Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0005180773

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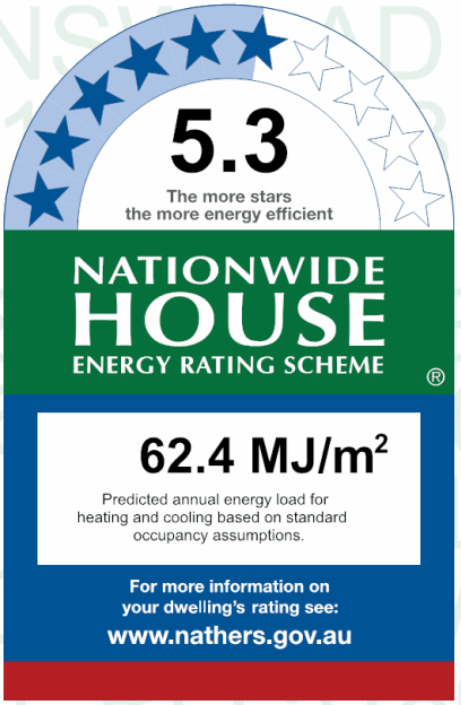

Property

Address	6 6 Mitchell Road , Palm Beach , NSW , 2108
Lot/DP	1/1086858
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	6 Mitchell Road Palm Beach NSW
Prepared by	Stephen Lesiuk

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	270.0	Open
Unconditioned*	26.0	**NatHERS climate zone**
Total	296.0	56
Garage	0.0	

Thermal performance

Heating	**Cooling**
37.3 MJ/m^2	**25.1** MJ/m^2

Accredited assessor

Name	Martin Pinson
Business name	INTEGRECO
Email	consulting@integreco.com
Phone	0422144603
Accreditation No.	DMN/19/1921

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts

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=XuZEZQvMg.
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.

* 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?

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
TIM-006-01 W	TIM-006-01 W Timber B DG Argon Fill Clear-Clear	2.6	0.53	0.50	0.56
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
TIM-005-01 W	TIM-005-01 W Timber A DG Argon Fill Clear-Clear	2.6	0.50	0.48	0.53
ALM-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

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*
Bedroom 1	TIM-006-01 W	n/a	2100	4000	n/a	65	N	No
Bedroom 1	TIM-006-01 W	n/a	1500	900	n/a	00	N	No
Bedroom 1	ALM-004-01 A	n/a	300	4500	n/a	00	E	No Shading
day1	TIM-006-01 W	n/a	500	900	n/a	00	NE	No
day1	TIM-005-01 W	n/a	500	900	n/a	60	SE	No
Unconditioned 1	TIM-005-01 W	n/a	1200	1800	n/a	60	W	Yes
Night Time 1	TIM-005-01 W	n/a	1200	900	n/a	60	E	No
Night Time 1	TIM-005-01 W	n/a	1200	900	n/a	60	S	No
	TIM-006-01 W	n/a	1200	3900	n/a	45	S	Yes
	ALM-004-01 A	n/a	350	3900	n/a	00	S	Yes
	TIM-006-01 W	n/a	2100	3900	n/a	65	S	No
	TIM-005-01 W	n/a	2100	900	n/a	60	W	No
	TIM-005-01 W	n/a	2100	900	n/a	60	W	No
	TIM-006-01 W	n/a	2100	4000	n/a	65	N	No
	TIM-006-01 W	n/a	2100	4000	n/a	65	N	No
	ALM-004-01 A	n/a	300	1800	n/a	00	W	No Shading
Day Time 2	TIM-006-01 W	n/a	2400	900	n/a	00	NE	No
Day Time 2	TIM-005-01 W	n/a	2400	900	n/a	60	SE	No
Day Time 2	TIM-005-01 W	n/a	1200	2700	n/a	30	S	Yes
Day Time 2	ALM-004-01 A	n/a	300	2700	n/a	00	S	Yes
Night Time 2	TIM-005-01 W	n/a	1200	900	n/a	60	E	No
Night Time 2	TIM-005-01 W	n/a	1200	900	n/a	60	S	No
Bedroom 2	TIM-006-01 W	n/a	2100	4000	n/a	65	N	Yes
Bedroom 2	ALM-003-01 A	n/a	300	4500	n/a	00	E	No
Bedroom 3	TIM-006-01 W	n/a	2100	4000	n/a	65	N	Yes
Bedroom 3	TIM-005-01 W	n/a	1200	4000	n/a	10	S	Yes
Bedroom 3	ALM-004-01 A	n/a	300	4000	n/a	00	S	Yes
Day Time 4	TIM-006-01 W	n/a	2100	4000	n/a	65	N	Yes
Bedroom 4	TIM-006-01 W	n/a	2100	4000	n/a	65	N	Yes
Night Time 3	TIM-005-01 W	n/a	1200	2599	n/a	10	S	Yes
Night Time 3	TIM-006-01 W	n/a	2100	2600	n/a	45	N	Yes
Night Time 4	TIM-005-01 W	n/a	1200	1400	n/a	10	S	Yes
Night Time 4	TIM-005-01 W	n/a	2100	800	n/a	60	W	No
Night Time 4	TIM-005-01 W	n/a	2100	900	n/a	60	W	No
Night Time 4	TIM-006-01 W	n/a	2100	1400	n/a	95	N	No
Night Time 4	ALM-004-01 A	n/a	300	4500	n/a	00	W	No Shading
Unconditioned 6	TIM-005-01 W	n/a	1200	900	n/a	90	W	Yes

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Day Time 5	TIM-006-01 W	n/a	2400	900	n/a	00	NE	No
Day Time 5	TIM-005-01 W	n/a	2400	900	n/a	60	SE	No
Day Time 6	TIM-005-01 W	n/a	1200	5050	n/a	30	NW	No
Day Time 6	TIM-006-01 W	n/a	2400	900	n/a	00	NE	No
Day Time 6	TIM-005-01 W	n/a	2400	900	n/a	60	SE	No
Day Time 6	TIM-005-01 W	n/a	1200	2200	n/a	30	E	No
Day Time 6	TIM-005-01 W	n/a	2100	900	n/a	00	W	No
Day Time 6	ALM-004-01 A	n/a	1200	2100	n/a	00	E	No Shading
Kitchen/Living	TIM-006-01 W	n/a	2100	4000	n/a	65	N	No
Kitchen/Living	TIM-006-01 W	n/a	2100	4000	n/a	65	N	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								

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Unconditioned 7	1200	2600	90	W
Day Time 6	2100	1100	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel on Battens	0.30	Light	Bulk Insulation R2.5	No
EW-2	Tilt up Concrete	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)
Bedroom 1	EW-1	2400	3995	N	300	NO
Bedroom 1	EW-1	2400	400	E	0	YES
Bedroom 1	EW-1	2400	1077	N	0	YES
Bedroom 1	EW-1	2400	2088	E	0	NO
Bedroom 1	EW-1	2400	400	S	0	YES
Bedroom 1	EW-1	2400	1795	E	0	YES
day1	EW-1	2400	1936	NE	0	YES
day1	EW-1	2400	5189	SE	0	NO
day1	EW-1	2400	561	SW	0	YES
Unconditioned 1	EW-1	2400	795	W	0	YES
Unconditioned 1	EW-1	2400	200	S	0	YES
Unconditioned 1	EW-1	2400	1800	W	0	NO
Unconditioned 1	EW-1	2400	200	N	2175	YES
Unconditioned 1	EW-1	2400	595	W	0	YES
Night Time 1	EW-1	2400	795	E	0	YES
Night Time 1	EW-1	2400	200	N	0	YES
Night Time 1	EW-1	2400	1000	E	0	NO
Night Time 1	EW-1	2400	1000	S	0	NO
Night Time 1	EW-1	2400	200	W	0	YES
Night Time 1	EW-1	2400	1795	S	0	YES
	EW-1	2400	200	E	10925	YES
	EW-1	2400	4000	S	0	NO
	EW-1	2400	800	W	0	YES
	EW-1	2400	4200	S	0	YES
	EW-1	2400	1600	W	0	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
	EW-2	2700	400	S	0	YES
	EW-2	2700	1400	W	0	NO
	EW-2	2700	400	N	0	YES
	EW-1	2400	1600	W	0	YES
	EW-1	2400	8195	N	2000	NO
Day Time 2	EW-2	2700	1518	SE	0	YES
Day Time 2	EW-2	2700	1523	SW	0	NO
Day Time 2	EW-2	2700	1161	NW	6560	YES
Day Time 2	EW-1	2400	1082	NE	0	YES
Day Time 2	EW-1	2400	447	NW	1901	YES
Day Time 2	EW-1	2400	1077	NE	0	NO
Day Time 2	EW-1	2400	1166	SE	0	NO
Day Time 2	EW-1	2400	283	SW	0	YES
Day Time 2	EW-1	2400	4386	SE	0	YES
Day Time 2	EW-1	2400	491	SW	0	YES
Day Time 2	EW-1	2400	1400	S	0	YES
Day Time 2	EW-1	2400	600	W	11500	YES
Day Time 2	EW-1	2400	2795	S	400	YES
Unconditioned 3	EW-2	2700	1448	SE	0	YES
Unconditioned 3	EW-2	2700	1523	SW	0	NO
Unconditioned 3	EW-2	2700	1161	NW	4317	YES
Unconditioned 4	EW-2	2700	1161	NW	3880	YES
Unconditioned 4	EW-2	2700	1518	SE	0	YES
Unconditioned 4	EW-2	2700	1523	SW	0	NO
Unconditioned 5	EW-2	2400	1166	NW	0	NO
Unconditioned 5	EW-1	2400	325	N	225	YES
Unconditioned 5	EW-2	2400	1448	SW	0	NO
Night Time 2	EW-1	2400	795	E	500	YES
Night Time 2	EW-1	2400	200	N	5900	YES
Night Time 2	EW-1	2400	1000	E	0	NO
Night Time 2	EW-1	2400	1000	S	0	NO
Night Time 2	EW-1	2400	200	W	0	YES
Night Time 2	EW-1	2400	1795	S	0	YES
Bedroom 2	EW-1	2400	3995	N	500	NO
Bedroom 2	EW-1	2600	4595	E	500	NO
Bedroom 3	EW-1	2400	3990	N	575	NO
Bedroom 3	EW-1	2400	3990	S	400	NO
Day Time 4	EW-1	2400	3990	N	525	NO
Bedroom 4	EW-1	2400	4190	N	550	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Night Time 3	EW-1	2400	2590	S	400	NO
Night Time 3	EW-1	2400	2590	N	575	NO
Night Time 4	EW-1	2400	1595	S	400	NO
Night Time 4	EW-1	2400	1600	W	500	YES
Night Time 4	EW-2	2700	400	S	2000	YES
Night Time 4	EW-2	2700	1400	W	100	NO
Night Time 4	EW-2	2700	400	N	2200	YES
Night Time 4	EW-1	2400	1600	W	500	YES
Night Time 4	EW-1	2400	1595	N	600	NO
Unconditioned 6	EW-1	2400	3190	W	0	YES
Day Time 5	EW-1	2700	1518	NW	3696	YES
Day Time 5	EW-1	2700	1265	NE	870	YES
Day Time 5	EW-1	2700	447	NW	4975	YES
Day Time 5	EW-1	2700	1077	NE	562	NO
Day Time 5	EW-1	2700	1166	SE	347	NO
Day Time 5	EW-1	2700	283	SW	71	YES
Day Time 5	EW-1	2700	4386	SE	0	YES
Day Time 5	EW-1	2700	561	SW	0	YES
Unconditioned 7	EW-1	2700	4000	N	1775	NO
Unconditioned 7	EW-1	2700	1395	E	2200	YES
Unconditioned 7	EW-1	2700	3195	W	5825	YES
Day Time 6	EW-1	2400	5471	NW	950	YES
Day Time 6	EW-1	2400	1265	NE	791	YES
Day Time 6	EW-1	2400	447	NW	79	YES
Day Time 6	EW-1	2400	1077	NE	0	NO
Day Time 6	EW-1	2400	1166	SE	0	NO
Day Time 6	EW-1	2400	283	SW	5339	YES
Day Time 6	EW-1	2400	3046	SE	0	YES
Day Time 6	EW-1	2400	3000	E	0	YES
Day Time 6	EW-1	2400	2800	S	0	NO
Day Time 6	EW-1	2400	2000	W	2200	YES
Day Time 6	EW-1	2400	208	SW	566	YES
Kitchen/Living	EW-1	2400	4195	S	0	YES
Kitchen/Living	EW-1	2400	8190	N	2000	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, plasterboard on battens one side		196.00	No insulation

* Refer to glossary.

Wall ID	Wall type	Area (m)	Bulk insulation
IW-2 - Tilt Concrete		20.00	No insulation
IW-3 - Cavity wall, plasterboard on battens one side		12.00	Bulk Insulation, Air Gap R2.5

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Suspended Concrete Slab 250mm	19.50	Open	Bulk Insulation in Contact with Floor R2.5	Bare
day1	Concrete Slab on Ground 250mm	15.10	None	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Unconditioned 1	Concrete Slab on Ground 250mm	3.80	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Day Time 1	Concrete Slab on Ground 250mm	2.80	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Night Time 1	Concrete Slab on Ground 250mm	6.50	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
	Concrete Slab on Ground 250mm	41.20	None	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Day Time 2	Concrete Slab on Ground 250mm	2.30	None	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Day Time 2/day1	Timber Above Plasterboard 250mm	15.00		Bulk Insulation R2	Bare
Day Time 2/Kitchen/Living	Timber Above Plasterboard 250mm	9.30		Bulk Insulation R2	Bare
Day Time 2	Suspended Concrete Slab 250mm	0.80	Open	Bulk Insulation in Contact with Floor R2.5	Bare
Unconditioned 3/Day Time 2	Timber Above Plasterboard 300mm	2.30		Bulk Insulation R2	Carpet 10mm
Unconditioned 4/Unconditioned 3	Timber Above Plasterboard 300mm	2.30		Bulk Insulation R2	Carpet 10mm
Unconditioned 5/Unconditioned 4	Timber Above Plasterboard 19mm	2.20		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Night Time 2/Night Time 1	Timber Above Plasterboard 300mm	6.50		Bulk Insulation R2	Ceramic Tiles 8mm
Day Time 3/Day Time 1	Timber Above Plasterboard 300mm	2.80		Bulk Insulation R2	Carpet 10mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	17.90		Bulk Insulation R2	Carpet 10mm
Bedroom 3/	Timber Above Plasterboard 19mm	17.90		Bulk Insulation R2	Carpet 10mm
Day Time 4/Kitchen/Living	Timber Above Plasterboard 19mm	13.80		Bulk Insulation R2	Carpet 10mm
Bedroom 4/Kitchen/Living	Timber Above Plasterboard 19mm	14.50		Bulk Insulation R2	Carpet 10mm
Night Time 3/	Timber Above Plasterboard 19mm	11.50		Bulk Insulation R2	Carpet 10mm
Night Time 4/	Timber Above Plasterboard 19mm	7.70		Bulk Insulation R2	Ceramic Tiles 8mm
Unconditioned 6/Unconditioned 1	Timber Above Plasterboard 19mm	3.40		Bulk Insulation R2	Ceramic Tiles 8mm
Day Time 5/Day Time 2	Timber Above Plasterboard 300mm	12.10		Bulk Insulation R2	Bare
Unconditioned 7/Day Time 2	Timber Above Plasterboard 300mm	3.40		Bulk Insulation R2	Bare
Unconditioned 7/Day Time 3	Timber Above Plasterboard 300mm	2.40		Bulk Insulation R2	Bare
Unconditioned 7/Unconditioned 6	Timber Above Plasterboard 300mm	3.60		Bulk Insulation R2	Bare

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Day Time 6/Day Time 5	Timber Above Plasterboard 250mm	11.90		Bulk Insulation R2	Bare
Day Time 6	Suspended Concrete Slab 250mm	7.20	Open	Bulk Insulation in Contact with Floor R2.5	Bare
Kitchen/Living	Concrete Slab on Ground 250mm	40.20	None	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Timber Above Plasterboard	Bulk Insulation R2	No
day1	Timber Above Plasterboard	Bulk Insulation R2	No
Unconditioned 1	Timber Above Plasterboard	Bulk Insulation R2	No
Day Time 1	Timber Above Plasterboard	Bulk Insulation R2	No
Night Time 1	Timber Above Plasterboard	Bulk Insulation R2	No
	Timber Above Plasterboard	Bulk Insulation R2	No
Day Time 2	Timber Above Plasterboard	Bulk Insulation R2	No
Day Time 2	Timber Above Plasterboard	Bulk Insulation R2	No
Unconditioned 3	Timber Above Plasterboard	Bulk Insulation R2	No
Unconditioned 4	Timber Above Plasterboard	Bulk Insulation R2	No
Day Time 3	Timber Above Plasterboard	Bulk Insulation R2	No
Unconditioned 6	Timber Above Plasterboard	Bulk Insulation R2	No
Day Time 5	Timber Above Plasterboard	Bulk Insulation R2	No
Kitchen/Living	Timber Above Plasterboard	Bulk Insulation R2	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Bedroom 1	8	Downlights - LED	150	Sealed
day1	6	Downlights - LED	150	Sealed
Unconditioned 1	2	Downlights - LED	150	Sealed
Unconditioned 1	1	Exhaust Fans	300	Sealed
Day Time 1	1	Downlights - LED	150	Sealed
Day Time 1	1	Exhaust Fans	300	Sealed
Night Time 1	3	Downlights - LED	150	Sealed
	16	Downlights - LED	150	Sealed
Day Time 2	1	Downlights - LED	150	Sealed
Day Time 2	10	Downlights - LED	150	Sealed
Unconditioned 4	1	Downlights - LED	150	Sealed
Night Time 2	3	Downlights - LED	150	Sealed
Day Time 3	1	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Bedroom 2	7	Downlights - LED	150	Sealed
Bedroom 3	7	Downlights - LED	150	Sealed
Day Time 4	6	Downlights - LED	150	Sealed
Bedroom 4	6	Downlights - LED	150	Sealed
Night Time 3	5	Downlights - LED	150	Sealed
Night Time 4	3	Downlights - LED	150	Sealed
Unconditioned 6	1	Downlights - LED	150	Sealed
Unconditioned 6	1	Exhaust Fans	300	Sealed
Day Time 5	5	Downlights - LED	150	Sealed
Unconditioned 7	4	Downlights - LED	150	Sealed
Day Time 6	8	Downlights - LED	150	Sealed
Kitchen/Living	16	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.5	0.50	Medium
Concrete	No Insulation, Only an Air Gap	0.30	Light
Concrete	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 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).