Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006370688

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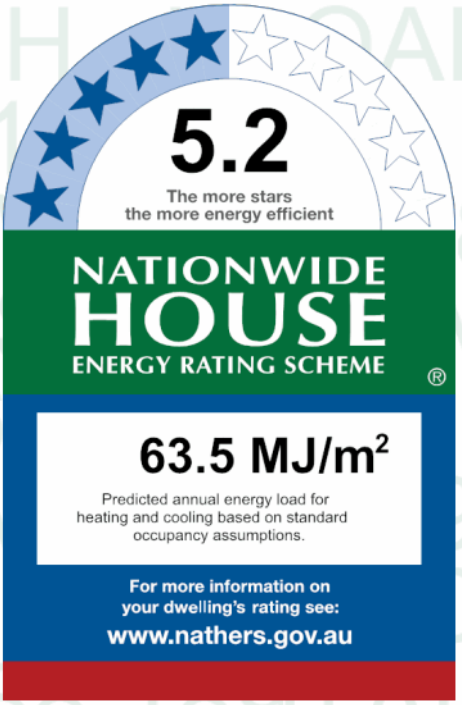

Property

Address	189 Riverview Road , Avalon Beach , NSW , 2107
Lot/DP	C/381427
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	NA
Prepared by	Durieddesign

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	642.0	Exposed
Unconditioned*	3.0	**NatHERS climate zone**
Total	645.0	56
Garage	0.0	

Thermal performance

Heating	**Cooling**
39.9 MJ/m^2	**23.7** MJ/m^2

Accredited assessor

Name	David Gradwell
Business name	Gradwell Consulting
Email	info@gradwellconsulting.com
Phone	1800 11 24 25
Accreditation No.	DMN/12/1451

Assessor Accrediting Organisation

Design Matters National

Declaration of interest The Assessor has provided design advice to the Applicant

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=aTqOlowlV.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
DOW-025-03 B	DOW-025-03 B TB Aluminium Sliding Door DG 5Clr/12Ar/5Clr	2.7	0.60	0.57	0.63
DOW-021-04 B	DOW-021-04 B Thermally Broken Aluminium Awning Window DG 4Clr/12Ar/4Clr	2.6	0.55	0.52	0.58

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Lift GF	DOW-025-03 B	n/a	3700	1700	n/a	00	N	No
Lift GF	DOW-025-03 B	n/a	3700	1700	n/a	00	S	No
Lift GF	DOW-025-03 B	n/a	3700	1599	n/a	00	W	No
WC GF	DOW-025-03 B	n/a	1600	600	n/a	45	W	No
Entrance	DOW-025-03 B	n/a	3100	4500	n/a	60	W	No
Entrance	ALM-002-03 A	n/a	1600	6000	n/a	90	N	No
Entrance	DOW-025-03 B	n/a	2400	4000	n/a	00	S	Yes
Entrance	DOW-025-03 B	n/a	3100	1500	n/a	00	W	No
Void	DOW-025-03 B	n/a	1000	9000	n/a	00	N	Yes
Void	DOW-025-03 B	n/a	1000	9000	n/a	00	S	Yes
Void	DOW-025-03 B	n/a	1000	11500	n/a	00	W	Yes
Void	DOW-025-03 B	n/a	1400	11500	n/a	00	W	No
Lounge	DOW-025-03 B	n/a	1200	1800	n/a	45	N	Yes
Lounge	DOW-025-03 B	n/a	1000	1800	n/a	00	N	Yes
Media room	DOW-025-03 B	n/a	1200	1800	n/a	45	N	No
Music	DOW-025-03 B	n/a	700	4400	n/a	45	S	No
Music	DOW-025-03 B	n/a	3300	900	n/a	00	W	Yes
Bedroom	DOW-025-03 B	n/a	1200	1800	n/a	45	S	No
Kitchen/Living	DOW-025-03 B	n/a	1200	1400	n/a	45	S	No
Kitchen/Living	DOW-025-03 B	n/a	1200	1700	n/a	45	S	No
Kitchen/Living	DOW-025-03 B	n/a	2800	11000	n/a	70	W	No
Kitchen/Living	DOW-025-03 B	n/a	1200	1200	n/a	45	N	No
Kitchen/Living	DOW-025-03 B	n/a	1200	600	n/a	00	N	Yes
Kitchen/Living	DOW-025-03 B	n/a	1200	1800	n/a	45	N	Yes
Kitchen/Living	DOW-025-03 B	n/a	1200	600	n/a	00	N	Yes
Bedroom 2	DOW-025-03 B	n/a	1200	3200	n/a	60	S	No
Bedroom 1	DOW-025-03 B	n/a	1200	3200	n/a	60	N	No
Bath 1	DOW-025-03 B	n/a	2200	1800	n/a	45	W	No
Bath 1	DOW-025-03 B	n/a	1800	600	n/a	00	W	Yes
Master	DOW-025-03 B	n/a	2200	5700	n/a	45	W	No
Bath 2	DOW-025-03 B	n/a	1200	2100	n/a	60	S	No
Bath 2	DOW-025-03 B	n/a	2200	2100	n/a	00	W	No
Bath 2	DOW-025-03 B	n/a	1800	600	n/a	00	W	Yes
WIR 2	DOW-025-03 B	n/a	1200	900	n/a	60	S	No
Yoga	DOW-025-03 B	n/a	2400	4200	n/a	00	N	No
Yoga	DOW-025-03 B	n/a	2400	3300	n/a	00	S	No
Yoga	DOW-021-04 B	n/a	2400	1000	n/a	90	S	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Yoga	DOW-025-03 B	n/a	2400	2400	n/a	00	W	No
Yoga	DOW-025-03 B	n/a	2400	2400	n/a	00	W	No
Yoga	DOW-021-04 B	n/a	2400	1000	n/a	90	W	No
Bedroom 6	DOW-025-03 B	n/a	900	1800	n/a	45	N	No
Bedroom 6	DOW-025-03 B	n/a	2400	3600	n/a	00	W	No
Rumpus	DOW-025-03 B	n/a	2400	4200	n/a	10	N	No
Rumpus	DOW-025-03 B	n/a	2400	3200	n/a	00	E	No
Rumpus	DOW-025-03 B	n/a	2400	499	n/a	00	SE	No
Rumpus	DOW-025-03 B	n/a	2400	900	n/a	00	E	No
Bedroom 7	DOW-025-03 B	n/a	2400	1500	n/a	00	E	No
Bedroom 7	DOW-025-03 B	n/a	2400	1500	n/a	00	SE	No
Bedroom 7	DOW-025-03 B	n/a	2400	2100	n/a	00	W	No
Bedroom 7	DOW-021-04 B	n/a	2400	1000	n/a	90	W	No
ENS 7	DOW-025-03 B	n/a	2400	1200	n/a	00	SE	No
ENS 7	DOW-025-03 B	n/a	2400	3200	n/a	00	S	No
ENS 7	DOW-025-03 B	n/a	2400	2400	n/a	00	W	No
Art Studio	DOW-025-03 B	n/a	700	5000	n/a	45	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
Entrance	2200	1800	90	E
Lounge	2400	820	90	N
Kitchen/Living	2400	820	90	N
WIR	2400	820	90	N
Bedroom 6	2040	820	90	S
Rumpus	2040	820	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R4	No
EW-2	Tilt up concrete, lined	0.50	Medium	Bulk Insulation R2.7	No
EW-3	Tilt up concrete, linedZ:7W2:1	0.50	Medium	Bulk Insulation R2.7	No
EW-4	Tilt up concrete, lined	0.50	Medium	Bulk Insulation R2.7	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Lift GF	EW-1	3700	1700	N	5100	YES
Lift GF	EW-1	3700	1700	S	100	YES
Lift GF	EW-1	3700	1600	W	100	NO
WC GF	EW-1	3100	2895	S	100	NO
WC GF	EW-1	3100	995	W	100	NO
Entrance	EW-1	3100	4995	W	1100	YES
Entrance	EW-1	3100	7000	N	100	NO
Entrance	EW-1	3100	9200	E	100	NO
Entrance	EW-1	3100	4095	S	100	NO
Entrance	EW-1	3100	1590	W	100	YES
Void	EW-1	2800	8995	N	100	NO
Void	EW-1	2800	8995	S	100	YES
Void	EW-1	2800	11600	W	600	NO
Lounge	EW-1	3300	5590	N	100	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Media room	EW-1	3300	5495	N	100	NO
Media room	EW-2	1800	6595	E	0	NO
Media room	EW-3	1500	6595	E	2000	NO
Stair L1	EW-4	3300	1190	E	2000	NO
Music	EW-1	3300	5495	S	100	NO
Music	EW-1	3300	1200	W	100	YES
Ldry	EW-4	2800	2595	E	2400	NO
Ldry	EW-4	2800	1300	S	5300	YES
Pantry	EW-1	2800	3695	N	100	NO
Pantry	EW-4	2800	4995	E	2400	NO
Toilet L2	EW-4	2800	2390	E	3700	YES
Bedroom	EW-4	2800	2795	E	3700	NO
Bedroom	EW-1	2800	5000	S	100	NO
Bedroom	EW-1	2800	1200	W	800	YES
Kitchen/Living	EW-1	2800	11295	S	100	YES
Kitchen/Living	EW-1	2800	11600	W	3900	NO
Kitchen/Living	EW-1	2800	13895	N	100	NO
Lift L2	EW-4	2800	1850	N	5100	NO
Lift L2	EW-4	2800	1600	E	2800	NO
Lift L2	EW-4	2800	1850	S	6200	NO
Kids Play	EW-4	2800	5050	N	5100	YES
Kids Play	EW-4	2800	5050	S	5100	YES
Bedroom 2	EW-4	2800	3395	E	8500	NO
Bedroom 2	EW-1	2800	5195	S	100	NO
Bedroom 1	EW-1	2800	5195	N	100	NO
Bedroom 1	EW-4	2800	3095	E	9800	NO
WIR	EW-1	2800	4490	N	100	NO
Bath 1	EW-1	2800	4395	N	100	NO
Bath 1	EW-1	3800	3095	W	2100	NO
Master	EW-1	3800	5990	W	2100	NO
Bath 4	EW-4	2800	1890	E	9800	YES
Bath 3	EW-4	2800	1590	E	9800	YES
Bath 2	EW-1	2800	3695	S	100	NO
Bath 2	EW-1	3800	4295	W	2100	NO
WIR 2	EW-1	2800	3095	S	100	YES
WIR 2	EW-1	2800	1800	E	100	YES
WIR 2	EW-1	2800	2095	S	100	NO
Yoga	EW-1	2400	4600	N	100	NO
Yoga	EW-4	2400	2600	E	100	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Yoga	EW-4	2400	424	SE	354	YES
Yoga	EW-4	2400	2508	E	301	YES
Yoga	EW-4	2400	316	SE	261	NO
Yoga	EW-1	2400	4400	S	4000	NO
Yoga	EW-1	2400	5700	W	100	NO
Bedroom 6	EW-1	2400	3095	N	1000	YES
Bedroom 6	EW-1	2400	3095	S	2975	YES
Bedroom 6	EW-1	2400	3800	W	100	NO
Rumpus	EW-1	2400	900	W	3200	YES
Rumpus	EW-1	2400	4600	N	100	NO
Rumpus	EW-4	2400	3400	E	75	NO
Rumpus	EW-4	2400	500	SE	250	YES
Rumpus	EW-4	2400	901	E	301	YES
Bedroom 7	EW-4	2400	1498	E	175	NO
Bedroom 7	EW-4	2400	1676	SE	316	NO
Bedroom 7	EW-1	2400	278	SE	283	NO
Bedroom 7	EW-1	2400	3290	W	2150	YES
ENS 7	EW-4	2400	1199	SE	160	NO
ENS 7	EW-4	2400	3413	S	90	NO
ENS 7	EW-1	2400	2595	W	100	NO
Art Studio	EW-2	3300	4995	E	2000	NO
Art Studio	EW-2	3300	5595	S	100	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		418.00	No insulation
IW-2 - Tilt Concrete		52.00	Bulk Insulation, No Air Gap R1

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Lift GF/Lift L1	Rendered Concrete 100mm	2.90		No Insulation	Bare
WC GF/Music	Rendered Concrete 100mm	1.30		No Insulation	Ceramic Tiles 8mm
WC GF/Art Studio	Rendered Concrete 100mm	1.40		No Insulation	Ceramic Tiles 8mm
Entrance/Lounge	Rendered Concrete 100mm	9.50		No Insulation	Cork Tiles or Parquetry 8mm
Entrance/Media room	Rendered Concrete 100mm	36.10		No Insulation	Cork Tiles or Parquetry 8mm
Entrance/Stair L1	Rendered Concrete 100mm	8.40		No Insulation	Cork Tiles or Parquetry 8mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Entrance/Music	Rendered Concrete 100mm	0.60		No Insulation	Cork Tiles or Parquetry 8mm
Entrance/Art Studio	Rendered Concrete 100mm	6.30		No Insulation	Cork Tiles or Parquetry 8mm
Void/Kitchen/Living	Rendered Concrete 100mm	105.10		No Insulation	Carpet+Rubber Underlay 18mm
Lift L1/Lift L1	Rendered Concrete 100mm	2.70		No Insulation	Bare
Lounge/Ldry	Rendered Concrete 100mm	2.00		No Insulation	Ceramic Tiles 8mm
Lounge/Pantry	Rendered Concrete 100mm	10.70		No Insulation	Ceramic Tiles 8mm
Lounge/Kitchen/Living	Rendered Concrete 100mm	20.20		No Insulation	Ceramic Tiles 8mm
Media room/Ldry	Rendered Concrete 100mm	2.40		No Insulation	Ceramic Tiles 8mm
Media room/Pantry	Rendered Concrete 100mm	7.40		No Insulation	Ceramic Tiles 8mm
Media room	Concrete Slab on Ground 100mm	26.00	None	No Insulation	Ceramic Tiles 8mm
Stair L1/Ldry	Rendered Concrete 100mm	3.00		No Insulation	Carpet+Rubber Underlay 18mm
Stair L1/Kitchen/Living	Rendered Concrete 100mm	1.50		No Insulation	Carpet+Rubber Underlay 18mm
Stair L1	Concrete Slab on Ground 100mm	4.70	None	No Insulation	Cork Tiles or Parquetry 8mm
Music/Toilet L2	Rendered Concrete 100mm	3.60		No Insulation	Ceramic Tiles 8mm
Music/Bedroom	Rendered Concrete 100mm	16.00		No Insulation	Ceramic Tiles 8mm
Music/Kitchen/Living	Rendered Concrete 100mm	7.70		No Insulation	Ceramic Tiles 8mm
Music	Concrete Slab on Ground 100mm	0.90	None	No Insulation	Ceramic Tiles 8mm
Lift L1/Lift L2	Rendered Concrete 100mm	2.70		No Insulation	Bare
Ldry	Concrete Slab on Ground 100mm	7.40	None	No Insulation	Cork Tiles or Parquetry 8mm
Pantry	Concrete Slab on Ground 100mm	18.10	None	No Insulation	Cork Tiles or Parquetry 8mm
Toilet L2	Concrete Slab on Ground 100mm	4.50	None	No Insulation	Ceramic Tiles 8mm
Bedroom	Concrete Slab on Ground 100mm	16.90	None	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living /Kids Play	Rendered Concrete 100mm	36.70		No Insulation	20/80 Ceramic/Cork
Kitchen/Living /Bedroom 2	Rendered Concrete 100mm	17.60		No Insulation	20/80 Ceramic/Cork
Kitchen/Living /Bedroom 1	Rendered Concrete 100mm	16.00		No Insulation	20/80 Ceramic/Cork
Kitchen/Living /WIR	Rendered Concrete 100mm	8.00		No Insulation	20/80 Ceramic/Cork
Kitchen/Living /Bath 4	Rendered Concrete 100mm	7.70		No Insulation	20/80 Ceramic/Cork
Kitchen/Living /Bath 3	Rendered Concrete 100mm	5.60		No Insulation	20/80 Ceramic/Cork
Kitchen/Living /WIR 2	Rendered Concrete 100mm	6.50		No Insulation	20/80 Ceramic/Cork
Kitchen/Living	Concrete Slab on Ground 100mm	54.60	None	No Insulation	20/80 Ceramic/Cork
Lift L2	Concrete Slab on Ground 100mm	3.00	None	Bulk Insulation in Contact with Floor R1	Bare
Kids Play	Concrete Slab on Ground 100mm	42.10	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bedroom 2	Concrete Slab on Ground 100mm	17.30	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Concrete Slab on Ground 100mm	15.70	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
WIR	Concrete Slab on Ground 100mm	13.50	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Bath 1	Concrete Slab on Ground 100mm	13.30	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Master	Concrete Slab on Ground 100mm	30.50	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bath 4	Concrete Slab on Ground 100mm	7.30	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Bath 3	Concrete Slab on Ground 100mm	5.20	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Bath 2	Concrete Slab on Ground 100mm	15.60	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
WIR 2	Concrete Slab on Ground 100mm	16.20	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Yoga/Rumpus	Rendered Concrete 100mm	17.20		No Insulation	Cork Tiles or Parquetry 8mm
Yoga/Bedroom 7	Rendered Concrete 100mm	8.50		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 6	Suspended Concrete Slab 150mm	11.60	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Rumpus	Concrete Slab on Ground 100mm	21.00	None	No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 7	Suspended Concrete Slab 150mm	13.90	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
ENS 7	Suspended Concrete Slab 150mm	5.10	Totally Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Art Studio/Toilet L2	Rendered Concrete 100mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
Art Studio/Bedroom	Rendered Concrete 100mm	0.80		No Insulation	Carpet+Rubber Underlay 18mm
Art Studio	Concrete Slab on Ground 100mm	26.00	None	No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Lift GF	Plasterboard	No insulation	No
WC GF	Plasterboard	No insulation	No
Entrance	Plasterboard	No insulation	No
Void	Plasterboard	No insulation	No
Lift L1	Plasterboard	No insulation	No
Lift L1	Rendered Concrete	No Insulation	No
Lounge	Plasterboard	No insulation	No
Lounge	Rendered Concrete	No Insulation	No
Media room	Plasterboard	No insulation	No
Media room	Rendered Concrete	No Insulation	No
Stair L1	Plasterboard	No insulation	No
Stair L1	Rendered Concrete	No Insulation	No
Music	Plasterboard	No insulation	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Music	Rendered Concrete	No Insulation	No
Lift L1	Plasterboard	No insulation	No
Lift L1	Rendered Concrete	No Insulation	No
Ldry	Plasterboard	No insulation	No
Ldry	Rendered Concrete	No Insulation	No
Pantry	Plasterboard	No insulation	No
Pantry	Rendered Concrete	No Insulation	No
Toilet L2	Plasterboard	No insulation	No
Toilet L2	Rendered Concrete	No Insulation	No
Bedroom	Plasterboard	No insulation	No
Bedroom	Rendered Concrete	No Insulation	No
Kitchen/Living	Plasterboard	No insulation	No
Kitchen/Living	Rendered Concrete	No Insulation	No
Lift L2	Plasterboard	No insulation	No
Lift L2	Rendered Concrete	No Insulation	No
Kids Play	Plasterboard	No insulation	No
Kids Play	Rendered Concrete	No Insulation	No
Bedroom 2	Plasterboard	No insulation	No
Bedroom 2	Rendered Concrete	No Insulation	No
Bedroom 1	Plasterboard	No insulation	No
Bedroom 1	Rendered Concrete	No Insulation	No
WIR	Plasterboard	No insulation	No
WIR	Rendered Concrete	No Insulation	No
Bath 1	Plasterboard	No insulation	No
Master	Plasterboard	No insulation	No
Bath 4	Plasterboard	No insulation	No
Bath 4	Rendered Concrete	No Insulation	No
Bath 3	Plasterboard	No insulation	No
Bath 3	Rendered Concrete	No Insulation	No
Bath 2	Plasterboard	No insulation	No
WIR 2	Plasterboard	No insulation	No
WIR 2	Rendered Concrete	No Insulation	No
Yoga	Plasterboard	No insulation	No
Bedroom 6	Plasterboard	No insulation	No
Rumpus	Plasterboard	No insulation	No
Rumpus	Rendered Concrete	No Insulation	No
Bedroom 7	Plasterboard	No insulation	No
Bedroom 7	Rendered Concrete	No Insulation	No
ENS 7	Plasterboard	No insulation	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Art Studio	Plasterboard	No insulation	No
Art Studio	Rendered Concrete	No Insulation	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Lift GF	2	Downlights - LED	150	Sealed
WC GF	2	Downlights - LED	150	Sealed
WC GF	1	Exhaust Fans	300	Sealed
Entrance	25	Downlights - LED	150	Sealed
Void	23	Downlights - LED	150	Sealed
Lounge	14	Downlights - LED	150	Sealed
Media room	15	Downlights - LED	150	Sealed
Stair L1	5	Downlights - LED	150	Sealed
Music	12	Downlights - LED	150	Sealed
Ldry	4	Downlights - LED	150	Sealed
Ldry	1	Exhaust Fans	300	Sealed
Pantry	8	Downlights - LED	150	Sealed
Toilet L2	2	Downlights - LED	150	Sealed
Toilet L2	1	Exhaust Fans	300	Sealed
Bedroom	7	Downlights - LED	150	Sealed
Kitchen/Living	38	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Kids Play	18	Downlights - LED	150	Sealed
Bedroom 2	8	Downlights - LED	150	Sealed
Bedroom 1	7	Downlights - LED	150	Sealed
WIR	6	Downlights - LED	150	Sealed
Bath 1	6	Downlights - LED	150	Sealed
Bath 1	1	Exhaust Fans	300	Sealed
Master	13	Downlights - LED	150	Sealed
Bath 4	4	Downlights - LED	150	Sealed
Bath 4	1	Exhaust Fans	300	Sealed
Bath 3	3	Downlights - LED	150	Sealed
Bath 3	1	Exhaust Fans	300	Sealed
Bath 2	7	Downlights - LED	150	Sealed
Bath 2	1	Exhaust Fans	300	Sealed
WIR 2	7	Downlights - LED	150	Sealed
Yoga	15	Downlights - LED	150	Sealed
Bedroom 6	5	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Rumpus	9	Downlights - LED	150	Sealed
Bedroom 7	6	Downlights - LED	150	Sealed
ENS 7	3	Downlights - LED	150	Sealed
ENS 7	1	Exhaust Fans	300	Sealed
Art Studio	12	Downlights - LED	150	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Void	2	1200
Bedroom	1	1200
Bedroom 2	1	1200
Bedroom 1	1	1200
Master	1	1200
Bedroom 6	1	1200
Rumpus	1	1200
Bedroom 7	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Concrete	Bulk Insulation, No Air Gap Above R4.5	0.50	Medium
Concrete	Bulk Insulation, No Air Gap Above R4.5	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 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).