Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006727630

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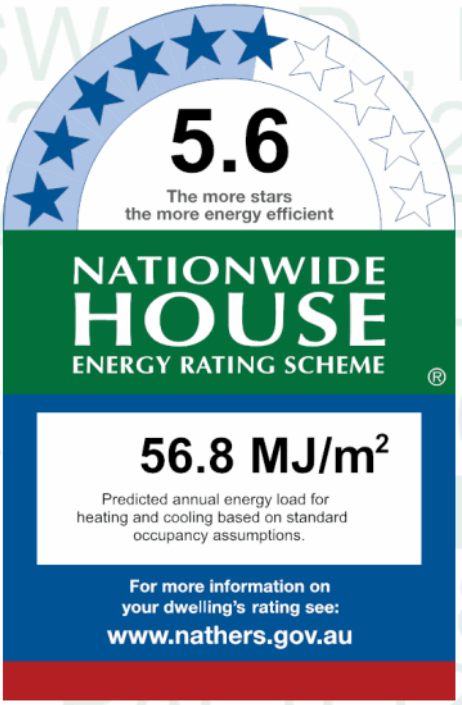

Property

Address	121 Pacific Road , Palm Beach , NSW , 2108
Lot/DP	Lot 17 DP 8595
NCC Class*	1a
Type	New Home

Plans

Main Plan	Project 0267
Prepared by	DB

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	469.4	Suburban
Unconditioned*	117.3	**NatHERS climate zone**
Total	586.7	56
Garage	35.9	

Thermal performance

Heating	Cooling
39.1 MJ/m^2	17.8 MJ/m^2

Accredited assessor

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Accreditation No.	20322
Assessor Accrediting Organisation	ABSA
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=LLUfTAfRa.
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

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
TIM-002-01 W	Timber B SG Clear	5.4	0.63	0.60	0.66

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
B4	ALM-004-01 A	ASD2549	2549	4959	Sliding	30	W	None
B4	ALM-004-01 A	ADW2508	2549	800	Double Hung	45	N	None
Ba3	ALM-002-01 A	ADW2508	2549	800	Double Hung	45	N	None
B5	ALM-004-01 A	ADW2508	2549	800	Double Hung	45	N	None
B5	ALM-004-01 A	ADW2508	2549	800	Double Hung	45	N	None
B5	ALM-004-01 A	ASD2549	2549	4959	Sliding	30	E	None
Entry	TIM-002-01 W	AFW2505	2549	549	Other	00	S	None
B3	ALM-004-01 A	ASD2724	2699	2400	Sliding	40	N	None
Ba2	ALM-002-01 A	ADW2708	2699	800	Double Hung	40	N	None
B2	ALM-004-01 A	ASD2724	2699	2400	Sliding	40	N	None
Ba1	ALM-004-01 A	ADW2708	2699	800	Double Hung	40	N	None
B1	ALM-004-01 A	ADW2721	2699	2100	Double Hung	20	N	None
B1	ALM-004-01 A	ASD2528	2550	2800	Sliding	40	E	None
Rumpus	ALM-004-01 A	ASD2570	2550	7000	Sliding	40	E	None
WC	ALM-002-01 A	ADW1410	1400	1000	Double Hung	45	S	None
Laundry	ALM-002-01 A	ADW1410	1399	1000	Double Hung	45	S	None
Laundry	ALM-002-01 A	ADW1410	1399	1000	Double Hung	45	S	None
M2	ALM-004-01 A	ASD2947	2944	4760	Sliding	40	W	None
M2	ALM-004-01 A	ADW1915	1950	1500	Double Hung	40	N	None
M2	ALM-004-01 A	ADW2906	2944	600	Double Hung	45	N	None
E2	ALM-004-01 A	ADW2921	2944	2100	Double Hung	40	N	None
E2	ALM-004-01 A	ADW2906	2944	600	Double Hung	45	N	None
E1	ALM-004-01 A	ADW2906	2944	600	Double Hung	45	N	None
WIR1	ALM-004-01 A	ADW2906	2944	600	Double Hung	45	N	None
M1	ALM-004-01 A	ADW2921	2944	2100	Double Hung	20	N	None
Foyer Entry	TIM-002-01 W	AFW2905	2944	500	Other	00	W	None
Garage	ALM-002-01 A	ADW2706	2700	600	Double Hung	40	S	None
Powder	ALM-002-01 A	ADW2706	2700	600	Double Hung	40	S	None
Study	ALM-004-01 A	ADW2921	2944	2100	Double Hung	22	S	None
Kit Living Din	ALM-004-01 A	AFW0634	600	3440	Other	00	W	None
Kit Living Din	ALM-004-01 A	ALW0634	600	3440	Louvre	60	W	None
Kit Living Din	ALM-004-01 A	ALW0634	600	3440	Louvre	60	W	None
Kit Living Din	ALM-004-01 A	AFW0634	600	3440	Other	00	W	None
Kit Living Din	ALM-004-01 A	AFW0634	600	3440	Other	00	E	None
Kit Living Din	ALM-004-01 A	ALW0634	600	3440	Louvre	60	E	None
Kit Living Din	ALM-004-01 A	ALW0634	600	3440	Louvre	60	E	None
Kit Living Din	ALM-004-01 A	AFW0634	600	3440	Other	00	E	None

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kit Living Din	ALM-004-01 A	ASD2970	2944	7000	Sliding	40	E	None
Kit Living Din	ALM-004-01 A	ASD2940	2944	4000	Sliding	40	E	None
Kit Living Din	ALM-004-01 A	ALW0630	600	3075	Louvre	60	S	None
Kit Living Din	ALM-004-01 A	ALW0630	600	3075	Louvre	60	S	None
Kit Living Din	ALM-004-01 A	ALW0630	600	3075	Louvre	60	N	None
Kit Living Din	ALM-004-01 A	ALW0630	600	3075	Louvre	60	N	None
Kit Living Din	ALM-004-01 A	ADW2930	2944	3000	Double Hung	22	N	None

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
DG-Generic-02 A	Clear Al DG DEFAULT ROOF WINDOW System 02	4.2	0.72	0.68	0.76

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
Lobby	DG-Generic-02 A	W4.3	45	894	894	N	None	None
E2	DG-Generic-02 A	W4.2	45	894	894	N	None	None
E2	DG-Generic-02 A	W4.5	45	894	894	N	None	None
Kit Living Din	DG-Generic-02 A	W4.6	45	894	894	N	None	None

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
Entry	2549	1350	100	S
Plant	2699	2800	100	N
Foyer Entry	2944	1350	100	W
Garage	2944	5410	100	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Retaining Concrete block	50	Medium		No
EW-002	Retaining Concrete block/Plasterboard	50	Medium		No
EW-003	Brick wall	30	Light		No
EW-004	Brick wall/Plasterboard	30	Light	Polyurethane rigid foamed aged: R1.5	No
EW-005	Brick wall	30	Light		No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
B4	EW-004	2550	3680	S	2100	Yes
B4	EW-004	2550	4960	W	1200	Yes
B4	EW-004	2550	3680	N		No
Ba3	EW-004	2550	1900	N		No
B5	EW-004	2550	5380	N		No
B5	EW-004	2550	4960	E	1850	Yes
B5	EW-004	2550	5380	S	2100	Yes
Entry	EW-004	2550	1900	S	2100	Yes
B3	EW-004	2700	4000	N	600	Yes
Ba2	EW-004	2700	1800	N	600	Yes
B2	EW-004	2700	3700	N	600	Yes
Ba1	EW-004	2700	2000	N	600	Yes
B1	EW-004	2700	4330	N	600	Yes
B1	EW-004	2700	4850	E	850	Yes
Rumpus	EW-004	2700	8800	E	850	Yes
Rumpus	EW-002	500	3254	S		No
Rumpus	EW-004	2200	3254	S		No
WC	EW-002	1100	2000	S		No
WC	EW-004	1600	2000	S		No
Laundry	EW-002	1300	3790	S		No

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Laundry	EW-004	1400	3790	S		No
Sauna	EW-002	1900	2070	S		No
Sauna	EW-004	800	2070	S		No
Cellar	EW-002	2200	4785	S		No
Cellar	EW-004	500	4785	S		No
Plant	EW-001	2500	3800	S		No
Plant	EW-005	200	3800	S		No
Plant	EW-001	2700	13800	W		No
Plant	EW-005	2700	3800	N	600	Yes
M2	EW-004	2945	8800	S	600	Yes
M2	EW-004	2945	4860	W	1860	Yes
M2	EW-004	2945	7800	N	600	Yes
E2	EW-004	2945	3984	N	600	Yes
E1	EW-004	2945	1600	N	600	Yes
WIR1	EW-004	2945	1600	N	600	Yes
M1	EW-004	2945	3590	N	600	Yes
Foyer Entry	EW-004	2945	2380	W	4500	Yes
Garage	EW-003	2945	4500	N	2380	Yes
Garage	EW-003	2945	6000	W	600	Yes
Garage	EW-003	2945	6000	S	600	Yes
Powder	EW-004	2945	2292	S	600	Yes
Study	EW-004	2945	3683	S	600	Yes
Pantry	EW-004	2945	2200	S	600	Yes
Kit Living Din	EW-004	950	13800	W	700	Yes
Kit Living Din	EW-004	950	13800	E	700	Yes
Kit Living Din	EW-004	2945	13800	E	4600	Yes
Kit Living Din	EW-004	3895	6190	S	700	Yes
Kit Living Din	EW-004	3895	6190	N	700	Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard/Brick wall	282.36	
IW-002	Plasterboard/Brick wall	89.24	
IW-003	Brick wall/Plasterboard	36.56	Polyurethane rigid foamed aged: R1.5
IW-004	Brick wall/Plasterboard	20.91	Polyurethane rigid foamed aged: R1.5
IW-005	Plasterboard/Brick wall	83.64	Polyurethane rigid foamed aged: R1.5
IW-006	Plasterboard/Brick wall	17.33	

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
B4/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Polished floor (R0.0 insul underl)	18.30			
Ba3/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	6.70			Ceramic tile
B5/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Polished floor (R0.0 insul underl)	26.70			
Entry/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Polished floor (R0.0 insul underl)	2.60			
B3/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	17.00			Ceramic tile
Ba2/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	5.60		R1.0	Ceramic tile
B2/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	17.90			Ceramic tile
Ba1/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	9.70		R1.0	Ceramic tile
B1/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	21.10			Ceramic tile
Rumpus/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	64.90		R1.0	Ceramic tile
H1/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	8.90		R1.0	Ceramic tile
WC/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	4.20			Ceramic tile
Laundry/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	8.00			Ceramic tile
Sauna/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	4.30			Ceramic tile
Cellar/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R0.0 insul underl)	15.40			Ceramic tile
Lobby/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	38.40		R1.0	Ceramic tile
Plant/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Trowel Finish (R0.0 insul underl)	52.40			
M2/Ground	as_FLOR-B001 #2031 © 100mm Concrete Floor slab with timber Floating floor (R0.0 insul under)	38.60			
M2/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling	1.40			
E2/Plant	200mm Concrete Floor slab with ceramic tiles (+R1.0) No ceiling	10.20		R1.0	Ceramic tile
E2/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	3.60		R1.0	Ceramic tile
E1/Plant	200mm Concrete Floor slab with ceramic tiles (+R1.0) No ceiling	3.50		R1.0	Ceramic tile
E1/B3	200mm Concrete Floor slab with ceramic tiles (+R0.0) + Plasterboard under	2.10			Ceramic tile
WIR1/B3	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	5.60			
M1/B3	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	8.80			
M1/Ba2	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	5.60			
M1/Lobby	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	4.80			
H2/B3	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	0.50			
H2/Lobby	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	0.30			
H2/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling	3.30			

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Foyer Entry/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling	8.10			
Foyer Entry/Lobby	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	15.50			
Garage/Ground	as_FLOR-B001 #2051 © 100mm Concrete Floor slab with Trowel Finish (R0.0 insul underl)	23.30			
Garage/Plant	200mm Concrete Floor slab concrete finish (no insul) No ceiling	12.60			
Access Garage/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling	8.80			
Powder/Plant	200mm Concrete Floor slab with ceramic tiles (+R0.0) No ceiling	4.50			Ceramic tile
Study/Cellar	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	11.40			
Pantry/H1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	1.00			
Pantry/Sauna	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	1.80			
Pantry/Cellar	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	4.00			
Kit Living Din/B2	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	17.90			
Kit Living Din/Ba1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	9.70			
Kit Living Din/B1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	2.90			
Kit Living Din/Rumpus	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	34.40			
Kit Living Din/H1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	6.70			
Kit Living Din/WC	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	3.20			
Kit Living Din/Laundry	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	8.00			
Kit Living Din/Sauna	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under	2.50			

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
E1/B3	200mm Concrete Floor slab with ceramic tiles (+R0.0) + Plasterboard under		No
WIR1/B3	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
M1/B3	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
H2/B3	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
M1/Ba2	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/B2	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/Ba1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/B1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/Rumpus	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Pantry/H1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kit Living Din/H1	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/WC	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/Laundry	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Pantry/Sauna	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Kit Living Din/Sauna	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Study/Cellar	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Pantry/Cellar	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
M1/Lobby	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
H2/Lobby	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
Foyer Entry/Lobby	200mm Concrete Floor slab with Floating Timber + R0.0 insul + Plasterboard under		No
M2/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling		No
E2/Plant	200mm Concrete Floor slab with ceramic tiles (+R1.0) No ceiling	R1.0	No
E1/Plant	200mm Concrete Floor slab with ceramic tiles (+R1.0) No ceiling	R1.0	No
H2/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling		No
Foyer Entry/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling		No
Garage/Plant	200mm Concrete Floor slab concrete finish (no insul) No ceiling		No
Access Garage/Plant	200mm Concrete Floor slab with Floating Timber (no insul) No Ceiling		No
Powder/Plant	200mm Concrete Floor slab with ceramic tiles (+R0.0) No ceiling		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kit Living Din	1	Chimney	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
300mm Soil over 200mm concrete slab roof + plasterb'd ceiling under + R4.0	R4.0	50	Medium
as_ROOF-B013.rof #2016 © Concrete slab 170mm - Drained Tile walking surface - R4.0 insulation under slab - Susp. Ceiling under	R4.0	50	Medium
Pebbles + Concrete slab 170mm - WP Membrane surface - R4.0 insulation under slab - Susp. Ceiling under	R4.0	30	Light

* Refer to glossary.

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Pebbles + Concrete slab 170mm - WP Membrane surface - R0.0 insulation under slab - Susp. Ceiling under		30	Light

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).