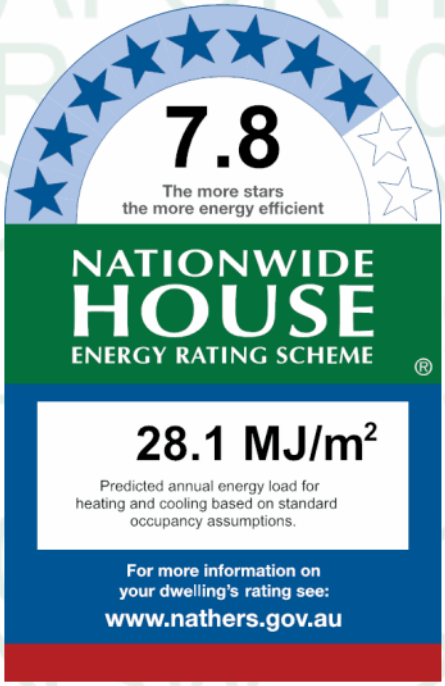
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009291436-02

Generated on 18 Mar 2024 using BERS Pro v4.4.1.5 (3.21)



Property

Address	13 Acacia Rd, Seaforth , NSW , 2092
Lot/DP	10330
NCC Class*	1A
Type	New Dwelling

Plans

Main plan	Rischmiller Residence
Prepared by	mpd Architects

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	327.0
Unconditioned*	71.0
Total	398.0
Garage	42.0

Exposure type

Open

NatHERS climate zone

56

Thermal performance

Heating	Cooling
18.3	**9.8**
MJ/m^2	MJ/m^2

Accredited assessor

Name	David Howard
Business name	Partners Energy Management
Email	david@partnersenergy.com.au
Phone	0421381005
Accreditation No.	20039
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=mQUvRxfRv.
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? 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

Downlights must not penetrate ceiling insulation.
Client has advised proximity to water way and being near top of a hill creates an OPEN environment.
Basement Store is not habitable due to ceiling height.
Grd walls modelled as Masterwall X series (R2.6) + R2.7 batts
L1 walls modelled as framed walls using Kingspan K12 - 25mm plus R2.7 batts
I have modeled the shading in accordance with NatHERS principles

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
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALS-074-09 A	ALS-074-09 A ProGlide Ultra Flat Sliding Door DG 6mmEVAnClr-12Ar-6mmClr	3.3	0.43	0.41	0.45
ALS-028-09 A	ALS-028-09 A 50mm Carinya Classic Fixed Window DG 6mmEVanClr-8Ar-4mmClr	2.6	0.51	0.48	0.54
BRZ-007-03 A	BRZ-007-03 A Easyscreen Fixed Lite Window System SG 6EVan	4.4	0.53	0.50	0.56
ALS-044-02 A	ALS-044-02 A Carinya Select 125 Hinged Door SG 6.38CPClr	4.4	0.48	0.46	0.50
ALS-003-02 A	ALS-003-02 A 76mm ViewMax Sliding Window DG 4Clr/8/4EA	3.6	0.56	0.53	0.59

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Basement Rumpus	ALS-074-09 A	n/a	2400	1500	n/a	45	W	No
Basement Rumpus	ALS-028-09 A	n/a	900	1600	n/a	00	N	No
Basement Rumpus	BRZ-007-03 A	n/a	900	600	n/a	90	N	No
Basement Rumpus	BRZ-007-03 A	n/a	900	600	n/a	90	N	No
Bed 5	ALS-028-09 A	n/a	900	1400	n/a	00	N	No
Bed 5	BRZ-007-03 A	n/a	900	600	n/a	90	N	No
Lounge	ALS-074-09 A	n/a	2400	2950	n/a	65	N	Yes
Lounge	ALS-074-09 A	n/a	2400	4100	n/a	65	W	Yes
Garage Stairs	ALS-028-09 A	n/a	1500	950	n/a	00	W	No
Kitchen/Living	BRZ-007-03 A	n/a	2700	800	n/a	90	N	Yes
Kitchen/Living	ALS-028-09 A	n/a	2700	1870	n/a	00	N	No
Kitchen/Living	BRZ-007-03 A	n/a	2700	800	n/a	90	N	No
Kitchen/Living	ALS-028-09 A	n/a	2700	1870	n/a	00	N	Yes
Kitchen/Living	BRZ-007-03 A	n/a	2700	800	n/a	90	S	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALS-028-09 A	n/a	600	1900	n/a	00	S	No
Kitchen/Living	ALS-028-09 A	n/a	500	1200	n/a	00	S	No
Grd Bath	BRZ-007-03 A	n/a	650	800	n/a	90	S	No
Bed 4	BRZ-007-03 A	n/a	600	1600	n/a	90	S	No
Bed 4	ALS-028-09 A	n/a	1450	800	n/a	00	W	No
Bed 4	BRZ-007-03 A	n/a	1450	800	n/a	90	W	No
Butlers	BRZ-007-03 A	n/a	1450	800	n/a	90	S	No
Ldry	ALS-044-02 A	n/a	2100	860	n/a	90	E	No
Ldry	BRZ-007-03 A	n/a	1450	800	n/a	90	S	No
Kitchen/Living	ALS-074-09 A	n/a	2700	4800	n/a	75	N	Yes
Kitchen/Living	ALS-074-09 A	n/a	2250	3600	n/a	65	N	Yes
Kitchen/Living	ALS-074-09 A	n/a	2250	3600	n/a	65	E	No
Kitchen/Living	BRZ-007-03 A	n/a	800	600	n/a	90	E	No
Kitchen/Living	ALS-028-09 A	n/a	800	1800	n/a	00	E	No
Bed 1	ALS-003-02 A	n/a	1650	2995	n/a	10	W	No
Bed 1	ALS-028-09 A	n/a	1650	1000	n/a	00	N	No
Bed 1	BRZ-007-03 A	n/a	1650	800	n/a	90	N	No
Bed 1	BRZ-007-03 A	n/a	1650	640	n/a	90	N	No
Ens 1	BRZ-007-03 A	n/a	650	800	n/a	90	S	No
Ens 1	BRZ-007-03 A	n/a	650	800	n/a	90	S	No
Ens 1	BRZ-007-03 A	n/a	1650	1600	n/a	90	W	No
WIR 1	BRZ-007-03 A	n/a	650	800	n/a	90	S	No
L1 Bath	BRZ-007-03 A	n/a	650	1600	n/a	90	S	No
L1 WC	BRZ-007-03 A	n/a	650	800	n/a	90	S	No
Bed 2	BRZ-007-03 A	n/a	1650	800	n/a	90	S	No
Bed 2	ALS-028-09 A	n/a	1650	1200	n/a	00	S	No
Bed 3	ALS-028-09 A	n/a	1500	1200	n/a	00	E	No
Bed 3	BRZ-007-03 A	n/a	1500	800	n/a	90	E	No
Bed 3	BRZ-007-03 A	n/a	1500	800	n/a	90	S	No
L1 Hall/Rumpus	ALS-028-09 A	n/a	2250	1870	n/a	00	N	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
L1 Hall/Rumpus	BRZ-007-03 A	n/a	2250	800	n/a	90	N	No
L1 Hall/Rumpus	BRZ-007-03 A	n/a	2250	800	n/a	90	N	No
L1 Hall/Rumpus	BRZ-007-03 A	n/a	2250	800	n/a	90	N	No
L1 Hall/Rumpus	ALS-028-09 A	n/a	2250	3200	n/a	00	N	No
L1 Hall/Rumpus	ALS-028-09 A	n/a	1500	750	n/a	00	W	No
L1 Hall/Rumpus	BRZ-007-03 A	n/a	1500	600	n/a	90	W	No
L1 Hall/Rumpus	ALS-028-09 A	n/a	1500	1400	n/a	00	N	No
L1 Hall/Rumpus	BRZ-007-03 A	n/a	1500	800	n/a	90	N	No
L1 Hall/Rumpus	ALS-074-09 A	n/a	2250	3000	n/a	30	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
VEL-011-01 W	Glass	2.6	0.24	0.23	0.25

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
WIR 1	VEL-011-01 W	n/a	0	900	600	N	No	No
L1 Bath	VEL-011-01 W	n/a	0	900	600	N	No	No

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

* Refer to glossary.

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	2400	5700	90	W
Basement storag	2040	820	90	E
Kitchen/Living	2700	1200	90	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Concrete Block	0.50	Medium	No insulation	No
EW-2	Concrete Block	0.50	Medium	Bulk Insulation R2	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R2.7	No
EW-4	Fibro Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R5	No
EW-5	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R3.8	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2700	5200	N	0	YES
Garage	EW-1	2700	6355	S	0	NO
Garage	EW-1	2700	6600	W	0	NO
Mud	EW-2	2700	4200	S	0	NO
Basement Rumpus	EW-3	2700	1755	W	1400	YES
Basement Rumpus	EW-2	2700	5345	N	0	NO
Basement storag	EW-1	2700	3145	E	6700	NO
Basement storag	EW-1	2700	2945	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)
Basement Bath	EW-2	2700	1790	E	6700	NO
Bed 5	EW-2	2700	3045	N	0	NO
Bed 5	EW-2	2700	3245	E	6700	NO
Lounge	EW-4	2700	6400	N	0	NO
Lounge	EW-4	2700	500	E	2800	YES
Lounge	EW-4	2700	2300	S	0	YES
Lounge	EW-4	2700	5400	W	0	NO
Garage Stairs	EW-4	2700	600	E	17800	YES
Garage Stairs	EW-4	2700	4100	S	0	NO
Garage Stairs	EW-4	2700	1195	W	0	YES
Kitchen/Living	EW-4	2700	7790	N	0	YES
Kitchen/Living	EW-4	3400	2290	S	600	YES
Grd Bath	EW-4	2700	1495	S	0	YES
Grd Bath	EW-4	2700	600	W	6400	YES
Bed 4	EW-4	2700	3295	S	0	NO
Bed 4	EW-4	2700	2200	W	0	YES
Butlers	EW-4	2700	2890	S	0	NO
Ldry	EW-4	2700	2195	E	0	YES
Ldry	EW-4	2700	3795	S	0	NO
Kitchen/Living	EW-4	2700	5495	N	0	YES
Kitchen/Living	EW-4	2700	1300	W	10500	YES
Kitchen/Living	EW-4	2700	4500	N	1300	NO
Kitchen/Living	EW-4	2700	7400	E	0	NO
Kitchen/Living	EW-4	2700	4000	S	0	YES
Bed 1	EW-5	2700	4595	W	400	NO
Bed 1	EW-5	2700	5400	N	0	NO
Bed 1	EW-5	2700	900	E	15400	YES
Ens 1	EW-5	2700	5395	S	0	NO
Ens 1	EW-5	2700	2395	W	500	NO
WIR 1	EW-5	2700	2290	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)
L1 Bath	EW-5	2700	2190	S	0	NO
L1 WC	EW-5	2700	1690	S	0	NO
Bed 2	EW-5	2700	4490	S	0	NO
Bed 3	EW-5	2700	3895	E	400	NO
Bed 3	EW-5	2700	4295	S	0	NO
L1 Hall/Rumpus	EW-5	2700	10495	N	1100	YES
L1 Hall/Rumpus	EW-5	2700	2600	W	10600	NO
L1 Hall/Rumpus	EW-5	2700	4500	N	0	NO
L1 Hall/Rumpus	EW-5	2700	4795	E	400	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Concrete Block		21.00	Bulk Insulation, No Air Gap R2
IW-2 - Single Skin Brick		34.00	No insulation
IW-3 - Single Skin Brick		17.00	Bulk Insulation, No Air Gap R2
IW-4 - Cavity wall, direct fix plasterboard, single gap		244.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	41.90	None	No Insulation	Bare
Mud	Concrete Slab on Ground 100mm	13.20	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Basement Rumpus	Concrete Slab on Ground 100mm	24.70	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Basement storag	Concrete Slab on Ground 100mm	9.30	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Basement Bath	Concrete Slab on Ground 100mm	4.00	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bed 5	Concrete Slab on Ground 100mm	9.90	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Lounge/Garage	Concrete Above Plasterboard 100mm	6.40		Bulk Insulation R2	Cork Tiles or Parquetry 8mm

* Refer to glossary.
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Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Lounge/Mud	Concrete Above Plasterboard 100mm	8.40		No Insulation	Cork Tiles or Parquetry 8mm
Lounge/Basement Rumpus	Concrete Above Plasterboard 100mm	15.60		No Insulation	Cork Tiles or Parquetry 8mm
Lounge/Basement storag	Concrete Above Plasterboard 100mm	1.20		No Insulation	Cork Tiles or Parquetry 8mm
Lounge/Bed 5	Concrete Above Plasterboard 100mm	1.50		No Insulation	Cork Tiles or Parquetry 8mm
Garage Stairs/Mud	Concrete Above Plasterboard 100mm	3.70		No Insulation	Cork Tiles or Parquetry 8mm
Garage Stairs/Basement storag	Concrete Above Plasterboard 100mm	1.50		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Basement storag	Concrete Above Plasterboard 100mm	5.30		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Basement Bath	Concrete Above Plasterboard 100mm	3.90		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bed 5	Concrete Above Plasterboard 100mm	2.00		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	15.00	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Grd Bath	Concrete Slab on Ground 100mm	3.80	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bed 4	Concrete Slab on Ground 100mm	14.60	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
WIR 4	Concrete Slab on Ground 100mm	2.60	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Pantry	Concrete Slab on Ground 100mm	1.50	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Butlers	Concrete Slab on Ground 100mm	5.50	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Ldry	Concrete Slab on Ground 100mm	7.40	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	70.20	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Bed 1/Lounge	Timber Above Plasterboard 19mm	10.70		No Insulation	Cork Tiles or Parquetry 8mm
Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	11.30		No Insulation	Cork Tiles or Parquetry 8mm
Bed 1	Suspended Timber Floor 19mm	3.50	Totally Open	Bulk Insulation, Gap to Floor R2.5	Carpet+Rubber Underlay 18mm
Ens 1/Lounge	Timber Above Plasterboard 19mm	2.50		No Insulation	Ceramic Tiles 8mm
Ens 1/Garage Stairs	Timber Above Plasterboard 19mm	3.60		No Insulation	Ceramic Tiles 8mm
Ens 1/Kitchen/Living	Timber Above Plasterboard 19mm	4.00		No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Ens 1/Grd Bath	Timber Above Plasterboard 19mm	1.20		No Insulation	Ceramic Tiles 8mm
Ens 1	Suspended Timber Floor 19mm	1.30	Totally Open	Bulk Insulation, Gap to Floor R2.5	Ceramic Tiles 8mm
WIR 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.60		No Insulation	Carpet+Rubber Underlay 18mm
WIR 1/Grd Bath	Timber Above Plasterboard 19mm	2.60		No Insulation	Carpet+Rubber Underlay 18mm
WIR 1/Bed 4	Timber Above Plasterboard 19mm	3.20		No Insulation	Carpet+Rubber Underlay 18mm
L1 Bath/Bed 4	Timber Above Plasterboard 19mm	4.20		No Insulation	Ceramic Tiles 8mm
L1 Bath/WIR 4	Timber Above Plasterboard 19mm	2.40		No Insulation	Ceramic Tiles 8mm
L1 Bath/Kitchen/Living	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
L1 WC/Kitchen/Living	Timber Above Plasterboard 19mm	1.50		No Insulation	Ceramic Tiles 8mm
L1 Bath Hall/Kitchen/Living	Timber Above Plasterboard 19mm	4.60		No Insulation	Ceramic Tiles 8mm
Bed 2/Kitchen/Living	Timber Above Plasterboard 19mm	17.00		No Insulation	Carpet+Rubber Underlay 18mm
Bed 3/Kitchen/Living	Timber Above Plasterboard 19mm	16.40		No Insulation	Carpet+Rubber Underlay 18mm
L1 Hall/Rumpus/Kitchen/Living	Timber Above Plasterboard 19mm	8.00		No Insulation	Cork Tiles or Parquetry 8mm
L1 Hall/Rumpus/Pantry	Timber Above Plasterboard 19mm	1.50		No Insulation	Cork Tiles or Parquetry 8mm
L1 Hall/Rumpus/Kitchen/Living	Timber Above Plasterboard 19mm	27.30		No Insulation	Cork Tiles or Parquetry 8mm
L1 Hall/Rumpus	Suspended Timber Floor 19mm	5.70	Totally Open	Bulk Insulation, Gap to 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*
Garage	Concrete, Plasterboard	Bulk Insulation R2	No
Garage	Concrete Above Plasterboard	Bulk Insulation R2	No
Mud	Concrete, Plasterboard	Bulk Insulation R2	No
Mud	Concrete Above Plasterboard	No Insulation	No
Basement Rumpus	Concrete, Plasterboard	Bulk Insulation R2	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Basement Rumpus	Concrete Above Plasterboard	No Insulation	No
Basement storag	Concrete, Plasterboard	Bulk Insulation R2	No
Basement storag	Concrete Above Plasterboard	No Insulation	No
Basement Bath	Concrete, Plasterboard	Bulk Insulation R2	No
Basement Bath	Concrete Above Plasterboard	No Insulation	No
Bed 5	Concrete, Plasterboard	Bulk Insulation R2	No
Bed 5	Concrete Above Plasterboard	No Insulation	No
Lounge	Plasterboard	Bulk Insulation R3.5	No
Lounge	Timber Above Plasterboard	No Insulation	No
Garage Stairs	Plasterboard	Bulk Insulation R3.5	No
Garage Stairs	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Grd Bath	Plasterboard	Bulk Insulation R3.5	No
Grd Bath	Timber Above Plasterboard	No Insulation	No
Bed 4	Plasterboard	Bulk Insulation R3.5	No
Bed 4	Timber Above Plasterboard	No Insulation	No
WIR 4	Plasterboard	Bulk Insulation R3.5	No
WIR 4	Timber Above Plasterboard	No Insulation	No
Pantry	Plasterboard	Bulk Insulation R3.5	No
Pantry	Timber Above Plasterboard	No Insulation	No
Butlers	Plasterboard	Bulk Insulation R3.5	No
Ldry	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ens 1	Plasterboard	Bulk Insulation R3.5	No
WIR 1	Plasterboard	Bulk Insulation R3.5	No
L1 Bath	Plasterboard	Bulk Insulation R3.5	No
L1 WC	Plasterboard	Bulk Insulation R3.5	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
L1 Bath Hall	Plasterboard	Bulk Insulation R3.5	No
Bed 2	Plasterboard	Bulk Insulation R3.5	No
Bed 3	Plasterboard	Bulk Insulation R3.5	No
L1 Hall/Rumpus	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Mud	2	Downlights - LED	0	Sealed
Basement Rumpus	4	Downlights - LED	0	Sealed
Basement Bath	1	Downlights - LED	0	Sealed
Bed 5	2	Downlights - LED	0	Sealed
Lounge	5	Downlights - LED	0	Sealed
Garage Stairs	2	Downlights - LED	0	Sealed
Kitchen/Living	5	Downlights - LED	0	Sealed
Grd Bath	1	Downlights - LED	0	Sealed
Bed 4	3	Downlights - LED	0	Sealed
WIR 4	1	Downlights - LED	0	Sealed
Pantry	1	Downlights - LED	0	Sealed
Butlers	2	Downlights - LED	0	Sealed
Ldry	2	Downlights - LED	0	Sealed
Kitchen/Living	8	Downlights - LED	0	Sealed
Bed 1	4	Downlights - LED	0	Sealed
Ens 1	2	Downlights - LED	0	Sealed
WIR 1	1	Downlights - LED	0	Sealed
L1 Bath	1	Downlights - LED	0	Sealed
L1 WC	1	Downlights - LED	0	Sealed
L1 Bath Hall	2	Downlights - LED	0	Sealed
Bed 2	3	Downlights - LED	0	Sealed
Bed 3	3	Downlights - LED	0	Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
L1 Hall/Rumpus	8	Downlights - LED	0	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Basement Rumpus	1	1200
Bed 5	1	900
Lounge	1	1400
Bed 4	1	900
Kitchen/Living	3	1400
Bed 1	1	900
Bed 2	1	900
Bed 3	1	900
L1 Hall/Rumpus	2	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Waterproofing Membrane	No Insulation, Only an Air Gap	0.50	Medium
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	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).