

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0007873102-01

Generated on 13 Jul 2022 using AccuRate Sustainability V2.4.3.21 SP1

Property

Address 1 Tutus Street , Balgowlah Heights , NSW
, 2093
Lot/DP Lot 23 DP 9561
NCC Class* 1a
Type New Home

Plans

Main Plan proposed new residence for P&A Winters
Prepared by AA

Construction and environment

Assessed floor area (m ² *)	Exposure Type
Conditioned*	378.1
Unconditioned*	167.7
Total	545.8
Garage	102.5

NatHERS climate zone
56



Accredited assessor

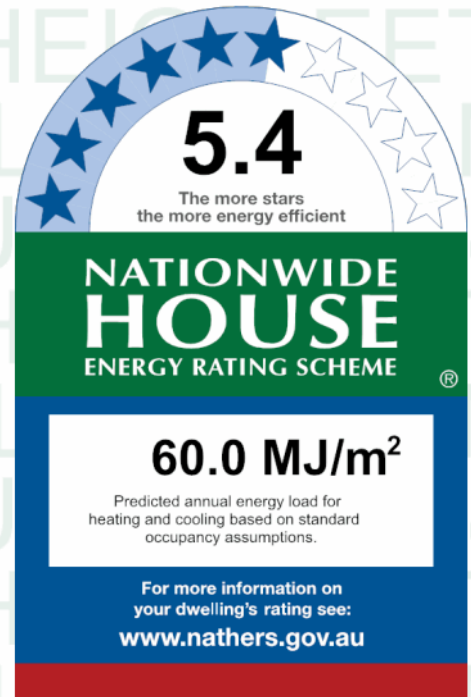
Name Rachel Clarke
Business name Building Sustainability
Email rclarke@buildingsustainability.com.au
Phone 0294204414
Accreditation No. 20824
Assessor Accrediting Organisation
ABSA
Declaration of interest Declaration completed: no conflicts

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
37.0 MJ/m ²	23.0 MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=wbzXgJeiy.

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? 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

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-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E - Clear	4.3	0.53	0.50	0.56

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*
bed 4	ALM-002-03 A	1	600	800	Other	00	N	None
bed 4	ALM-002-03 A	2	2400	2200	Sliding	45	E	None
study	ALM-002-03 A	3	2400	1300	Louvre	90	N	None
study	ALM-004-03 A	4	2400	3300	Sliding	45	E	None
lobby/bath 4/stair void	ALM-004-03 A	13	1600	2300	Other	00	N	None
lobby/bath 4/stair void	ALM-004-03 A	14	1000	2600	Other	00	E	None
rumpus	ALM-004-03 A	8	1800	3400	Sliding	35	E	None
kitchen/breakfast	ALM-001-03 A	10	2400	900	Casement	100	N	None
kitchen/breakfast	ALM-002-03 A	11	2400	4200	Sliding	30	E	None
kitchen/breakfast	ALM-002-03 A	24	1500	2500	Other	00	W	None
kitchen/breakfast	ALM-002-03 A	25	1500	700	Louvre	30	W	None
dining/lobby/upper void	ALM-004-03 A	12a	1300	800	Other	00	E	None
dining/lobby/upper void	ALM-002-03 A	12b	1300	600	Louvre	90	E	None
dining/lobby/upper void	ALM-002-03 A	18a	2400	600	Louvre	90	S	None
dining/lobby/upper void	ALM-001-03 A	18b	2400	1800	Casement	100	S	None
dining/lobby/upper void	ALM-002-03 A	18c	2400	600	Louvre	90	S	None
dining/lobby/upper void	ALM-004-03 A	19	1500	1650	Other	00	W	None
dining/lobby/upper void	ALM-004-03 A	39	900	3600	Other	00	W	None
family	ALM-004-03 A	15	2400	4100	Sliding	45	E	None
family	ALM-004-03 A	16	2400	1400	Sliding	45	W	None
guest WC	ALM-002-03 A	17	1200	600	Louvre	90	S	None
living	ALM-004-03 A	20a	2700	3300	Sliding	45	S	None
living	ALM-002-03 A	20b	2700	600	Louvre	90	S	None
living	ALM-004-03 A	21	2700	3700	Sliding	65	W	None
living	ALM-004-03 A	22a	2250	3400	Other	00	N	None
living	ALM-002-03 A	22b	450	3400	Louvre	90	N	None
bath 1	ALM-002-03 A	26	1300	550	Louvre	90	N	None
bath 1	ALM-002-03 A	42	1200	1000	Louvre	30	W	None
bed 1	ALM-002-03 A	27	2400	900	Louvre	90	N	None
bed 1	ALM-002-03 A	28	2400	3500	Sliding	45	E	None
bath 2	ALM-002-03 A	29	2400	600	Louvre	40	E	None
bed 2	ALM-002-03 A	30	1200	500	Other	00	N	None
bed 2	ALM-002-03 A	31a	2400	2200	Sliding	90	E	None
bed 2	ALM-002-03 A	31b	2400	600	Louvre	60	E	None
bed 3	ALM-002-03 A	32a	2400	2200	Sliding	90	E	None
bed 3	ALM-002-03 A	32b	2400	600	Louvre	60	E	None
bed 3	ALM-002-03 A	33	1200	450	Other	90	S	None

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
bed 3	ALM-002-03 A	34	1800	1100	Sliding	90	W	None
bed 3	ALM-002-03 A	35	2400	450	Louvre	90	S	None
bath 3	ALM-002-03 A	36	1200	600	Louvre	90	S	None
laundry	ALM-002-03 A	37	1200	1200	Louvre	90	S	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
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/cellar/services	2600	4800	0	E
lower entry	2600	950	100	N
lobby/bath 4/stair void	2400	1800	66	E

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	Brick wall	50	Medium	Polystyrene extruded (k = 0.028): R0.9	No
EW-005	Brick wall	50	Medium	Polystyrene extruded (k = 0.028): R0.9	No
EW-006	Retaining Concrete block	50	Medium	Polystyrene extruded (k = 0.028): R0.9	No
EW-007	Sandstone	50	Medium		No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
garage/cellar/services	EW-001	3700	3500	N		Yes
garage/cellar/services	EW-001	3700	7200	N		No
garage/cellar/services	EW-001	2050	6700	N		Yes
garage/cellar/services	EW-002	1650	6700	N		No
garage/cellar/services	EW-002	3700	6700	E	400	No
garage/cellar/services	EW-001	3700	4100	W		No
garage/cellar/services	EW-001	3700	900	E		Yes
lower entry	EW-002	3700	2100	N	650	Yes
lower entry	EW-002	3700	700	S		No
lower entry	EW-001	3700	16200	S		No
lower entry	EW-001	3700	4700	W		No
bed 4	EW-005	2900	4000	N		Yes
bed 4	EW-005	2900	2200	E	4700	Yes
study	EW-005	2900	4400	N	2200	Yes
study	EW-005	2900	3500	E	300	Yes
study	EW-005	2900	1100	S		Yes
lobby/bath 4/stair void	EW-005	2900	1950	E	3200	Yes
lobby/bath 4/stair void	EW-006	2900	2500	S		No
lobby/bath 4/stair void	EW-006	2900	2100	W		No
lobby/bath 4/stair void	EW-005	2800	3300	N		Yes
lobby/bath 4/stair void	EW-005	550	1700	N		Yes
lobby/bath 4/stair void	EW-005	1800	2600	E	3700	No
lobby/bath 4/stair void	EW-005	1100	2600	E		No
lobby/bath 4/stair void	EW-005	550	1700	S		Yes
rumpus	EW-005	2900	750	N		Yes
rumpus	EW-005	2900	5200	E	300	Yes
rumpus	EW-006	2000	4850	S		No
rumpus	EW-005	900	4850	S		No

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
kitchen/breakfast	EW-005	2800	9000	N		Yes
kitchen/breakfast	EW-005	2800	700	E		Yes
kitchen/breakfast	EW-005	2800	1200	N		Yes
kitchen/breakfast	EW-005	2800	4200	E	3300	Yes
kitchen/breakfast	EW-005	2800	4500	W		Yes
dining/lobby/upper void	EW-005	2800	2200	E	3300	Yes
dining/lobby/upper void	EW-005	2800	5900	S		Yes
dining/lobby/upper void	EW-005	2800	2200	W		Yes
dining/lobby/upper void	EW-005	2700	1100	E	1900	Yes
dining/lobby/upper void	EW-005	2700	1100	S		No
dining/lobby/upper void	EW-005	1800	5250	W		Yes
dining/lobby/upper void	EW-005	2800	700	S		Yes
family	EW-005	2800	4600	E	3700	Yes
family	EW-005	2800	4800	S		No
family	EW-005	2800	2500	W		Yes
guest WC	EW-005	2800	1500	S		Yes
living	EW-005	2700	5900	S		Yes
living	EW-005	2700	5000	W	6000	Yes
living	EW-005	2700	3400	N	270	Yes
living	EW-005	2700	2200	N		Yes
living	EW-005	2700	300	N		Yes
bath 1	EW-005	2700	3100	N		Yes
bath 1	EW-005	2700	4800	W		Yes
bed 1	EW-005	2700	5800	N		Yes
bed 1	EW-005	2700	700	E	1000	Yes
bed 1	EW-005	2700	1000	N	700	Yes
bed 1	EW-005	2700	3650	E	950	Yes
bath 2	EW-005	2700	600	E		Yes
bath 2	EW-005	2700	270	N		Yes
bath 2	EW-005	2700	1800	E		Yes
bed 2	EW-005	2700	2750	N		Yes
bed 2	EW-005	2700	3800	E	950	Yes
bed 3	EW-005	2700	3800	E	950	Yes
bed 3	EW-005	2700	5100	S		No
bed 3	EW-005	2700	2500	W		Yes
bed 3	EW-005	2700	1200	S		Yes
bath 3	EW-005	2700	1300	S		Yes
laundry	EW-005	2700	2400	S		Yes
laundry	EW-005	2700	3000	W	1900	Yes

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
upper lobby	EW-005	2700	1700	S	1900	No
subfloor	EW-007	2900	1000	N		No
subfloor	EW-007	2900	600	S		No
subfloor	EW-007	2900	4200	W		Yes
subfloor	EW-007	2900	7400	S		Yes
subfloor	EW-007	2900	4000	W		No
bed 4 storage	EW-001	2800	2250	N		No
bed 4 storage	EW-005	100	2250	N		No
bed 4 storage	EW-001	2900	2100	W		No
bed 4 storage	EW-001	2800	900	E		Yes
bed 4 storage	EW-005	100	900	E		No
bed 4 WIR	EW-001	2700	1050	N		Yes
bed 4 WIR	EW-005	200	1050	N		No
cellar	EW-001	2900	2900	W		No

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-001	Brick wall	282.20	
IW-002	Brick wall	169.10	
IW-003	Brick wall	81.15	
IW-004	Brick wall	12.47	Polystyrene extruded (k = 0.028): R0.4
IW-005	Brick wall	1.45	
IW-007	Brick wall	29.62	Polystyrene extruded (k = 0.028): R0.9

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
garage/cellar/services/Ground	as_FLOR-B002 #1006 © 150mm Concrete Floor slab (no insul)	102.50			
lower entry/Ground	as_FLOR-B002 #1006 © 150mm Concrete Floor slab (no insul)	50.10			
bed 4/garage/cellar/services	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	16.50		R2.5	Carpet 10 + rubber underlay 8
study/garage/cellar/services	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	16.20		R2.5	
lobby/bath 4/stair void/garage/cellar/services	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	8.10		R2.5	Ceramic tile
lobby/bath 4/stair void/lower entry	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	14.60		R2.5	Ceramic tile
lobby/bath 4/stair void/lower entry	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	12.10		R2.5	
lobby/bath 4/stair void/garage/cellar/services	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	0.50		R2.5	

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
rumpus/Ground	as_FLOR-B002 #2021 © 150mm Concrete Floor slab with parquet timber floor (R1.0 insul underl)	22.00		R1.0	
rumpus/lower entry	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	0.30		R2.5	
kitchen/breakfast/Ground	as_FLOR-B002 #2051 © 150mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	35.10		R1.0	Ceramic tile
kitchen/breakfast/bed 4 storage	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	4.80		R2.5	Ceramic tile
kitchen/breakfast/cellar	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	8.60		R2.5	Ceramic tile
kitchen/breakfast/bed 4 WIR	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	2.10		R2.5	Ceramic tile
kitchen/breakfast/lobby/bath 4/stair void	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	0.50		R2.5	
dining/lobby/upper void/lobby/bath 4/stair void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	4.40		R2.5	Ceramic tile
dining/lobby/upper void/Ground	as_FLOR-B002 #2051 © 150mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	36.60		R1.0	Ceramic tile
dining/lobby/upper void/lobby/bath 4/stair void	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	10.30		R2.5	
dining/lobby/upper void/subfloor	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	1.70		R2.5	Ceramic tile
dining/lobby/upper void/subfloor	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	2.30		R2.5	
family/Ground	as_FLOR-B002 #2021 © 150mm Concrete Floor slab with parquet timber floor (R1.0 insul underl)	19.10		R1.0	
family/subfloor	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	4.10		R2.5	
guest WC/Ground	as_FLOR-B002 #2051 © 150mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	2.00		R1.0	Ceramic tile
guest WC/subfloor	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	0.90		R2.5	Ceramic tile
living/Ground	as_FLOR-B002 #2051 © 150mm Concrete Floor slab with Ceramic tile floor (R1.0 insul underl)	29.50		R1.0	Ceramic tile
bath 1/kitchen/breakfast	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	13.40		R2.5	Ceramic tile
bed 1/kitchen/breakfast	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	32.10		R2.5	Carpet 10 + rubber underlay 8
bath 2/kitchen/breakfast	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	0.30		R2.5	Ceramic tile
bath 2/dining/lobby/upper void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	4.30		R2.5	Ceramic tile
bed 2/dining/lobby/upper void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	3.00		R2.5	Carpet 10 + rubber underlay 8
bed 2/lobby/bath 4/stair void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	9.00		R2.5	Carpet 10 + rubber underlay 8
bed 2/rumpus	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	3.00		R2.5	Carpet 10 + rubber underlay 8
bed 3/rumpus	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	18.30		R2.5	Carpet 10 + rubber underlay 8
bed 3/guest WC	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	2.40		R2.5	Carpet 10 + rubber underlay 8
bed 3/dining/lobby/upper void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	1.10		R2.5	Carpet 10 + rubber underlay 8

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
bath 3/dining/lobby/upper void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	3.40		R2.5	Ceramic tile
bath 3/guest WC	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	0.30		R2.5	Ceramic tile
laundry/dining/lobby/upper void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	8.50		R2.5	Ceramic tile
upper lobby/dining/lobby/upper void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	22.10		R2.5	Carpet 10 + rubber underlay 8
upper lobby/kitchen/breakfast	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	4.50		R2.5	Carpet 10 + rubber underlay 8
subfloor/Ground	Bare ground	11.90	Enclosed		
bed 4 storage/garage/cellar/services	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	4.80		R2.5	Carpet 10 + rubber underlay 8
bed 4 WIR/garage/cellar/services	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	1.80		R2.5	Carpet 10 + rubber underlay 8
cellar/garage/cellar/services	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	8.60		R2.5	

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
bed 4/garage/cellar/services	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
study/garage/cellar/services	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
lobby/bath 4/stair void/garage/cellar/services	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
bed 4 storage/garage/cellar/services	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bed 4 WIR/garage/cellar/services	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
cellar/garage/cellar/services	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
lobby/bath 4/stair void/garage/cellar/services	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
lobby/bath 4/stair void/lower entry	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
rumpus/lower entry	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
lobby/bath 4/stair void/lower entry	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
dining/lobby/upper void/lobby/bath 4/stair void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
bed 2/lobby/bath 4/stair void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
dining/lobby/upper void/lobby/bath 4/stair void	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
kitchen/breakfast/lobby/bath 4/stair void	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
bed 2/rumpus	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bed 3/rumpus	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
bath 1/kitchen/breakfast	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
bed 1/kitchen/breakfast	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bath 2/kitchen/breakfast	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
upper lobby/kitchen/breakfast	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bath 2/dining/lobby/upper void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
bed 2/dining/lobby/upper void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bed 3/dining/lobby/upper void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bath 3/dining/lobby/upper void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
laundry/dining/lobby/upper void	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
upper lobby/dining/lobby/upper void	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bed 3/guest WC	as_FLOR-B006 #2014 © 200mm Concrete Floor slab with carpet-underfelt(R2.5 insul under)	R2.5	No
bath 3/guest WC	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
dining/lobby/upper void/subfloor	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
dining/lobby/upper void/subfloor	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
family/subfloor	as_FLOR-B006 #2024 © 200mm Concrete Floor slab with parquet timber floor (R2.5 insul underl)	R2.5	No
guest WC/subfloor	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
kitchen/breakfast/bed 4 storage	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
kitchen/breakfast/bed 4 WIR	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No
kitchen/breakfast/cellar	as_FLOR-B006 #2054 © 200mm Concrete Floor slab with Ceramic tile floor (R2.5 insul underl)	R2.5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
No Data Available				

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
as_ROOF-B011.rof #1001 © Concrete slab 150mm - Drained Tile walking surface - no insulation - Susp. Ceiling under		50	Medium
as_ROOF-B021 #1103 © 300mm Soil over 200mm concrete slab roof + plasterb'd ceiling under		50	Medium
as_ROOF-B021 #1103 © 300mm Soil over 200mm concrete slab roof + R2.5 insulation under slab plasterb'd ceiling under	R2.5	50	Medium
as_ROOF-B011.rof #2037 © Concrete slab 150mm - Tile walking surface - R2.5 insulation under slab - Susp. Ceiling under	R2.5	50	Medium
as_ROOF-B011.rof #2047 © Concrete slab 150mm - WP Membrane surface - R2.5 insulation under slab - Susp. Ceiling under	R2.5	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).