820	90	SE
Lounge/Dining	2400	1500	90	NE

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	No insulation	No
EW-2	Cavity Brick	0.50	Medium	No insulation	No
EW-3	Cavity Brick	0.50	Medium	Foil Sided Bubble Wrap, Anti-glare one side	No
EW-4	AAC 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)
Garage	EW-1	1800	5745	NW	0	NO
Garage	EW-1	600	5745	NW	100	NO
Garage	EW-2	2400	6400	NE	1800	NO
Garage	EW-2	2400	3300	NE	600	NO
Garage	EW-2	2400	5800	SE	100	YES
Garage	EW-2	2400	1700	NE	100	YES
Garage	EW-2	2400	3900	SE	300	YES
Cellar	EW-3	2400	4990	NW	100	NO
Laundry	EW-3	2400	2045	NE	100	YES
Laundry	EW-3	2400	3345	SE	300	NO
Bath Bass	EW-3	2400	3390	SE	300	NO
Bedroom 1	EW-3	2400	4045	NW	100	NO
Bedroom 1	EW-3	2400	4045	SW	3100	NO
Bedroom 2	EW-3	2400	4245	SE	100	NO
Bedroom 2	EW-3	2400	4645	SW	3100	NO
Media Bass	EW-3	2400	5790	NW	400	NO
Snooker	EW-3	2400	4590	SW	3100	NO
Bedroom 3	EW-4	2700	3995	NW	200	NO
Bedroom 3	EW-4	2700	3895	NE	600	NO
E/S Bed 3	EW-4	2700	2890	NW	500	NO
Lounge/Dining	EW-4	2700	5795	NE	600	NO
Lounge/Dining	EW-4	2700	5800	SE	300	YES
Lounge/Dining	EW-4	2700	1700	NE	300	YES
Lounge/Dining	EW-4	2700	3895	SE	300	YES
Lounge/Dining	EW-4	2700	3395	SW	100	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen	EW-4	2700	2100	NE	300	YES
Kitchen	EW-4	2700	3695	SE	300	NO
Bath GF	EW-4	2700	1590	SE	300	NO
Bedroom 4	EW-4	2700	4295	SE	100	NO
Bedroom 4	EW-4	2700	4195	SW	3200	NO
E/S Bed 4	EW-4	2700	1590	SE	300	NO
HWY GF	EW-4	2700	5090	NW	100	YES
Family	EW-4	2700	5190	SW	3200	NO
Family	EW-4	2700	3390	NE	100	YES
Bedroom 5	EW-4	2700	4095	SW	3200	NO
Bedroom 5	EW-4	2700	5095	NW	100	NO
Bedroom 6	EW-4	2700	5090	NW	500	NO
Bedroom 6	EW-4	2700	5095	SE	100	YES
E/S Bed 6	EW-4	2700	3790	NW	500	NO
Lift FF	EW-4	2400	1395	NW	100	YES
Lift FF	EW-4	2400	1495	SW	300	NO
Stairs FF	EW-4	2400	2295	NW	100	NO
Stairs FF	EW-4	2400	1700	SW	100	YES
WC FF	EW-4	2400	1690	NW	100	NO
Sun Room	EW-4	2400	4095	NW	100	NO
Sun Room	EW-4	2400	8600	NE	500	NO
Sun Room	EW-4	2400	5600	SE	300	NO
Sun Room	EW-4	2400	4400	SW	4600	YES
Sun Room	EW-4	2400	3900	SE	6300	YES
Sun Room	EW-4	2400	995	SW	300	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		47.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Single Skin Brick		131.00	No insulation
IW-3 - Cavity wall, direct fix plasterboard, single gap		218.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	91.20	None	No Insulation	Bare
Lift/Bass	Concrete Slab on Ground 100mm	1.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Cellar	Concrete Slab on Ground 100mm	11.50	None	No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Laundry	Concrete Slab on Ground 100mm	6.80	None	No Insulation	Ceramic Tiles 8mm
Bath Bass	Concrete Slab on Ground 100mm	11.40	None	No Insulation	Ceramic Tiles 8mm
Sauna	Concrete Slab on Ground 100mm	3.90	None	No Insulation	Ceramic Tiles 8mm
HWY to Laundry	Concrete Slab on Ground 100mm	3.00	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1	Concrete Slab on Ground 100mm	16.40	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	19.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Media Bass	Concrete Slab on Ground 100mm	23.40	None	No Insulation	Carpet+Rubber Underlay 18mm
Snooker	Concrete Slab on Ground 100mm	41.50	None	No Insulation	Carpet+Rubber Underlay 18mm
HWY Bass	Concrete Slab on Ground 100mm	13.30	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Concrete Above Plasterboard 100mm	15.20		Bulk Insulation R2.5	Carpet 10mm
WIR Bed 3/Garage	Concrete Above Plasterboard 100mm	2.90		Bulk Insulation R2.5	Carpet 10mm
E/S Bed 3/Garage	Concrete Above Plasterboard 100mm	3.50		Bulk Insulation R2.5	Carpet 10mm
E/S Bed 3/Cellar	Concrete Above Plasterboard 100mm	1.10		No Insulation	Carpet 10mm
Lounge/Dining/Garage	Concrete Above Plasterboard 100mm	60.10		Bulk Insulation R2.5	Carpet 10mm
Lounge/Dining/HWY Bass	Concrete Above Plasterboard 100mm	12.80		No Insulation	Carpet 10mm
Kitchen/Garage	Concrete Above Plasterboard 100mm	4.30		Bulk Insulation R2.5	Carpet 10mm
Kitchen/Laundry	Concrete Above Plasterboard 100mm	6.90		No Insulation	Carpet 10mm
Kitchen/Bath Bass	Concrete Above Plasterboard 100mm	1.20		No Insulation	Carpet 10mm
Kitchen/HWY to Laundry	Concrete Above Plasterboard 100mm	2.70		No Insulation	Carpet 10mm
Bath GF/Bath Bass	Concrete Above Plasterboard 100mm	4.30		No Insulation	Carpet 10mm
Bedroom 4/Sauna	Concrete Above Plasterboard 100mm	1.90		No Insulation	Carpet 10mm
Bedroom 4/Bedroom 2	Concrete Above Plasterboard 100mm	17.60		No Insulation	Carpet 10mm
E/S Bed 4/Bath Bass	Concrete Above Plasterboard 100mm	3.40		No Insulation	Carpet 10mm
E/S Bed 4/Sauna	Concrete Above Plasterboard 100mm	1.00		No Insulation	Carpet 10mm
HWY GF/Garage	Concrete Above Plasterboard 100mm	1.90		Bulk Insulation R2.5	Carpet 10mm
HWY GF/Bath Bass	Concrete Above Plasterboard 100mm	2.40		No Insulation	Carpet 10mm
HWY GF/Sauna	Concrete Above Plasterboard 100mm	0.80		No Insulation	Carpet 10mm
HWY GF/HWY to Laundry	Concrete Above Plasterboard 100mm	0.60		No Insulation	Carpet 10mm
HWY GF/Snooker	Concrete Above Plasterboard 100mm	5.10		No Insulation	Carpet 10mm
Family/Bedroom 2	Concrete Above Plasterboard 100mm	2.10		No Insulation	Carpet 10mm
Family/Snooker	Concrete Above Plasterboard 100mm	23.40		No Insulation	Carpet 10mm
Bedroom 5/Bedroom 1	Concrete Above Plasterboard 100mm	16.50		No Insulation	Carpet 10mm
Bedroom 5/Media Bass	Concrete Above Plasterboard 100mm	4.00		No Insulation	Carpet 10mm
Bedroom 6/Cellar	Concrete Above Plasterboard 100mm	2.30		No Insulation	Carpet 10mm
Bedroom 6/Media Bass	Concrete Above Plasterboard 100mm	19.70		No Insulation	Carpet 10mm
Lift GF/Lift/Bass	Concrete Above Plasterboard 100mm	1.80		No Insulation	Carpet 10mm
E/S Bed 6/Cellar	Concrete Above Plasterboard 100mm	8.20		No Insulation	Carpet 10mm
Lift FF/Lift GF	AAC Above Plasterboard 100mm	2.00		No Insulation	Carpet 10mm
Stairs FF/Lounge/Dining	AAC Above Plasterboard 19mm	6.20		No Insulation	Carpet 10mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
WC FF/WIR Bed 3	AAC Above Plasterboard 19mm	2.80		No Insulation	Ceramic Tiles 8mm
WC FF/E/S Bed 3	AAC Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
Sun Room/Bedroom 3	AAC Above Plasterboard 19mm	11.10		No Insulation	Carpet 10mm
Sun Room/Lounge/Dining	AAC Above Plasterboard 19mm	37.10		No Insulation	Carpet 10mm

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
Lift/Bass	Concrete Above Plasterboard	No Insulation	No
Cellar	Concrete Above Plasterboard	No Insulation	No
Laundry	Concrete Above Plasterboard	No Insulation	No
Bath Bass	Concrete Above Plasterboard	No Insulation	No
Sauna	Concrete Above Plasterboard	No Insulation	No
HWY to Laundry	Concrete Above Plasterboard	No Insulation	No
Bedroom 1	Concrete Above Plasterboard	No Insulation	No
Bedroom 2	Concrete Above Plasterboard	No Insulation	No
Media Bass	Concrete Above Plasterboard	No Insulation	No
Snooker	Concrete, Plasterboard	Bulk Insulation R4	No
Snooker	Concrete Above Plasterboard	No Insulation	No
HWY Bass	Concrete, Plasterboard	Bulk Insulation R4	No
HWY Bass	Concrete Above Plasterboard	No Insulation	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 3	AAC Above Plasterboard	No Insulation	No
WIR Bed 3	AAC Above Plasterboard	No Insulation	No
E/S Bed 3	Plasterboard	Bulk Insulation R4	No
E/S Bed 3	AAC Above Plasterboard	No Insulation	No
Lounge/Dining	Plasterboard	Bulk Insulation R4	No
Lounge/Dining	AAC Above Plasterboard	No Insulation	No
Kitchen	Plasterboard	Bulk Insulation R4	No
Bath GF	Plasterboard	Bulk Insulation R4	No
Bedroom 4	Plasterboard	Bulk Insulation R4	No
E/S Bed 4	Plasterboard	Bulk Insulation R4	No
HWY GF	Plasterboard	Bulk Insulation R4	No
Family	Plasterboard	Bulk Insulation R4	No
Bedroom 5	Plasterboard	Bulk Insulation R4	No
Bedroom 6	Plasterboard	Bulk Insulation R4	No
Lift GF	AAC Above Plasterboard	No Insulation	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
E/S Bed 6	Plasterboard	Bulk Insulation R4	No
Lift FF	Plasterboard	Bulk Insulation R4	No
Stairs FF	Plasterboard	Bulk Insulation R4	No
WC FF	Plasterboard	Bulk Insulation R4	No
Sun Room	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
Lift/Bass	1	Downlights - LED	50	Sealed
Cellar	4	Downlights - LED	50	Sealed
Laundry	2	Downlights - LED	50	Sealed
Bath Bass	4	Downlights - LED	50	Sealed
Sauna	2	Downlights - LED	50	Sealed
HWY to Laundry	1	Downlights - LED	50	Sealed
Bedroom 1	5	Downlights - LED	50	Sealed
Bedroom 2	6	Downlights - LED	50	Sealed
Media Bass	7	Downlights - LED	50	Sealed
Snooker	14	Downlights - LED	50	Sealed
HWY Bass	4	Downlights - LED	50	Sealed
Bedroom 3	4	Downlights - LED	50	Sealed
WIR Bed 3	1	Downlights - LED	50	Sealed
E/S Bed 3	2	Downlights - LED	50	Sealed
Lounge/Dining	18	Downlights - LED	50	Sealed
Kitchen	4	Downlights - LED	50	Sealed
Bath GF	2	Downlights - LED	50	Sealed
Bedroom 4	5	Downlights - LED	50	Sealed
E/S Bed 4	2	Downlights - LED	50	Sealed
HWY GF	3	Downlights - LED	50	Sealed
Family	7	Downlights - LED	50	Sealed
Bedroom 5	6	Downlights - LED	50	Sealed
Bedroom 6	6	Downlights - LED	50	Sealed
Lift GF	1	Downlights - LED	50	Sealed
E/S Bed 6	3	Downlights - LED	50	Sealed
Lift FF	1	Downlights - LED	50	Sealed
Stairs FF	2	Downlights - LED	50	Sealed
WC FF	2	Downlights - LED	50	Sealed
Sun Room	13	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
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).