Nationwide House Energy Rating Scheme
NatHERS Certificate

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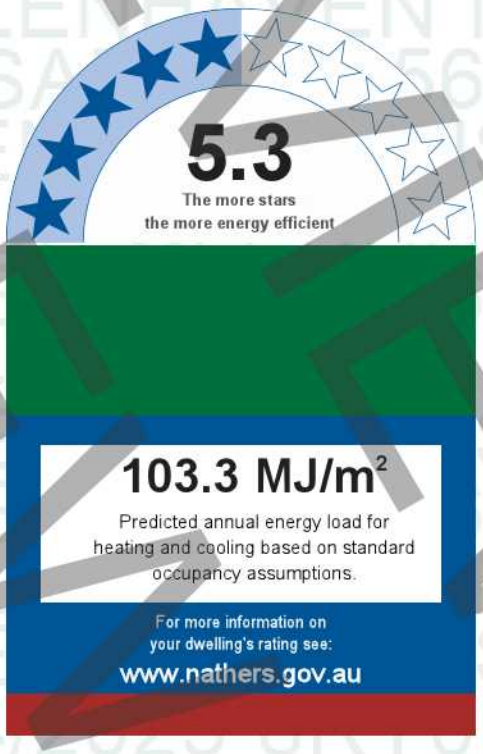

Property

Address	82 Fingal Avenue, Glenhaven, NSW, 2156
Lot/DP	2/-/DP1263749
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	CC 301 Rev C 24.09.2024
Prepared by	Daniel Siric Architects

Construction and environment

Assessed floor area (m²)*	
Conditioned*	455.9
Unconditioned*	70.1
Total	526
Garage	50.5

Exposure type
suburban

NatHERS climate zone
28 Richmond

Thermal performance

Heating	Cooling
48.3 MJ/m²	55 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.

Accredited assessor

Name	Tania Hannaford
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Accreditation No.	DMN/21/2023
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit When using either link, ensure you are visiting www.FR5.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.

* Refer to glossary.

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

This certificate is generated based on

* for construction documentation (Tech note 3.3.2)

The following default specifications (Tech note 3.9)

* Default window from the NatHERS default window library with the specified opening type

* Colours - Ceiling - Medium (Tech note 9.3)

* Ceiling penetrations in accordance with Table 6 (Tech note 9.6) (note, no downlights specified or modelled)

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-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.6
ALM-002-04 A	Aluminium B SG Low Solar Gain Low-E	5.6	0.41	0.39	0.43
ALM-001-04 A	Aluminium A SG Low Solar Gain Low-E	5.6	0.36	0.34	0.38
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74

Custom* windows

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

* Refer to glossary.

Window and glazed door *Schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Basement Carpark	ALM-001-01 A	WB-01/WT-06	900	3000	awning	60.0	S	No
Rumpus	ALM-002-04 A	WG-13/WT-14	2700	4810	sliding	60.0	E	No
Rumpus	ALM-002-04 A	WG-12/WT13	2700	3690	sliding	45.0	N	No
Bedroom 5	ALM-001-01 A	WG-14/WT-09	1900	800	awning	90.0	E	No
Bedroom 5	ALM-001-01 A	WG-15/WT-10	1900	3000	awning	60.0	E	No
Ensuite 5	ALM-001-01 A	WG-16/WT-09	1900	800	awning	90.0	E	No
Powder 2	ALM-001-01 A	WG-01/WT-01	2100	900	awning	60.0	S	No
Laundry	ALM-001-01 A	WG-03/WT03	1400	1500	awning	90.0	S	No
Laundry	ALM-001-01 A	WG-04/WT01	2100	900	casement	90.0	W	No
Rear Hallway	ALM-001-01 A	WG-02/WT-01	2100	900	awning	60.0	S	No
Kitch/Din/Livin- g	ALM-001-04 A	WG-09/WT-22	2600	3350	fixed	0.0	N	No
Kitch/Din/Livin- g	ALM-002-04 A	WT-22	500	3350	fixed	0.0	N	No
Kitch/Din/Livin- g	ALM-001-04 A	WG-10/WT-21	2650	1100	casement	90.0	N	No
Kitch/Din/Livin- g	ALM-002-04 A	WT-23	500	1100	fixed	0.0	N	No
Kitch/Din/Livin- g	ALM-001-04 A	WG-08/WT-23	2650	1100	casement	90.0	N	No
Kitch/Din/Livin- g	ALM-002-04 A	WT-21	500	1100	fixed	0.0	N	No
Kitch/Din/Livin- g	ALM-002-01 A	WG-07/WT-11	2700	2700	fixed	0.0	E	No
Kitch/Din/Livin- g	ALM-001-04 A	WG-06/WT-20	2651	1750	awning	0.0	N	No
Kitch/Din/Livin- g	ALM-001-04 A	WG-05/WT-05	900	2700	awning	60.0	W	No
Bedroom 2	ALM-001-01 A	WF-09/WT-17	2550	3240	awning	10.0	E	No
Bedroom 2	ALM-001-01 A	WF-08/WT-19	2212	1800	awning	22.0	N	No
Bedroom 4	ALM-001-01 A	WF-05/WT-05	900	2400	awning	60.0	W	No
Bedroom 3	ALM-001-01 A	WG-06/WT-20	2212	1750	awning	22.0	N	No
Leisure	ALM-002-04 A	WG-09/WT-22	2200	3350	fixed	0.0	N	No
Leisure	ALM-002-04 A	WG-10/WT-21	2200	1100	fixed	0.0	N	No
Leisure	ALM-002-04 A	WG-08/WT-23	2200	1100	fixed	0.0	N	No
Void	ALM-002-01 A	WF-10/WT-18	1862	1150	fixed	0.0	E	No
Main Bedroom	ALM-001-01 A	WF-01/WT-06	900	3000	awning	10.0	S	No
Main Bedroom	ALM-001-01 A	WF-13/WT-15	2550	800	awning	60.0	E	No
Main Bedroom	ALM-001-01 A	WF-12/WT-16	2550	3000	awning	45.0	E	No
Main Bedroom	ALM-001-01 A	WF-11/WT-15	2550	800	awning	60.0	E	No
Main WIR	ALM-002-01 A	WF-03/WT-07	1500	760	fixed	0.0	W	No
Main WIR	ALM-002-01 A	WF-02/WT-08	1500	1250	fixed	0.0	S	No
Main Ensuite	ALM-001-01 A	WF-04/WT02	900	1200	awning	90.0	W	No
Ensuite 2	ALM-001-01 A	WF-09/WT17	2550	1620	awning	10.0	E	No
Bath 2	ALM-001-01 A	WF-06/WT-04	900	1800	awning	90.0	W	No

* Refer to glossary.

Roof window *type and performance value*

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 %	Area (m²)	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 (m²)	Orient-ation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Basement Carpark	2400	5850	100.0	E
Entry	2700	1600	100.0	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	WC-05	0.29	Light	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.5)	No
2	WC-05	0.5	Medium	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.5)	No
3	WS-07	0.29	Light	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.0)	No
4	WS-08	0.29	Light	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.0)	No
5	WS-09	0.29	Light	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.0)	No
6	WS-04	0.29	Light	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.8)	No

* Refer to glossary.

7	WS-06		0.29	Light	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R2.0)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Basement Carpark	1	2500	7583	S	0	Yes
Basement Carpark	1	2500	6662	E	839	Yes
Lower Hallway	2	2400	198	ENE	0	Yes
Lower Hallway	1	2500	924	NE	0	No
Lower Hallway	1	2500	541	NNE	0	No
Lower Hallway	1	2500	608	NNE	0	No
Lower Hallway	1	2500	659	N	0	No
Lower Hallway	1	2500	979	NNW	0	No
Powder	2	2500	907	W	0	Yes
Powder	1	2500	1864	N	0	No
Lift 2	3	2700	182	W	0	Yes
Lift 2	3	2700	160	N	0	Yes
Rumpus	4	2700	1519	S	2965	Yes
Rumpus	5	2700	655	E	852	No
Rumpus	4	2700	4896	E	947	Yes
Rumpus	5	2700	650	E	852	No
Rumpus	3	2700	6686	N	4208	Yes
Rumpus	3	2700	3921	W	0	Yes
Bedroom 5	6	2700	5093	E	777	Yes
Bedroom 5	4	2700	678	N	2175	Yes
Bedroom 5	6	2700	3034	S	0	Yes
Ensuite 5	6	2700	2774	S	0	Yes
Ensuite 5	4	2700	1882	E	790	Yes
Powder 2	4	2700	2863	S	0	Yes
Laundry	4	2700	3839	S	0	No
Laundry	6	2700	3983	W	0	Yes
Cool Room	6	2700	2716	S	0	Yes
Rear Hallway	6	2700	1185	S	0	Yes
Entry	3	2700	2407	E	2532	Yes
Kitch/Din/Living	4	2700	2440	S	0	Yes
Kitch/Din/Living	3	2700	7043	N	0	Yes
Kitch/Din/Living	3	3220	3692	E	0	Yes
Kitch/Din/Living	7	3220	6274	N	0	Yes
Kitch/Din/Living	4	3220	5755	W	0	Yes
Kitch/Din/Living	4	2700	5493	W	0	Yes

* Refer to glossary.

Bedroom 2	6	2700	3663	E	265	Yes
Bedroom 2	5	2700	3474	N	0	No
Bedroom 2	6	2700	1846	N	0	No
Bedroom 2	5	2700	1334	N	0	No
Bedroom 2	6	2700	3977	W	0	Yes
Bedroom 4	6	2700	3664	W	0	Yes
Bedroom 4	6	2700	2497	S	0	Yes
Bedroom 3	6	2700	3851	E	0	Yes
Bedroom 3	6	2700	2488	N	0	No
Bedroom 3	6	2700	252	W	0	Yes
Bedroom 3	5	2700	1241	N	0	No
Bedroom 3	6	2700	1831	N	0	No
Bedroom 3	5	2700	789	N	0	No
Bedroom 3	6	2700	3614	W	0	Yes
Leisure	6	2700	435	S	0	Yes
Leisure	3	2700	7049	N	0	Yes
Void	5	2700	604	E	0	Yes
Void	6	2700	1795	E	0	Yes
Void	6	2700	2386	S	0	Yes
Main Bedroom	6	2700	5005	S	0	No
Main Bedroom	5	2700	266	E	0	Yes
Main Bedroom	6	2700	793	E	0	Yes
Main Bedroom	5	2700	450	E	0	Yes
Main Bedroom	6	2700	3011	E	0	Yes
Main Bedroom	5	2700	434	E	0	Yes
Main Bedroom	6	2700	826	E	0	Yes
Main Bedroom	5	2700	649	E	0	Yes
Main WIR	6	2700	587	S	0	Yes
Main WIR	6	2700	875	W	0	Yes
Main WIR	6	2700	4591	S	0	No
Main Ensuite	6	2700	3643	W	0	Yes
Main Ensuite	6	2700	3039	S	0	Yes
Ensuite 2	6	2700	1497	S	0	Yes
Ensuite 2	5	2700	687	E	182	Yes
Ensuite 2	6	2700	1575	E	322	Yes
Bath 2	6	2700	2684	W	0	Yes

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	SW	68.8	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.5)
2	WC-05	4.9	Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.5)
3	WC-03	14.3	

4	FR5 - Internal Plasterboard Stud Wall	9.4
5	WC03Lined	44
6	WS-03	254.1
7	WC-01	22.6

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Basement Carpark	CSOG - CSOG: Slab on Ground	50.5	Enclosed	R0.0	none
Lower Hallway	CSOG - CSOG: Slab on Ground	25.5	Enclosed	R0.0	none
Lift 1	CSOG - CSOG: Slab on Ground	3.6	Enclosed	R0.0	none
Powder	CSOG - CSOG: Slab on Ground	3.3	Enclosed	R0.0	Tiles
Lift 2	GFSLAB	0.4	Enclosed	R0.0	Tiles
Lift 2	GFSLAB	3.3	Enclosed	R0.0	none
Rumpus	GFSLAB	35.5	Enclosed	R0.0	Tiles
Rumpus	GFSLAB	2.1	Enclosed	R0.0	Tiles
Bedroom 5	GFSLAB	4.6	Elevated	R0.0	Timber
Bedroom 5	GFSLAB	0.7	Enclosed	R0.0	Timber
Bedroom 5	GFSLAB	0	Enclosed	R0.0	Carpet
Bedroom 5	GFSLAB	16	Enclosed	R0.0	Timber
Bedroom 5	GFSLAB	11.7	Enclosed	R0.0	Timber
Bedroom 5	GFSLAB	3	Enclosed	R0.0	Timber
Ensuite 5	GFSLAB	3.5	Enclosed	R0.0	Tiles
Ensuite 5	GFSLAB	1.7	Elevated	R0.0	Tiles
Powder 2	GFSLAB	1.6	Enclosed	R0.0	Tiles
Powder 2	GFSLAB	2.6	Enclosed	R0.0	Tiles
Laundry	GFSLAB	10	Enclosed	R0.0	Tiles
Laundry	GFSLAB	5.3	Enclosed	R0.0	Tiles
Cool Room	GFSLAB	0.1	Enclosed	R0.0	Tiles
Cool Room	GFSLAB	0.1	Enclosed	R0.0	Tiles
Cool Room	GFSLAB	2.4	Enclosed	R0.0	Tiles
Cool Room	GFSLAB	1.6	Enclosed	R0.0	Tiles
Butler's Pantry	GFSLAB	7.1	Enclosed	R0.0	Tiles
Butler's Pantry	GFSLAB	7.4	Enclosed	R0.0	Tiles
Rear Hallway	GFSLAB	5	Enclosed	R0.0	Tiles
Rear Hallway	GFSLAB	0.7	Enclosed	R0.0	Tiles
Entry	GFSLAB	5.7	Enclosed	R0.0	Tiles
Entry	GFSLAB	2.6	Enclosed	R0.0	Tiles
Kitch/Din/Living	GFSLAB	30.6	Enclosed	R0.0	Tiles
Kitch/Din/Living	GFSLAB	2.9	Enclosed	R0.0	Tiles
Kitch/Din/Living	GFSLAB	2	Enclosed	R0.0	Tiles
Kitch/Din/Living	CSOG - CSOG: Slab on Ground	36.1	Enclosed	R2.5	Timber

Kitch/Din/Living	GFSLAB	55.2	Enclosed	R0.0	Tiles
Bedroom 2	FR5 - 250mm concrete slab Lined	28.8	Enclosed	R0.0	Timber
Bedroom 4	FR5 - 250mm concrete slab Lined	18.6	Enclosed	R0.0	Timber
Bedroom 3	FR5 - 250mm concrete slab Lined	23.5	Enclosed	R0.0	Timber
Lift 3	FR5 - 250mm concrete slab Lined	3.1	Enclosed	R0.0	none
Leisure	FR5 - 250mm concrete slab Lined	57.9	Enclosed	R0.0	Timber
Void	No Floor	5.7	Enclosed	R0.0	No Floor
Main Bedroom	FR5 - 250mm concrete slab Lined	27.7	Enclosed	R0.0	Timber
Main WIR	FR5 - 250mm concrete slab Lined	26.2	Enclosed	R0.0	Timber
WC	FR5 - 250mm concrete slab Lined	1.1	Enclosed	R0.0	Tiles
Main Ensuite	FR5 - 250mm concrete slab Lined	9.8	Enclosed	R0.0	Tiles
Ensuite 2	FR5 - 250mm concrete slab Lined	7.4	Enclosed	R0.0	Tiles
Bath 2	FR5 - 250mm concrete slab Lined	11.9	Enclosed	R0.0	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Basement Carpark	GFSLAB	R0.0	No
Lower Hallway	GFSLAB	R0.0	No
Lift 1	GFSLAB	R0.0	No
Powder	GFSLAB	R0.0	No
Lift 2	FR5 - 250mm concrete slab Lined	R0.0	No
Lift 2	FR5 - 250mm concrete slab Lined	R0.0	No
Rumpus	FR5 - 250mm concrete slab Lined	R0.0	No
Rumpus	FR5 - 250mm concrete slab Lined	R0.0	No
Bedroom 5	Plasterboard	R0.0	No
Bedroom 5	Plasterboard	R0.0	No
Bedroom 5	FR5 - 250mm concrete slab Lined	R0.0	No
Bedroom 5	Plasterboard	R0.0	No
Bedroom 5	Plasterboard	R0.0	No
Ensuite 5	Plasterboard	R0.0	No
Ensuite 5	Plasterboard	R0.0	No
Powder 2	Plasterboard	R0.0	No
Powder 2	FR5 - 250mm concrete slab Lined	R0.0	No
Laundry	FR5 - 250mm concrete slab Lined	R0.0	No
Laundry	Plasterboard	R0.0	No
Cool Room	FR5 - 250mm concrete slab Lined	R0.0	No
Cool Room	FR5 - 250mm concrete slab Lined	R0.0	No
Cool Room	Plasterboard	R0.0	No
Butler's Pantry	FR5 - 250mm concrete slab Lined	R0.0	No
Butler's Pantry	FR5 - 250mm concrete slab Lined	R0.0	No
Rear Hallway	FR5 - 250mm concrete slab Lined	R0.0	No

* Refer to glossary.

Rear Hallway	Plasterboard	R0.0	No
Entry	FR5 - 250mm concrete slab Lined	R0.0	No
Entry	FR5 - 250mm concrete slab Lined	R0.0	No
Kitch/Din/Living	FR5 - 250mm concrete slab Lined	R0.0	No
Kitch/Din/Living	FR5 - 250mm concrete slab Lined	R0.0	No
Kitch/Din/Living	Plasterboard	R0.0	No
Kitch/Din/Living	FR5 - 250mm concrete slab Lined	R0.0	No
Kitch/Din/Living	FR5 - 250mm concrete slab Lined	R0.0	No
Bedroom 2	Plasterboard	R6.0	Yes
Bedroom 4	Plasterboard	R6.0	Yes
Bedroom 3	Plasterboard	R6.0	Yes
Lift 3	Plasterboard	R6.0	Yes
Leisure	Plasterboard	R6.0	Yes
Void	Plasterboard	R6.0	Yes
Main Bedroom	Plasterboard	R6.0	Yes
Main WIR	Plasterboard	R6.0	Yes
WC	Plasterboard	R6.0	Yes
Main Ensuite	Plasterboard	R6.0	Yes
Ensuite 2	Plasterboard	R6.0	Yes
Bath 2	Plasterboard	R6.0	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Powder	1	Exhaust Fans	250	Sealed
Ensuite 5	1	Exhaust Fans	250	Sealed
Powder 2	1	Exhaust Fans	250	Sealed
Laundry	1	Exhaust Fans	250	Sealed
Kitch/Din/Living	1	Exhaust Fans	250	Sealed
Kitch/Din/Living	1	Heater Flues	300	Unsealed
WC	1	Exhaust Fans	250	Sealed
Main Ensuite	1	Exhaust Fans	250	Sealed
Ensuite 2	1	Exhaust Fans	250	Sealed
Bath 2	1	Exhaust Fans	250	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Rumpus	1	900
Bedroom 5	1	900
Bedroom 2	1	900
Bedroom 4	1	900
Bedroom 3	1	900

* Refer to glossary.

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
GreenRoofIntensive:Slab - 500mm Substrate : 400mm:400mm Slab - 500mm Substrate	0.0	0.5	Medium
GreenRoofExtensive:Slab - 100mm Substrate : 400mm:400mm Slab - 100mm Substrate	0.0	0.5	Medium
GreenRoofExtensive:Slab - 100mm Substrate : 200mm:200mm Slab - 100mm Substrate	0.0	0.5	Medium
SlabExt:Slab - Suspended Slab - External Insul : 200mm: 200mm Suspended Slab - External Insul	0.0	0.5	Medium
Ceil: Ceiling	0.0	0.5	Medium
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.73	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 NatHERSAdministrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.

National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening Percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).