



ABN: 71 166 427 550

To:

Northern Beaches Council

BASIX ASSESSMENT REPORT
(Simulation Method)

Lot 41 No 7 Ruskin Rowe, Avalon Beach NSW 2107

27 October 2022

10 Inverness Place BOWRAL

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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008162695

Generated on 27 Oct 2022 using BERS Pro v4.4.1.5 (3.21)

Property

Address 7 Ruskin Rowe , Avalon Beach , NSW , 2107
Lot/DP 41/22361
NCC Class* 1A
Type New Dwelling

Plans

Main Plan Job For Andrew Verity Earl, Dated 9/9/2022, Sheets 1-8

Prepared by rama

Construction and environment

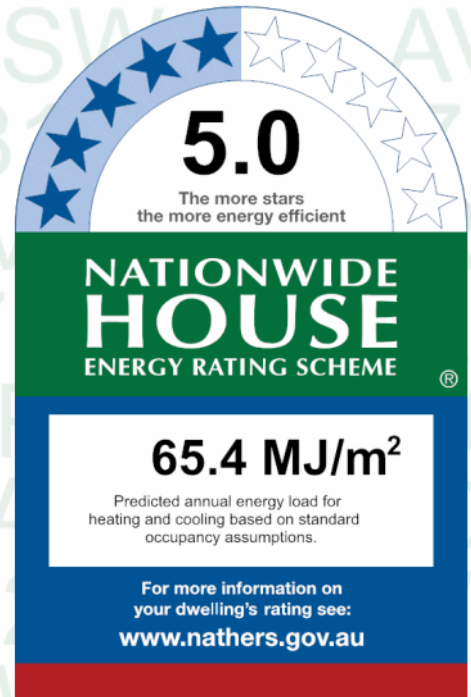
Assessed floor area (m ²)*	Exposure Type
Conditioned*	359.0
Unconditioned*	85.0
Total	444.0
Garage	67.0

NatHERS climate zone 56



Accredited assessor

Name Scott Douglass
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Accreditation No. 13/1547
Assessor Accrediting Organisation Design Matters National
Declaration of interest None



Thermal performance

Heating	Cooling
40.1 MJ/m ²	25.4 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=EHiGuniQ. 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? 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

I have not modeled the shading, no shading is applicable

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
TIM-004-04 W	TIM-004-04 W Timber B DG Air Fill Low Solar Gain low-E -Clear	2.3	0.25	0.24	0.26
TIM-003-01 W	TIM-003-01 W Timber A DG Air Fill Clear-Clear	3.0	0.48	0.46	0.50
TIM-004-01 W	TIM-004-01 W Timber B DG Air Fill Clear-Clear	3.0	0.56	0.53	0.59
TIM-002-01 W	TIM-002-01 W Timber B SG Clear	5.4	0.63	0.60	0.66
TIM-001-01 W	TIM-001-01 W Timber A SG Clear	5.4	0.56	0.53	0.59

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*
Kitchen/Living	TIM-004-04 W	n/a	2400	5600	n/a	45	NE	Yes
Kitchen/Living	TIM-004-04 W	n/a	1350	7900	n/a	00	NE	No
Kitchen/Living	TIM-003-01 W	n/a	2340	1440	n/a	90	SE	No
Kitchen/Living	TIM-003-01 W	n/a	2340	1440	n/a	90	SE	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	40	SE	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	40	SE	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	40	SE	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	40	SE	No
Kitchen/Living	TIM-003-01 W	n/a	1400	2700	n/a	90	SE	No
Kitchen/Living	TIM-003-01 W	n/a	2340	820	n/a	90	SE	No
Kitchen/Living	TIM-003-01 W	n/a	2340	820	n/a	90	NW	No
Kitchen/Living	TIM-003-01 W	n/a	2340	1440	n/a	90	NW	No
Kitchen/Living	TIM-003-01 W	n/a	2340	1440	n/a	90	NW	No
Kitchen/Living	TIM-003-01 W	n/a	2340	1440	n/a	90	NW	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Kitchen/Living	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Kitchen/Living	TIM-004-04 W	n/a	750	9000	n/a	00	NW	No Shading
Kitchen/Living	TIM-004-04 W	n/a	750	9000	n/a	00	SE	No Shading
Lounge	TIM-003-01 W	n/a	2400	820	n/a	90	NE	No
Lounge	TIM-003-01 W	n/a	2400	820	n/a	90	NE	No
Lounge	TIM-004-01 W	n/a	2400	600	n/a	40	SE	No
Lounge	TIM-004-01 W	n/a	2400	600	n/a	40	SE	No
Lounge	TIM-003-01 W	n/a	2340	1440	n/a	90	SE	No
Guest	TIM-003-01 W	n/a	2340	820	n/a	90	SE	No
Guest	TIM-003-01 W	n/a	1200	1500	n/a	90	SE	No
Guest ens	TIM-003-01 W	n/a	1400	600	n/a	90	SW	No
Mud	TIM-004-01 W	n/a	2400	600	n/a	45	NE	No
Mud	TIM-004-01 W	n/a	2400	600	n/a	45	NE	No
Garage 1	TIM-002-01 W	n/a	2400	1200	n/a	45	SW	No
Garage 1	TIM-002-01 W	n/a	600	6000	n/a	00	NW	No
Garage 1	TIM-002-01 W	n/a	2400	1200	n/a	45	NE	No
Garage 1	TIM-002-01 W	n/a	2400	1200	n/a	45	NE	No
Garden store	TIM-001-01 W	n/a	1400	600	n/a	90	SW	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garden store	TIM-001-01 W	n/a	2040	1440	n/a	90	NW	No
Wet bar	TIM-003-01 W	n/a	2400	1440	n/a	90	NW	No
Wet bar	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Wet bar	TIM-004-01 W	n/a	2400	600	n/a	45	NW	No
Wet bar	TIM-003-01 W	n/a	900	600	n/a	90	NW	No
Wet bar	TIM-003-01 W	n/a	900	600	n/a	90	SE	No
Wet bar	TIM-004-01 W	n/a	2400	5500	n/a	60	SW	No
Pool pdr	TIM-001-01 W	n/a	1400	600	n/a	90	SE	No
Pump room	TIM-001-01 W	n/a	2040	820	n/a	90	NW	No
Pump room	TIM-001-01 W	n/a	2040	820	n/a	90	SE	No
bed 1	TIM-003-01 W	n/a	1200	1500	n/a	90	NE	No
bed 1	TIM-003-01 W	n/a	1200	1500	n/a	90	NE	No
bed 1	TIM-003-01 W	n/a	2100	1440	n/a	90	SE	No
bed 1	TIM-003-01 W	n/a	2100	1440	n/a	90	SE	No
bed 1	TIM-004-01 W	n/a	600	1500	n/a	00	SW	No
Ens/wir b1	TIM-003-01 W	n/a	2100	1440	n/a	90	SE	No
Ens/wir b1	TIM-003-01 W	n/a	1200	600	n/a	90	SW	No
stairs	TIM-004-04 W	n/a	2100	4200	n/a	00	NE	No
stairs	TIM-004-04 W	n/a	600	4200	n/a	00	SW	No
bed 2	TIM-003-01 W	n/a	1200	1500	n/a	90	SW	No
bed 2	TIM-003-01 W	n/a	1200	1500	n/a	90	SW	No
bed 2	TIM-003-01 W	n/a	2100	1440	n/a	90	NW	No
bed 2	TIM-003-01 W	n/a	2100	720	n/a	90	NW	No
wir/ens b2	TIM-001-01 W	n/a	1200	600	n/a	90	SE	No
bed 3	TIM-003-01 W	n/a	2100	1440	n/a	90	NW	No
bed 3	TIM-003-01 W	n/a	2100	720	n/a	90	NW	No
bed 3	TIM-003-01 W	n/a	1200	1500	n/a	90	NE	No
bed 3	TIM-003-01 W	n/a	1200	1500	n/a	90	NE	No
ens bed 3	TIM-001-01 W	n/a	1200	450	n/a	90	SE	No
Laundry	TIM-001-01 W	n/a	2040	820	n/a	90	SW	No
Laundry	TIM-002-01 W	n/a	2100	400	n/a	90	SW	No
Powder	TIM-001-01 W	n/a	1200	600	n/a	90	SW	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
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
bed 2	GEN-04-008a	n/a	300	2.40	SW	None	No	0.50
bed 3	GEN-04-008a	n/a	300	2.40	NE	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage 1	2100	6000	90	NW

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	0.85	Dark	Bulk Insulation R2.5	No
EW-2	Cavity Brick	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.85	Dark	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	4200	8800	NE	600	NO
Kitchen/Living	EW-1	2701	1200	SE	550	NO
Kitchen/Living	EW-1	2700	9200	SE	3400	NO
Kitchen/Living	EW-1	2701	1300	SE	550	NO
Kitchen/Living	EW-1	3000	1300	SW	11000	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2400	1395	SE	1300	YES
Kitchen/Living	EW-1	2400	1400	NW	1300	YES
Kitchen/Living	EW-1	3000	1300	SW	8200	YES
Kitchen/Living	EW-1	2701	1300	NW	550	NO
Kitchen/Living	EW-1	2700	9200	NW	3400	NO
Kitchen/Living	EW-1	2701	1200	NW	550	NO
Hall	EW-1	2700	1790	SE	0	NO
Lounge	EW-1	3001	1295	NE	13700	YES
Lounge	EW-1	3000	1000	NE	950	YES
Lounge	EW-2	2700	500	NW	1000	YES
Lounge	EW-2	2700	1100	NE	2200	NO
Lounge	EW-2	2700	500	SE	0	YES
Lounge	EW-1	3000	1900	NE	2700	YES
Lounge	EW-1	3000	3895	SE	0	NO
Guest	EW-1	2700	1095	SE	0	NO
Guest	EW-1	2700	1000	SW	0	YES
Guest	EW-1	2550	2400	SE	0	YES
Guest	EW-1	2400	5895	SW	400	NO
Guest ens	EW-1	2400	1995	SW	400	NO
Guest ens	EW-1	2550	2400	NW	4800	YES
Mud	EW-1	2400	1595	NE	2700	NO
Mud	EW-1	2401	1295	NE	13700	YES
Garage 1	EW-3	3047	2400	SW	0	YES
Garage 1	EW-3	3047	6800	NW	0	NO
Garage 1	EW-3	3047	7295	NE	0	NO
Garden store	EW-3	3000	5600	SW	400	NO
Garden store	EW-3	3150	2395	NW	0	YES
Garden store	EW-3	3150	2395	SE	4800	YES
Wet bar	EW-1	3538	4700	NW	450	NO
Wet bar	EW-1	2800	2300	NE	550	YES
Wet bar	EW-1	3492	3495	SE	450	NO
Wet bar	EW-1	2800	7000	SW	550	NO
Pool pdr	EW-1	2800	1000	NE	550	YES
Pool pdr	EW-1	3100	1195	SE	450	NO
Pump room	EW-3	2250	1195	NW	300	YES
Pump room	EW-3	2100	3700	NE	400	NO
Pump room	EW-3	2250	1195	SE	300	YES
bed 1	EW-1	2100	1795	NE	100	YES
bed 1	EW-1	2400	600	NW	450	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
bed 1	EW-1	2100	2500	NE	550	YES
bed 1	EW-2	2100	500	NW	2950	YES
bed 1	EW-2	2100	1100	NE	50	NO
bed 1	EW-2	2100	500	SE	2350	YES
bed 1	EW-1	2100	1900	NE	550	YES
bed 1	EW-1	3300	4695	SE	450	NO
bed 1	EW-1	2100	1795	SW	100	YES
Ens/wir b1	EW-1	2750	2095	SE	450	NO
Ens/wir b1	EW-1	2100	5500	SW	550	NO
Ens/wir b1	EW-1	2750	2095	NW	450	YES
stairs	EW-1	2100	4190	NE	100	YES
stairs	EW-1	2100	4190	SW	100	YES
bed 2	EW-1	1800	3195	SW	550	NO
bed 2	EW-1	2400	3800	SW	550	NO
bed 2	EW-1	3550	3395	NW	450	NO
wir/ens b2	EW-1	2500	2095	SE	450	YES
wir/ens b2	EW-1	1800	3195	SW	550	NO
bed 3	EW-1	3550	3395	NW	450	NO
bed 3	EW-1	2400	4100	NE	550	NO
bed 3	EW-1	1800	2895	NE	550	NO
ens bed 3	EW-1	1800	3195	NE	550	NO
ens bed 3	EW-1	2100	600	SE	450	YES
Laundry	EW-1	2400	2195	SW	0	YES
Powder	EW-1	2400	2590	SW	400	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		231.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		40.00	Bulk Insulation, No Air Gap R2
IW-3 - Cavity wall, direct fix plasterboard, single gap		27.00	Bulk Insulation, No Air Gap R2.5

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Waffle pod slab 175 mm 100mm	73.90	None	Waffle Pod 175mm	60/40 Carpet 10mm/Ceramic
Kitchen/Living	Suspended Concrete Slab 150mm	39.50	Totally Open	Bulk Insulation in Contact with Floor	Ceramic Tiles 8mm
Stairs	Waffle pod slab 175 mm 100mm	11.10	None	Waffle Pod 175mm	Carpet+Rubber Underlay 18mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hall	Waffle pod slab 175 mm 100mm	27.50	None	Waffle Pod 175mm	60/40 Carpet 10mm/Ceramic
Lounge	Waffle pod slab 175 mm 100mm	20.80	None	Waffle Pod 175mm	Carpet+Rubber Underlay 18mm
Guest	Waffle pod slab 175 mm 100mm	21.30	None	Waffle Pod 175mm	Carpet+Rubber Underlay 18mm
Guest ens	Waffle pod slab 175 mm 100mm	7.30	None	Waffle Pod 175mm	Ceramic Tiles 8mm
Mud	Waffle pod slab 175 mm 100mm	8.30	None	Waffle Pod 175mm	Ceramic Tiles 8mm
Garage 1	Waffle pod slab 175 mm 100mm	49.10	None	Waffle Pod 175mm	Bare
Garden store	Waffle pod slab 175 mm 100mm	13.20	None	Waffle Pod 175mm	Bare
Wet bar	Waffle pod slab 175 mm 100mm	28.90	None	Waffle Pod 175mm	Carpet+Rubber Underlay 18mm
Pool pdr	Waffle pod slab 175 mm 100mm	3.40	None	Waffle Pod 175mm	Ceramic Tiles 8mm
Pump room	Waffle pod slab 175 mm 100mm	4.30	None	Waffle Pod 175mm	Bare
bed 1/Hall	Timber Above Plasterboard 100mm	12.40		No Insulation	Carpet+Rubber Underlay 18mm
bed 1/Lounge	Timber Above Plasterboard 100mm	20.90		No Insulation	Carpet+Rubber Underlay 18mm
Ens/wir b1/Hall	Timber Above Plasterboard 100mm	5.40		No Insulation	Ceramic Tiles 8mm
Ens/wir b1/Guest	Timber Above Plasterboard 100mm	5.90		No Insulation	Ceramic Tiles 8mm
stairs/Stairs	Timber Above Plasterboard 19mm	11.10		No Insulation	Carpet+Rubber Underlay 18mm
stairs/Hall	Timber Above Plasterboard 19mm	5.80		No Insulation	Carpet+Rubber Underlay 18mm
bed 2/Garage 1	Timber Above Plasterboard 19mm	23.50		Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
bed 2/Laundry	Timber Above Plasterboard 19mm	3.70		No Insulation	Carpet+Rubber Underlay 18mm
wir/ens b2/Garage 1	Timber Above Plasterboard 19mm	0.60		Bulk Insulation R2.5	Ceramic Tiles 8mm
wir/ens b2/Laundry	Timber Above Plasterboard 19mm	5.90		No Insulation	Ceramic Tiles 8mm
bed 3/Mud	Timber Above Plasterboard 19mm	2.00		No Insulation	Carpet+Rubber Underlay 18mm
bed 3/Garage 1	Timber Above Plasterboard 19mm	23.50		Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
bed 3/Laundry	Timber Above Plasterboard 19mm	1.10		No Insulation	Carpet+Rubber Underlay 18mm
ens bed 3/Mud	Timber Above Plasterboard 19mm	6.40		No Insulation	Ceramic Tiles 8mm
ens bed 3/Garage 1	Timber Above Plasterboard 19mm	0.70		Bulk Insulation R2.5	Ceramic Tiles 8mm
Laundry	Waffle pod slab 175 mm 19mm	10.50	None	Waffle Pod 175mm	Ceramic Tiles 8mm
Powder	Waffle pod slab 175 mm 19mm	4.00	None	Waffle Pod 175mm	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R5	No
Stairs	Plasterboard	Bulk Insulation R5	No
Stairs	Timber Above Plasterboard	No Insulation	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Hall	Plasterboard	Bulk Insulation R5	No
Hall	Timber Above Plasterboard	No Insulation	No
Lounge	Plasterboard	Bulk Insulation R5	No
Lounge	Timber Above Plasterboard	No Insulation	No
Guest	Plasterboard	Bulk Insulation R5	No
Guest	Timber Above Plasterboard	No Insulation	No
Guest ens	Plasterboard	Bulk Insulation R5	No
Mud	Plasterboard	Bulk Insulation R5	No
Mud	Timber Above Plasterboard	No Insulation	No
Garage 1	Plasterboard	No insulation	No
Garage 1	Timber Above Plasterboard	Bulk Insulation R2.5	No
Garden store	Plasterboard	No insulation	No
Wet bar	Plasterboard	Bulk Insulation R5	No
Pool pdr	Plasterboard	Bulk Insulation R5	No
Pump room	Plasterboard	No insulation	No
bed 1	Plasterboard	Bulk Insulation R5	No
Ens/wir b1	Plasterboard	Bulk Insulation R5	No
stairs	Plasterboard	Bulk Insulation R5	No
bed 2	Plasterboard	Bulk Insulation R5	No
wir/ens b2	Plasterboard	Bulk Insulation R5	No
bed 3	Plasterboard	Bulk Insulation R5	No
ens bed 3	Plasterboard	Bulk Insulation R5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Powder	Plasterboard	Bulk Insulation R5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	49	Downlights - LED	0	Sealed
Kitchen/Living	1	Exhaust Fans	160	Sealed
Kitchen/Living	1	Chimneys	200	Sealed
Stairs	5	Downlights - LED	0	Sealed
Hall	12	Downlights - LED	0	Sealed
Lounge	9	Downlights - LED	0	Sealed
Lounge	1	Chimneys	200	Sealed
Guest	9	Downlights - LED	0	Sealed
Guest ens	3	Downlights - LED	0	Sealed
Guest ens	1	Exhaust Fans	300	Sealed
Mud	4	Downlights - LED	0	Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Wet bar	12	Downlights - LED	0	Sealed
Pool pdr	1	Downlights - LED	0	Sealed
Pool pdr	1	Exhaust Fans	300	Sealed
bed 1	14	Downlights - LED	0	Sealed
bed 1	1	Chimneys	200	Sealed
Ens/wir b1	4	Downlights - LED	0	Sealed
Ens/wir b1	1	Exhaust Fans	300	Sealed
stairs	7	Downlights - LED	0	Sealed
bed 2	11	Downlights - LED	0	Sealed
wir/ens b2	3	Downlights - LED	0	Sealed
wir/ens b2	1	Exhaust Fans	300	Sealed
bed 3	11	Downlights - LED	0	Sealed
ens bed 3	3	Downlights - LED	0	Sealed
ens bed 3	1	Exhaust Fans	300	Sealed
Laundry	4	Downlights - LED	0	Sealed
Powder	1	Downlights - LED	0	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.85	Dark

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).