Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006220248

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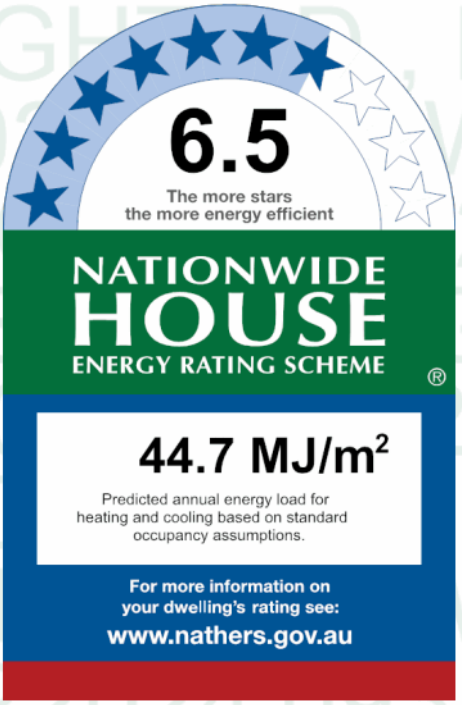

Property

Address	1 Tabalum Road , Balgowlah Heights , NSW , 2093
Lot/DP	20/758044
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	19-0660
Prepared by	Legend Design

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	310.0	Exposed
Unconditioned*	156.0	**NatHERS climate zone**
Total	466.0	56
Garage	126.0	

Thermal performance

Heating	**Cooling**
27.2 MJ/m^2	**17.5** MJ/m^2

Accredited assessor

Name	Tracey Cools
Business name	Efficient Living Pty Ltd
Email	admin@efficientliving.com.au
Phone	02 9970 6181
Accreditation No.	HERA10033

Assessor Accrediting Organisation

HERA

Declaration of interest None

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=QyaqtWbvz.
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
ATB-006-03 B	ATB-006-03 B Al Thermally Broken B DG Argon Fill High Solar Gain low-E - Clear	2.9	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					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Guest Bedroom	ATB-006-03 B	n/a	2700	800	n/a	00	S	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Guest Bedroom	ATB-006-03 B	n/a	2700	2400	n/a	45	W	No
Guest Bedroom	ATB-006-03 B	n/a	2700	800	n/a	00	W	No
Rumpus	ATB-006-03 B	n/a	2700	6600	n/a	67	W	No
Bedroom 2	ATB-006-03 B	n/a	1200	2400	n/a	45	N	No
Bedroom 2	ATB-006-03 B	n/a	1950	2300	n/a	22	S	No
Bedroom 2	ATB-006-03 B	n/a	2700	3200	n/a	45	W	No
Bedroom 2	ATB-006-03 B	n/a	1950	800	n/a	00	W	No
Ens 2	ATB-006-03 B	n/a	500	2080	n/a	45	N	No
Ens 2	ATB-006-03 B	n/a	1500	400	n/a	00	E	No
Stairs level 2	ATB-006-03 B	n/a	2500	4050	n/a	00	N	No
Hall Void	ATB-006-03 B	n/a	2700	2940	n/a	00	W	No
Hall Void	ATB-006-03 B	n/a	2700	900	n/a	90	W	No
Bedroom 1	ATB-006-03 B	n/a	2700	800	n/a	00	N	No
Bedroom 1	ATB-006-03 B	n/a	2700	800	n/a	00	S	No
Bedroom 1	ATB-006-03 B	n/a	2100	1250	n/a	45	S	No
Bedroom 1	ATB-006-03 B	n/a	2700	800	n/a	00	W	No
Bedroom 1	ATB-006-03 B	n/a	2700	2900	n/a	45	W	No
Bedroom 1	ATB-006-03 B	n/a	2700	800	n/a	00	W	No
Ens 1	ATB-006-03 B	n/a	2100	2100	n/a	15	S	No
Bedroom 3	ATB-006-03 B	n/a	2100	930	n/a	00	W	No
Bedroom 3	ATB-006-03 B	n/a	900	2400	n/a	22	E	No
Bedroom 3	ATB-006-03 B	n/a	2100	2400	n/a	22	S	No
Laundry	ATB-006-03 B	n/a	900	1500	n/a	45	E	No
Bath	ATB-006-03 B	n/a	1000	1730	n/a	45	E	No
Bedroom 4	ATB-006-03 B	n/a	1200	2500	n/a	45	N	No
Bedroom 4	ATB-006-03 B	n/a	1200	2400	n/a	22	E	No
Family	ATB-006-03 B	n/a	2200	900	n/a	45	N	No
Family	ATB-006-03 B	n/a	2200	900	n/a	45	N	No
Family	ATB-006-03 B	n/a	900	2500	n/a	45	N	No
Family	ATB-006-03 B	n/a	2700	3800	n/a	60	W	No
Kitchen/Living	ATB-006-03 B	n/a	2700	675	n/a	00	E	No
Kitchen/Living	ATB-006-03 B	n/a	2700	675	n/a	00	E	No
Kitchen/Living	ATB-006-03 B	n/a	700	4000	n/a	00	E	No
Kitchen/Living	ATB-006-03 B	n/a	2700	6965	n/a	67	S	No
Kitchen/Living	ATB-006-03 B	n/a	1800	2250	n/a	45	S	No
Kitchen/Living	ATB-006-03 B	n/a	2700	8050	n/a	67	W	No
Kitchen/Living	ATB-006-03 B	n/a	2700	3030	n/a	00	W	Yes
Kitchen/Living	ATB-006-03 B	n/a	600	8770	n/a	00	S	No Shading
Kitchen/Living	ATB-006-03 B	n/a	600	950	n/a	00	W	No Shading

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ATB-006-03 B	n/a	600	4550	n/a	00	N	No Shading
Stairs level 3	ATB-006-03 B	n/a	2700	4050	n/a	00	N	No
Stairs level 3	ATB-006-03 B	n/a	600	3800	n/a	00	E	No Shading
Stairs level 3	ATB-006-03 B	n/a	600	4050	n/a	00	N	No Shading
Stairs level 3	ATB-006-03 B	n/a	600	3800	n/a	00	W	No Shading
Office	ATB-006-03 B	n/a	1700	2500	n/a	45	N	No
Office	ATB-006-03 B	n/a	1700	1250	n/a	45	E	No
PR	ATB-006-03 B	n/a	1400	900	n/a	45	E	No
BP	ATB-006-03 B	n/a	1400	900	n/a	45	E	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation

* Refer to glossary.

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage 1	2400	6000	90	SW
Rumpus	2040	820	90	S
Kitchen/Living	2700	1200	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Tilt up concrete, lined	0.30	Light	No insulation	No
EW-2	Tilt up concrete, lined	0.30	Light	No insulation	No
EW-3	Tilt up concrete, lined	0.30	Light	Bulk Insulation R2.5	No
EW-4	Tilt up concrete, lined	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)
Garage 1	EW-1	2950	6702	NW	0	NO
Garage 1	EW-1	2950	2040	E	0	NO
Garage 1	EW-1	2950	8900	S	0	YES
Garage 1	EW-1	2950	6888	SE	0	YES
Garage 1	EW-1	2950	1887	NE	7908	YES
Garage 1	EW-1	2950	3220	SE	25	NO
Garage 1	EW-1	2950	1616	S	25	NO
Garage 1	EW-1	2950	6224	SW	0	NO
Plant room	EW-2	2950	5340	N	0	NO
Plant room	EW-1	2950	700	E	0	YES
Pool Equip St	EW-1	2950	6926	NW	0	NO
Pool Equip St	EW-1	2950	3740	N	0	NO
Stairs Garage L	EW-1	2950	2740	E	0	NO
Stairs Garage L	EW-1	2950	4140	N	0	YES
Guest Bedroom	EW-3	2700	3600	N	1625	NO
Guest Bedroom	EW-4	2700	540	N	0	NO
Guest Bedroom	EW-4	2700	2400	S	13425	YES
Guest Bedroom	EW-4	2700	3500	W	2800	NO
Bath Level 1	EW-4	2700	2240	N	0	NO
Bath Level 1	EW-4	2700	700	E	0	YES
Rumpus	EW-4	2700	1340	E	0	NO
Rumpus	EW-4	2700	3600	S	0	YES
Rumpus	EW-4	2700	5300	E	0	YES
Rumpus	EW-4	2700	1500	S	0	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Rumpus	EW-4	2700	3200	S	6575	NO
Rumpus	EW-4	2700	6640	W	5550	YES
Stairs level 1	EW-4	2700	2740	E	0	NO
Stairs level 1	EW-4	2700	4140	N	0	YES
Bedroom 2	EW-4	2700	3740	N	400	NO
Bedroom 2	EW-4	2700	2500	S	12125	YES
Bedroom 2	EW-4	2700	4800	W	800	NO
Ens 2	EW-4	2700	2140	N	400	NO
Ens 2	EW-4	2700	700	E	8100	YES
Stairs level 2	EW-4	2700	4080	N	500	YES
Hall Void	EW-4	2700	4080	W	3300	YES
Bedroom 1	EW-4	2700	2500	N	9400	YES
Bedroom 1	EW-4	2700	6440	S	3025	NO
Bedroom 1	EW-4	2700	4800	W	1375	NO
Ens 1	EW-4	2700	2180	S	2900	YES
Bedroom 3	EW-4	2700	1000	W	10725	YES
Bedroom 3	EW-4	2700	4340	E	400	NO
Bedroom 3	EW-4	2700	4300	S	1900	NO
Laundry	EW-4	2700	1200	N	8450	YES
Laundry	EW-4	2700	2340	E	400	NO
Bath	EW-4	2700	2980	E	1600	YES
Bedroom 4	EW-4	2700	2756	N	467	YES
Bedroom 4	EW-4	2700	500	N	500	NO
Bedroom 4	EW-4	2700	361	NE	451	NO
Bedroom 4	EW-4	2700	4700	E	500	NO
Bedroom 4	EW-4	2700	1700	S	11800	YES
Family	EW-4	2700	4500	N	1000	NO
Family	EW-4	2700	700	E	8600	YES
Family	EW-4	2700	2440	S	12775	YES
Family	EW-4	2700	4200	W	2300	NO
Kitchen/Living	EW-4	2700	2980	E	2600	YES
Kitchen/Living	EW-4	2700	6240	E	700	NO
Kitchen/Living	EW-4	2700	10700	S	600	NO
Kitchen/Living	EW-4	2700	8158	W	4643	YES
Kitchen/Living	EW-4	2700	3940	W	4800	YES
Stairs level 3	EW-4	2700	4080	N	1450	YES
Office	EW-4	2700	2756	N	1020	YES
Office	EW-4	2700	500	N	1075	NO
Office	EW-4	2700	283	NE	1025	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Office	EW-4	2700	2840	E	1000	NO
PR	EW-4	2700	1840	E	1000	NO
PR	EW-4	2700	500	S	11900	YES
BP	EW-4	2700	1780	E	700	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Tilt Concrete		384.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Lift garage Lev	Concrete Slab on Ground 200mm	2.50	None	No Insulation	Ceramic Tiles 8mm
Lift Level 1/Lift garage Lev	Concrete Above Plasterboard 200mm	2.50		No Insulation	Ceramic Tiles 8mm
Lift Level 2/Lift Level 1	Concrete Above Plasterboard 200mm	2.50		No Insulation	Ceramic Tiles 8mm
Lift Level 3/Lift Level 2	Concrete Above Plasterboard 200mm	2.50		No Insulation	Ceramic Tiles 8mm
Garage 1	Concrete Slab on Ground 200mm	73.20	None	No Insulation	Bare
Plant room	Concrete Slab on Ground 200mm	17.90	None	No Insulation	Bare
Pool Equip St	Concrete Slab on Ground 200mm	35.10	None	No Insulation	Bare
Stairs Garage L	Concrete Slab on Ground 200mm	8.30	None	No Insulation	Ceramic Tiles 8mm
Guest Bedroom/Plant room	Concrete Above Plasterboard 200mm	10.40		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Guest Bedroom/Pool Equip St	Concrete Above Plasterboard 200mm	3.80		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Bath Level 1/Plant room	Concrete Above Plasterboard 200mm	7.60		Bulk Insulation R2.5	Ceramic Tiles 8mm
Rumpus/Garage 1	Concrete Above Plasterboard 200mm	14.70		Bulk Insulation R2.5	Ceramic Tiles 8mm
Rumpus	Concrete Slab on Ground 200mm	21.30	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Stairs level 1/Stairs Garage L	Concrete Above Plasterboard 200mm	8.30		No Insulation	Ceramic Tiles 8mm
Bedroom 2/Guest Bedroom	Concrete Above Plasterboard 150mm	12.60		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2/Bath Level 1	Concrete Above Plasterboard 150mm	2.70		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2/Rumpus	Concrete Above Plasterboard 150mm	5.20		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2	Suspended Concrete Slab 150mm	2.40	Totally Open	Bulk Insulation in Contact with Floor R3	Cork Tiles or Parquetry 8mm
Ens 2/Bath Level 1	Concrete Above Plasterboard 200mm	4.90		No Insulation	Ceramic Tiles 8mm
Stairs level 2/Stairs level 1	Concrete Above Plasterboard 200mm	8.10		No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hall Void/Rumpus	Concrete Above Plasterboard 200mm	22.10		No Insulation	Ceramic Tiles 8mm
Hall Void	Concrete Slab on Ground 200mm	13.10	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 1/Rumpus	Concrete Above Plasterboard 150mm	5.40		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Concrete Slab 150mm	25.20	Totally Open	Bulk Insulation in Contact with Floor R3	Cork Tiles or Parquetry 8mm
Ens 1	Concrete Slab on Ground 200mm	8.60	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 200mm	18.50	None	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Laundry	Concrete Slab on Ground 200mm	7.00	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 200mm	9.10	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 4	Concrete Slab on Ground 200mm	15.50	None	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Family/Bedroom 2	Concrete Above Plasterboard 200mm	12.80		No Insulation	Ceramic Tiles 8mm
Family/Ens 2	Concrete Above Plasterboard 200mm	5.20		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 2	Concrete Above Plasterboard 200mm	1.80		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Hall Void	Concrete Above Plasterboard 200mm	30.20		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 1	Concrete Above Plasterboard 200mm	14.80		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Ens 1	Concrete Above Plasterboard 200mm	9.10		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 3	Concrete Above Plasterboard 200mm	18.70		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Laundry	Concrete Above Plasterboard 200mm	1.90		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bath	Concrete Above Plasterboard 200mm	9.50		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 4	Concrete Above Plasterboard 200mm	2.10		No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	24.50	Totally Open	Bulk Insulation in Contact with Floor R3	Ceramic Tiles 8mm
Stairs level 3/Stairs level 2	Concrete Above Plasterboard 150mm	8.10		No Insulation	Ceramic Tiles 8mm
Office/Bedroom 4	Concrete Above Plasterboard 200mm	9.70		No Insulation	Ceramic Tiles 8mm
PR/Bedroom 4	Concrete Above Plasterboard 200mm	3.30		No Insulation	Ceramic Tiles 8mm
BP/Laundry	Concrete Above Plasterboard 200mm	5.10		No Insulation	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Lift garage Lev	Concrete Above Plasterboard	No Insulation	No
Lift Level 1	Concrete Above Plasterboard	No Insulation	No
Lift Level 2	Concrete Above Plasterboard	No Insulation	No
Lift Level 3	Concrete, Plasterboard	Bulk Insulation R4.5	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage 1	Concrete, Plasterboard	No insulation	No
Garage 1	Concrete Above Plasterboard	Bulk Insulation R2.5	No
Plant room	Concrete Above Plasterboard	Bulk Insulation R2.5	No
Pool Equip St	Concrete, Plasterboard	No insulation	No
Pool Equip St	Concrete Above Plasterboard	Bulk Insulation R2.5	No
Stairs Garage L	Concrete Above Plasterboard	No Insulation	No
Guest Bedroom	Plasterboard	Bulk Insulation R2.5	No
Guest Bedroom	Concrete Above Plasterboard	No Insulation	No
Bath Level 1	Concrete Above Plasterboard	No Insulation	No
Rumpus	Plasterboard	Bulk Insulation R2.5	No
Rumpus	Concrete Above Plasterboard	No Insulation	No
Stairs level 1	Concrete Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Concrete Above Plasterboard	No Insulation	No
Ens 2	Concrete Above Plasterboard	No Insulation	No
Stairs level 2	Concrete Above Plasterboard	No Insulation	No
Hall Void	Plasterboard	Bulk Insulation R2.5	No
Hall Void	Concrete Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Concrete Above Plasterboard	No Insulation	No
Ens 1	Concrete Above Plasterboard	No Insulation	No
Bedroom 3	Concrete Above Plasterboard	No Insulation	No
Laundry	Concrete Above Plasterboard	No Insulation	No
Bath	Concrete Above Plasterboard	No Insulation	No
Bedroom 4	Concrete Above Plasterboard	No Insulation	No
Family	Concrete, Plasterboard	Bulk Insulation R4.5	No
Kitchen/Living	Concrete, Plasterboard	Bulk Insulation R4.5	No
Stairs level 3	Concrete, Plasterboard	Bulk Insulation R4.5	No
Office	Concrete, Plasterboard	Bulk Insulation R4.5	No
PR	Concrete, Plasterboard	Bulk Insulation R4.5	No
BP	Concrete, Plasterboard	Bulk Insulation R4.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Guest Bedroom	3	Downlights - LED	150	Sealed
Bath Level 1	2	Downlights - LED	150	Sealed
Bath Level 1	1	Exhaust Fans	300	Sealed
Rumpus	9	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Stairs level 1	1	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Ens 2	1	Downlights - LED	150	Sealed
Ens 2	1	Exhaust Fans	300	Sealed
Stairs level 2	2	Downlights - LED	150	Sealed
Hall Void	8	Downlights - LED	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Ens 1	2	Downlights - LED	150	Sealed
Ens 1	1	Exhaust Fans	300	Sealed
Bedroom 3	4	Downlights - LED	150	Sealed
Laundry	1	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 4	3	Downlights - LED	150	Sealed
Family	4	Downlights - LED	150	Sealed
Kitchen/Living	28	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Stairs level 3	2	Downlights - LED	150	Sealed
Office	2	Downlights - LED	150	Sealed
PR	1	Downlights - LED	150	Sealed
PR	1	Exhaust Fans	300	Sealed
BP	1	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Waterproofing Membrane	Bulk Insulation, No Air Gap Above R1	0.30	Light
Waterproofing Membrane	No Insulation, Only an Air Gap	0.30	Light
Concrete	No Insulation, Only an Air Gap	0.30	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).