

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0006182034

Generated on 29 Jun 2021 using BERS Pro v4.4.0.2 (3.21)

Property

Address Unit House, 521 Barrenjoey Road ,
Bilgola Beach , NSW , 2107

Lot/DP 129/16902

NCC Class* 1A

Type New Dwelling

Plans

Main Plan A 2004 00 - A2 2004 15

Prepared by Peterdownes design

Construction and environment

Assessed floor area (m ²)*	Exposure Type
Conditioned* 437.0	Suburban
Unconditioned* 27.0	NatHERS climate zone
Total 464.0	56
Garage 0.0	

Accredited assessor

Name Ailin Zhang

Business name Victor Lin Associates Pty Ltd

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Accreditation No. DMN/19/1894

Assessor Accrediting Organisation
Design Matters National

Declaration of interest None

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.

5.1
The more stars
the more energy efficient

**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

65.0 MJ/m²
Predicted annual energy load for
heating and cooling based on standard
occupancy assumptions.

For more information on
your dwelling's rating see:
www.nathers.gov.au

Thermal performance

Heating	Cooling
39.3 MJ/m ²	25.7 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=AECXMYSIE.

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?

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-003-04 A	ALM-003-04 A Aluminium A DG Air Fill Low Solar Gain low-E -Clear	4.9	0.33	0.33	0.33
ALM-004-04 A	ALM-004-04 A Aluminium B DG Air Fill Low Solar Gain low-E -Clear	4.9	0.33	0.33	0.33
ATB-004-04 B	ATB-004-04 B AI Thermally Broken B DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27	0.27	0.27

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*
Office 1	ALM-003-04 A	n/a	600	1200	n/a	90	NW	No
Office 1	ALM-003-04 A	n/a	1600	1200	n/a	90	SE	No
Office 1	ALM-004-04 A	n/a	1600	600	n/a	00	S	No
Office 1	ALM-004-04 A	n/a	1600	1600	n/a	00	SW	No
Office 1	ALM-004-04 A	n/a	1600	1600	n/a	00	SW	No
office 2	ALM-003-04 A	n/a	600	2400	n/a	90	NW	No
office 2	ALM-004-04 A	n/a	2400	2000	n/a	45	SE	No
office 2	ALM-004-04 A	n/a	1600	600	n/a	00	SE	No
office 2	ALM-004-04 A	n/a	1600	1600	n/a	00	SW	No
office 2	ALM-004-04 A	n/a	1600	1600	n/a	00	SW	No
corridor	ALM-003-04 A	n/a	1600	600	n/a	90	SE	No
corridor	ALM-003-04 A	n/a	1600	600	n/a	90	SE	No
bath	ALM-003-04 A	n/a	600	1200	n/a	90	NW	No
studio	ALM-003-04 A	n/a	600	2400	n/a	90	NW	No
studio	ALM-004-04 A	n/a	1600	600	n/a	00	S	No
studio	ATB-004-04 B	n/a	1600	1600	n/a	00	SW	No
studio	ATB-004-04 B	n/a	1600	1600	n/a	00	SW	No
bath	ALM-003-04 A	n/a	600	1200	n/a	90	NW	No
corridor	ALM-003-04 A	n/a	1600	600	n/a	90	NW	No
corridor	ALM-003-04 A	n/a	1600	600	n/a	00	SE	No
corridor	ALM-003-04 A	n/a	1600	600	n/a	00	SE	No
corridor	ALM-003-04 A	n/a	1600	600	n/a	00	SE	No
corridor	ALM-003-04 A	n/a	2250	600	n/a	00	SE	No
family	ATB-004-04 B	n/a	2700	2500	n/a	45	NW	No
family	ATB-004-04 B	n/a	1300	2500	n/a	00	NW	No
family	ALM-004-04 A	n/a	600	600	n/a	00	NW	No
family	ALM-004-04 A	n/a	600	600	n/a	00	NW	No
family	ATB-004-04 B	n/a	2700	2500	n/a	45	SE	No
family	ATB-004-04 B	n/a	1300	2500	n/a	00	SE	No
family	ALM-003-04 A	n/a	3850	600	n/a	90	SE	No
family	ALM-003-04 A	n/a	3850	600	n/a	90	S	No
family	ALM-003-04 A	n/a	3850	600	n/a	90	S	No
family	ATB-004-04 B	n/a	3850	2550	n/a	00	S	No
Bedroom 4	ATB-004-04 B	n/a	2700	2500	n/a	45	SE	No
Bedroom 4	ALM-004-04 A	n/a	2550	600	n/a	00	SE	No
Bedroom 4	ALM-004-04 A	n/a	2550	600	n/a	00	S	No
Bedroom 4	ALM-004-04 A	n/a	2550	600	n/a	00	S	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 3	ATB-004-04 B	n/a	2700	2500	n/a	45	SE	No
Bedroom 3	ATB-004-04 B	n/a	2700	2500	n/a	45	NW	No
Bedroom 2	ATB-004-04 B	n/a	2700	2500	n/a	45	NW	No
Bedroom 2	ATB-004-04 B	n/a	2550	2550	n/a	00	S	No
bath	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
bath	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
daytime	ALM-004-04 A	n/a	1600	300	n/a	00	SW	No
daytime	ALM-004-04 A	n/a	1600	300	n/a	00	W	No
daytime	ALM-004-04 A	n/a	1600	300	n/a	00	NW	No
daytime	ALM-004-04 A	n/a	1600	300	n/a	00	NW	No
daytime	ALM-004-04 A	n/a	1600	300	n/a	00	N	No
daytime	ATB-004-04 B	n/a	2550	3000	n/a	20	SE	No
Kitchen/Living	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
Kitchen/Living	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
Kitchen/Living	ALM-004-04 A	n/a	1600	300	n/a	00	SW	No
Kitchen/Living	ALM-004-04 A	n/a	1600	300	n/a	00	W	No
Kitchen/Living	ALM-004-04 A	n/a	1600	300	n/a	00	NW	No
Kitchen/Living	ALM-004-04 A	n/a	1600	300	n/a	00	N	No
Kitchen/Living	ALM-004-04 A	n/a	1600	300	n/a	00	N	No
Kitchen/Living	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
Kitchen/Living	ATB-004-04 B	n/a	1950	3000	n/a	00	NE	No
Kitchen/Living	ATB-004-04 B	n/a	2700	5000	n/a	45	NE	No
Kitchen/Living	ATB-004-04 B	n/a	2550	4500	n/a	00	SE	No
Kitchen/Living	ATB-004-04 B	n/a	2550	2550	n/a	00	SE	No
Kitchen/Living	ATB-004-04 B	n/a	2700	6800	n/a	45	S	No
wc	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
Bedroom 1	ATB-004-04 B	n/a	2700	5000	n/a	45	NE	No
Bedroom 1	ATB-004-04 B	n/a	2550	4500	n/a	00	SE	No
Bedroom 1	ALM-004-04 A	n/a	2700	2500	n/a	45	S	No
Bedroom 1	ALM-004-04 A	n/a	2550	2550	n/a	00	S	No
ens	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
ens	ALM-003-04 A	n/a	2550	600	n/a	90	NW	No
ens	ALM-004-04 A	n/a	1950	3000	n/a	00	NE	No
Studio	ATB-004-04 B	n/a	2400	2000	n/a	45	SE	No
Studio	ATB-004-04 B	n/a	1000	4400	n/a	00	NE	No Shading
Studio	ALM-004-04 A	n/a	1	1	n/a	00	SW	No Shading
Studio	ALM-004-04 A	n/a	1	1	n/a	00	NW	No Shading
Studio	ATB-004-04 B	n/a	1150	2550	n/a	00	SE	No Shading
Stairwell	ALM-004-04 A	n/a	2550	600	n/a	00	S	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Stairwell	ALM-003-04 A	n/a	2550	900	n/a	90	S	No
Stairwell	ALM-004-04 A	n/a	2550	600	n/a	00	S	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
corridor	2400	900	90	SE

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	0.50	Medium	Bulk Insulation R3	No
EW-2	Tilt up concrete, lined	0.50	Medium	Bulk Insulation R3	No

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-3	Tilt up concrete, lined	0.85	Dark	Bulk Insulation R3	No
EW-4	Metal Clad Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R3	No
EW-5	Metal Clad Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R3	No
EW-6	Tilt up concrete, lined	0.85	Dark	Bulk Insulation R3	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Office 1	EW-1	2770	3729	NW	329	YES
Office 1	EW-1	2770	3432	SE	2273	NO
Office 1	EW-1	2770	721	S	472	NO
Office 1	EW-1	2770	5756	SW	682	NO
bath	EW-1	2770	2231	NW	304	YES
bath	EW-1	2770	2116	NE	329	YES
lift	EW-1	2770	2116	NW	251	YES
lift	EW-1	2770	2005	NE	301	YES
corridor	EW-1	2770	2133	NE	304	YES
corridor	EW-1	2770	4139	SE	329	NO
office 2	EW-2	2770	4139	NW	707	YES
office 2	EW-1	2770	3630	SE	2298	NO
office 2	EW-1	2770	894	SE	559	NO
office 2	EW-1	2770	5657	SW	633	NO
corridor	EW-1	2770	2133	NE	329	YES
corridor	EW-1	2770	4139	SE	329	NO
lift	EW-1	2770	2116	NW	304	YES
lift	EW-1	2770	2005	NE	351	YES
bath	EW-2	2770	2231	NW	280	YES
bath	EW-1	2770	2116	NE	456	YES
studio	EW-2	2770	4450	NW	736	YES
studio	EW-2	2770	1199	SE	1105	NO
studio	EW-2	2770	781	S	1011	NO
studio	EW-2	2770	5558	SW	962	NO
bath	EW-2	2770	2330	NW	255	YES
bath	EW-2	2770	2116	NE	481	YES
corridor	EW-2	2770	1015	NE	382	YES
corridor	EW-2	2770	1919	NW	329	YES
corridor	EW-2	2770	6539	SE	1107	YES
lift	EW-2	2770	2116	NW	251	YES
lift	EW-2	2770	2005	NE	378	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
family	EW-3	4300	7661	NW	933	YES
family	EW-4	4300	1020	SW	127	YES
family	EW-4	4300	707	SW	152	NO
family	EW-4	4300	640	W	160	NO
family	EW-4	4300	640	W	125	NO
family	EW-4	4300	600	NW	175	NO
family	EW-4	4300	854	NW	269	NO
family	EW-4	4300	566	N	318	NO
family	EW-4	4300	539	N	325	NO
family	EW-4	4300	811	NE	226	YES
family	EW-3	4300	6607	SE	200	NO
family	EW-3	4300	922	SE	1074	NO
family	EW-3	4300	860	S	1040	NO
family	EW-3	4300	1063	S	957	NO
family	EW-3	4300	3854	S	840	YES
lift	EW-3	4300	2299	NW	251	YES
store	EW-3	4300	2392	SE	250	NO
Bedroom 4	EW-3	3000	2802	SE	1078	NO
Bedroom 4	EW-3	3000	1020	SE	1123	NO
Bedroom 4	EW-2	3000	781	S	1101	NO
Bedroom 4	EW-3	3000	1635	S	1125	NO
Bedroom 3	EW-3	3000	2626	NE	280	NO
Bedroom 3	EW-3	3000	5399	SE	1051	NO
Bedroom 3	EW-3	3000	2938	NW	1015	YES
Bedroom 3	EW-3	3000	3828	NE	354	YES
Bedroom 2	EW-3	3000	4238	NW	354	NO
Bedroom 2	EW-3	3000	4609	S	1042	NO
lift	EW-3	3000	2299	NW	226	YES
bath	EW-3	3000	3116	NW	378	NO
bath	EW-3	3000	2522	NE	329	YES
daytime	EW-3	3000	195	NW	2075	YES
daytime	EW-4	3000	922	S	206	YES
daytime	EW-4	3000	806	SW	251	NO
daytime	EW-5	3000	1204	W	212	NO
daytime	EW-5	3000	700	NW	200	NO
daytime	EW-5	3000	854	NW	190	NO
daytime	EW-5	3000	781	N	230	NO
daytime	EW-5	3000	1113	NE	152	YES
daytime	EW-3	3000	3795	SE	1051	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-3	3000	3622	NW	354	YES
Kitchen/Living	EW-4	3000	1217	SW	152	YES
Kitchen/Living	EW-4	3000	728	SW	309	NO
Kitchen/Living	EW-5	3000	781	W	215	NO
Kitchen/Living	EW-5	3000	707	NW	177	NO
Kitchen/Living	EW-5	3000	500	NW	275	NO
Kitchen/Living	EW-5	3000	721	N	305	NO
Kitchen/Living	EW-5	3000	1030	N	280	NO
Kitchen/Living	EW-5	3000	702	NE	202	YES
Kitchen/Living	EW-3	3000	1310	NW	986	NO
Kitchen/Living	EW-3	3000	8994	NE	1036	NO
Kitchen/Living	EW-3	3000	9409	SE	1001	NO
Kitchen/Living	EW-3	3000	7694	S	1409	NO
lift	EW-3	3000	2299	NW	226	YES
wc	EW-3	3000	1618	NW	1044	YES
Bedroom 1	EW-6	3000	5355	NE	1089	YES
Bedroom 1	EW-6	3000	5204	SE	950	NO
Bedroom 1	EW-6	3000	5972	S	1210	YES
ens	EW-6	3000	2938	NW	1118	YES
ens	EW-6	3000	3630	NE	1135	YES
lift	EW-6	3000	2199	NW	326	YES
Studio	EW-2	2770	3031	SE	1114	YES
Stairwell	EW-4	3000	762	W	269	NO
Stairwell	EW-4	3000	825	NW	230	NO
Stairwell	EW-4	3000	721	N	215	NO
Stairwell	EW-4	3000	806	N	202	NO
Stairwell	EW-5	3000	811	NE	127	YES
Stairwell	EW-6	3000	2366	S	1107	YES
Stairwell	EW-3	3000	2193	S	1208	NO
Day Time 14	EW-2	2770	2938	NW	280	YES
Day Time 14	EW-2	2770	8994	NE	432	NO
Day Time 14	EW-2	2770	2997	SE	325	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1	Cavity wall, direct fix plasterboard, single gap	410.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Office 1	Concrete Slab on Ground 200mm	23.40	None	No Insulation	Cork Tiles or Parquetry 8mm
bath	Concrete Slab on Ground 200mm	4.40	None	No Insulation	Ceramic Tiles 8mm
lift	Concrete Slab on Ground 200mm	4.00	None	No Insulation	Ceramic Tiles 8mm
corridor	Concrete Slab on Ground 200mm	12.80	None	No Insulation	Ceramic Tiles 8mm
office 2/Office 1	Rendered Concrete 200mm	23.30		No Insulation	Cork Tiles or Parquetry 8mm
office 2	Suspended Concrete Slab 200mm	2.40	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
corridor/corridor	Rendered Concrete 100mm	12.60		No Insulation	Ceramic Tiles 8mm
lift/lift	Rendered Concrete 200mm	4.00		No Insulation	Ceramic Tiles 8mm
bath/bath	Rendered Concrete 200mm	4.30		No Insulation	Ceramic Tiles 8mm
studio/office 2	Rendered Concrete 200mm	10.90		No Insulation	Ceramic Tiles 8mm
studio	Suspended Concrete Slab 200mm	2.50	Totally Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
bath/bath	Rendered Concrete 200mm	4.30		No Insulation	Ceramic Tiles 8mm
corridor/corridor	Rendered Concrete 200mm	12.60		No Insulation	Ceramic Tiles 8mm
corridor	Concrete Slab on Ground 200mm	2.90	None	No Insulation	Ceramic Tiles 8mm
lift/lift	Rendered Concrete 100mm	4.00		No Insulation	Ceramic Tiles 8mm
family	Concrete Slab on Ground 200mm	70.10	None	No Insulation	Ceramic Tiles 8mm
lift	Concrete Slab on Ground 200mm	4.60	None	No Insulation	Ceramic Tiles 8mm
bath	Concrete Slab on Ground 200mm	6.00	None	No Insulation	Ceramic Tiles 8mm
Day Time 14	Concrete Slab on Ground 200mm	2.70	None	No Insulation	Ceramic Tiles 8mm
store	Concrete Slab on Ground 200mm	4.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 4/family	Rendered Concrete 200mm	14.30		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/Day Time 14	Rendered Concrete 150mm	2.90		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/store	Rendered Concrete 150mm	4.20		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/Day Time 14	Rendered Concrete 150mm	8.30		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/Day Time 14	Rendered Concrete 150mm	11.10		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2/family	Rendered Concrete 200mm	15.00		No Insulation	Cork Tiles or Parquetry 8mm
lift/lift	Rendered Concrete 200mm	4.50		No Insulation	Ceramic Tiles 8mm
bath/family	Rendered Concrete 200mm	5.00		No Insulation	Ceramic Tiles 8mm
ldry/bath	Rendered Concrete 200mm	3.30		No Insulation	Ceramic Tiles 8mm
bath/Day Time 14	Rendered Concrete 150mm	4.50		No Insulation	Ceramic Tiles 8mm
daytime/family	Rendered Concrete 150mm	33.60		No Insulation	Ceramic Tiles 8mm
daytime/bath	Rendered Concrete 150mm	2.60		No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
daytime/Day Time 14	Rendered Concrete 150mm	1.10		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 4	Rendered Concrete 200mm	4.30		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 3	Rendered Concrete 200mm	16.00		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 3	Rendered Concrete 200mm	5.50		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 2	Rendered Concrete 200mm	0.50		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /bath	Rendered Concrete 200mm	5.30		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /ldry	Rendered Concrete 200mm	1.00		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /bath	Rendered Concrete 200mm	4.70		No Insulation	Ceramic Tiles 8mm
Kitchen/Living /daytime	Rendered Concrete 200mm	38.20		No Insulation	Ceramic Tiles 8mm
lift/lift	Rendered Concrete 200mm	4.40		No Insulation	Ceramic Tiles 8mm
pantry/Bedroom 3	Rendered Concrete 200mm	3.50		No Insulation	Ceramic Tiles 8mm
pantry/ldry	Rendered Concrete 200mm	2.50		No Insulation	Ceramic Tiles 8mm
wc/Bedroom 3	Rendered Concrete 200mm	1.90		No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Rendered Concrete 200mm	25.60		No Insulation	Cork Tiles or Parquetry 8mm
ens/Kitchen/Living	Rendered Concrete 200mm	6.80		No Insulation	Ceramic Tiles 8mm
ens/pantry	Rendered Concrete 200mm	5.90		No Insulation	Ceramic Tiles 8mm
ens/wc	Rendered Concrete 200mm	2.00		No Insulation	Ceramic Tiles 8mm
lift/lift	Rendered Concrete 200mm	4.00		No Insulation	Ceramic Tiles 8mm
Studio/office 2	Rendered Concrete 200mm	13.90		No Insulation	Ceramic Tiles 8mm
Stairwell/Kitchen/Living	Rendered Concrete 200mm	6.20		No Insulation	Ceramic Tiles 8mm
Day Time 14	Concrete Slab on Ground 200mm	25.80	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Office 1	Plasterboard	Bulk Insulation R4	No
Office 1	Rendered Concrete	No Insulation	No
bath	Plasterboard	Bulk Insulation R4	No
bath	Rendered Concrete	No Insulation	No
lift	Plasterboard	Bulk Insulation R4	No
lift	Rendered Concrete	No Insulation	No
corridor	Plasterboard	Bulk Insulation R4	No
corridor	Rendered Concrete	No Insulation	No
office 2	Plasterboard	Bulk Insulation R4	No
office 2	Rendered Concrete	No Insulation	No
corridor	Plasterboard	Bulk Insulation R4	No
corridor	Rendered Concrete	No Insulation	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
lift	Plasterboard	Bulk Insulation R4	No
lift	Rendered Concrete	No Insulation	No
bath	Plasterboard	Bulk Insulation R4	No
bath	Rendered Concrete	No Insulation	No
studio	Concrete	Bulk Insulation R4	No
bath	Concrete	Bulk Insulation R4	No
corridor	Concrete	Bulk Insulation R4	No
lift	Concrete	Bulk Insulation R4	No
family	Concrete	Bulk Insulation R4	No
family	Rendered Concrete	No Insulation	No
lift	Concrete	Bulk Insulation R4	No
lift	Rendered Concrete	No Insulation	No
bath	Concrete	Bulk Insulation R4	No
bath	Rendered Concrete	No Insulation	No
Day Time 14	Concrete	Bulk Insulation R4	No
Day Time 14	Rendered Concrete	No Insulation	No
store	Concrete	Bulk Insulation R4	No
store	Rendered Concrete	No Insulation	No
Bedroom 4	Concrete	Bulk Insulation R4	No
Bedroom 4	Rendered Concrete	No Insulation	No
Bedroom 3	Concrete	Bulk Insulation R4	No
Bedroom 3	Rendered Concrete	No Insulation	No
Bedroom 3	Concrete	Bulk Insulation R4	No
Bedroom 3	Rendered Concrete	No Insulation	No
Bedroom 2	Concrete	Bulk Insulation R4	No
Bedroom 2	Rendered Concrete	No Insulation	No
lift	Concrete	Bulk Insulation R4	No
lift	Rendered Concrete	No Insulation	No
bath	Concrete	Bulk Insulation R4	No
bath	Rendered Concrete	No Insulation	No
ldry	Concrete	Bulk Insulation R4	No
ldry	Rendered Concrete	No Insulation	No
bath	Concrete	Bulk Insulation R4	No
bath	Rendered Concrete	No Insulation	No
daytime	Concrete	Bulk Insulation R4	No
daytime	Rendered Concrete	No Insulation	No
Kitchen/Living	Concrete	Bulk Insulation R4	No
Kitchen/Living	Rendered Concrete	No Insulation	No
lift	Concrete	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
lift	Rendered Concrete	No Insulation	No
pantry	Concrete	Bulk Insulation R4	No
pantry	Rendered Concrete	No Insulation	No
wc	Concrete	Bulk Insulation R4	No
wc	Rendered Concrete	No Insulation	No
Bedroom 1	Concrete	Bulk Insulation R4	No
ens	Concrete	Bulk Insulation R4	No
lift	Concrete	Bulk Insulation R4	No
Studio	Plasterboard	Bulk Insulation R4	No
Stairwell	Concrete	Bulk Insulation R4	No
Day Time 14	Concrete	Bulk Insulation R4	No
Day Time 14	Rendered Concrete	No Insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
Office 1	4	Downlights - LED	150	Sealed
bath	2	Downlights - LED	150	Sealed
bath	1	Exhaust Fans	300	Sealed
corridor	2	Downlights - LED	150	Sealed
office 2	6	Downlights - LED	150	Sealed
corridor	2	Downlights - LED	150	Sealed
bath	2	Downlights - LED	150	Sealed
bath	1	Exhaust Fans	300	Sealed
studio	2	Downlights - LED	150	Sealed
bath	1	Downlights - LED	150	Sealed
bath	1	Exhaust Fans	300	Sealed
corridor	4	Downlights - LED	150	Sealed
family	14	Downlights - LED	150	Sealed
bath	2	Downlights - LED	150	Sealed
bath	1	Exhaust Fans	300	Sealed
store	1	Downlights - LED	150	Sealed
Bedroom 4	4	Downlights - LED	150	Sealed
Bedroom 3	4	Downlights - LED	150	Sealed
Bedroom 3	2	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
bath	1	Downlights - LED	150	Sealed
bath	1	Exhaust Fans	300	Sealed
ldry	1	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
ldry	1	Exhaust Fans	300	Sealed
bath	1	Downlights - LED	150	Sealed
bath	1	Exhaust Fans	300	Sealed
daytime	8	Downlights - LED	150	Sealed
Kitchen/Living	16	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
pantry	1	Downlights - LED	150	Sealed
wc	1	Exhaust Fans	300	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
ens	4	Downlights - LED	150	Sealed
ens	1	Exhaust Fans	300	Sealed
Studio	2	Downlights - LED	150	Sealed
Stairwell	2	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
family	1	1200
Kitchen/Living	1	1200

Roof type

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

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 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).