Nationwide House Energy Rating Scheme® NatHERS® Certificate No. 0009273350-01

Generated on 05 Mar 2024 using BERS Pro v5.1.7 (3.22)

Property

Address	37 Noble Avenue, Punchbowl , NSW , 2196
Lot/DP	Lot 57 DP 182909
NCC class*	1a
Floor/all Floors	G of 3 floors
Type	New Home

Plans

Main plan	37 Noble Avenue
Prepared by	Dawsonvu

Construction and environment

Assessed floor area [m2]*

Conditioned*	329.7
Unconditioned*	34.7
Total	429.9
Garage	65.5

Exposure type

Suburban

NatHERS climate zone

56 Mascot (Sydney Airport)

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

National Construction Code (NCC) requirements

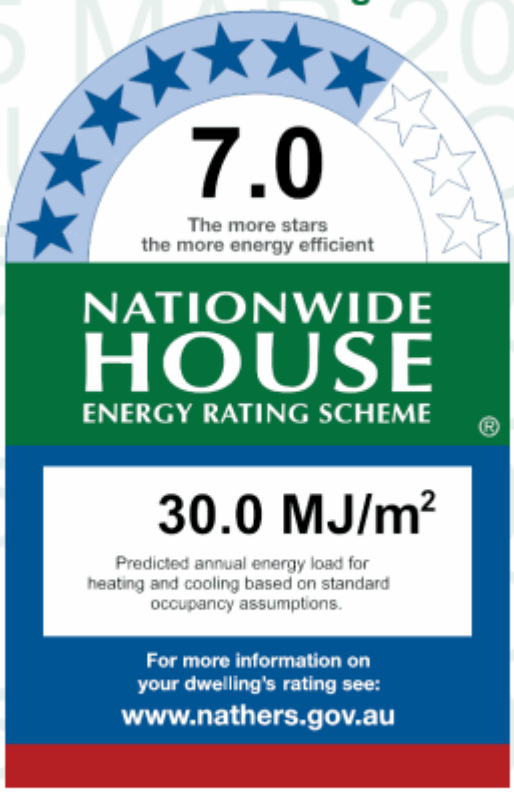
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	14.8
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=kTuxbmMmi . When using either link, ensure you are visiting hstar.com.au

* Refer to glossary

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

CSOG – Concrete Slab on Ground
SF – Suspended Floor (or a mixture of CSOG and SF)
NA – Not Applicable

NCC Climate Zone 1 or 2:

Yes
No
NA – Not Applicable

Outdoor Living Area:

Yes
No
NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes
No
NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use

No Whole of Home performance assessment conducted for this certificate

Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost

No Whole of Home performance assessment conducted for this certificate

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	☐	☐			

Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without

* Refer to glossary.

requiring an amended certificate

Room *schedule*

Room	Zone Type	Area [m^2]
Garage	Garage	65.49
Passage	Daytime	15.6
WC	Daytime	3.31
Cellar	Unconditioned	18.21
Bed 2	Bedroom	17.84
Ensuite Bed 2	Nighttime	4.98
Hallway	Daytime	27.36
Living/Gym	Living	68.43
Laundry	Unconditioned	4.66
Powder	Unconditioned	4.22
Butlers	Daytime	6.69
Kitchen/Living	Kitchen/Living	71.34
Bed 5	Bedroom	16.19
Bed 4	Bedroom	16.68
Bath	Unconditioned	7.59
Bed 3	Bedroom	17.84
Stairwell	Daytime	17.8
Robe	Nighttime	17.4
Ensuite Bed 1	Nighttime	12.01
Bed 1	Bedroom	25.72

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					

* Refer to glossary.

Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-101-09 A	Signature Sliding Door 100TB DG 4mmET/12Ar/4mmET	2.1	0.47	0.45	0.49
BRD-109-05 A	Signature Hinged Door 100TB DG 4mmSt/12Ar/4mmSt	2.1	0.29	0.28	0.30
BRD-109-09 A	Signature Hinged Door 100TB DG 4mmET/12Ar/4mmET	2.1	0.43	0.41	0.45
DOW-021-05 B	Thermally Broken Aluminium Awning Window DG 4ET/12Ar/4ET	1.9	0.46	0.44	0.48
DOW-021-07 B	Thermally Broken Aluminium Awning Window DG 4SolB/12Ar/4Clr	1.7	0.18	0.17	0.19
DOW-023-14 B	TB Al Fixed-DG with TPS Spacer LightBridge_ClrSl_6.38-8-5	1.9	0.46	0.44	0.48
VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.6	0.24	0.23	0.25

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Cellar	DOW-021-05 B	W1	600	2650	Awning	60	S	No
Bed 2	DOW-021-07 B	W3	2700	3660	Awning	10	W	Yes
Hallway	BRD-109-05 A	W2	2400	1640	Casement	90	W	No
Living/Gym	DOW-021-05 B	W19	2700	1200	Awning	60	E	No
Living/Gym	BRD-101-09 A	W18	2700	1920	Sliding	45	N	No
Living/Gym	BRD-101-09 A	W9	2700	3730	Sliding	60	S	No
Living/Gym	BRD-101-09 A	W8	2700	3730	Sliding	60	E	Yes
Laundry	BRD-109-09 A	W17	2400	895	Casement	90	N	No
Powder	DOW-021-05 B	W16	1200	850	Awning	90	N	No
Butlers	DOW-023-14 B	W15	600	1570	Fixed	00	N	No
Kitchen/Living	DOW-023-14 B	W14	600	3200	Fixed	00	N	No
Kitchen/Living	DOW-023-14 B	W14	600	3200	Fixed	00	N	No
Kitchen/Living	BRD-101-09 A	W12	2700	6400	Sliding	60	E	No
Kitchen/Living	DOW-023-14 B	W11	2050	2050	Fixed	00	S	No
Kitchen/Living	BRD-101-09 A	W10	2700	3730	Sliding	30	W	No
Bed 5	DOW-021-05 B	W6	1200	1450	Awning	45	S	No
Bed 4	DOW-021-05 B	W7	1200	1450	Awning	45	S	No

* Refer to glossary.

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bath	DOW-021-05 B	W5	1200	850	Awning	90	S	No
Bed 3	DOW-021-07 B	W4	2700	3660	Awning	10	W	Yes
Stairwell	DOW-023-14 B	W20	2700	1810	Fixed	00	W	Yes
Ensuite Bed 1	DOW-021-07 B	W23	2700	1810	Awning	45	S	No
Bed 1	DOW-021-07 B	W22	2700	3000	Louvre	10	E	No
Bed 1	DOW-021-07 B	W21	2700	3650	Awning	10	W	Yes

Roof window* *type and performance value*

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	VEL-011-01 W VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	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
Ensuite Bed 2	VEL-011-01 W	S2	0	980	550	N	No	No
Hallway	VEL-011-01 W	S3	0	1500	1500	N	No	No
Kitchen/Living	VEL-011-01 W	S1	0	1500	1500	N	No	No

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
Garage	2400	5610	90	W

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 Timber Stud Frame	0.496489411764706		No insulation	No
EW-2	Tilt Up Concrete, Lined Timber Stud Frame	0.496489411764706		Bulk Insulation R2.7	No
EW-3	Timber Stud Frame Brick Veneer	0.496489411764706		Reflective foil with bulk no gap R2.7	Yes
EW-4	Fibro Timber Stud Frame Panel on Battens	0.496489411764706		Reflective foil with bulk no gap R2.7	Yes

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	2750	6095	N	1000	No
Garage	EW-1	2750	11195	S	100	No
Garage	EW-1	2750	6500	W	1200	No
Passage	EW-2	2750	900	W	7300	No
Passage	EW-2	2750	7595	N	100	No
WC	EW-2	2750	1095	N	100	No
WC	EW-2	2750	2195	E	100	No
Cellar	EW-2	2750	5195	E	100	No
Cellar	EW-2	2750	3595	S	100	No
Bed 2	EW-3	3000	4595	N	100	No
Bed 2	EW-4	3000	3695	W	100	Yes
Ensuite Bed 2	EW-3	3000	2090	N	2000	No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Hallway	EW-3	3000	1900	W	3433	Yes
Hallway	EW-3	3000	4500	N	100	No
Hallway	EW-3	3000	600	E	100	No
Living/Gym	EW-3	3000	7395	N	100	No
Living/Gym	EW-4	3000	1300	E	20000	No
Living/Gym	EW-4	3000	2300	N	1400	No
Living/Gym	EW-4	3000	4895	S	600	No
Living/Gym	EW-4	3000	5600	E	600	No
Living/Gym	EW-3	3000	6395	S	100	No
Laundry	EW-3	3000	2195	W	17550	No
Laundry	EW-3	3000	2195	N	100	No
Powder	EW-3	3000	1990	N	100	No
Butlers	EW-3	3000	3190	N	100	No
Kitchen/Living	EW-3	3000	5695	N	100	No
Kitchen/Living	EW-4	3000	9600	E	4600	Yes
Kitchen/Living	EW-3	3000	8000	S	100	No
Kitchen/Living	EW-4	3000	5600	W	150	No
Bed 5	EW-3	3000	3390	S	100	No
Bed 4	EW-3	3000	3490	S	100	No
Bath	EW-3	3000	3190	S	100	No
Bed 3	EW-3	3000	4595	S	100	No
Bed 3	EW-4	3000	3695	W	100	Yes
Stairwell	EW-4	3000	3895	W	100	No
Stairwell	EW-3	3000	4695	N	100	No
Robe	EW-3	3000	4590	N	100	No
Robe	EW-4	3000	2995	S	100	No
Robe	EW-4	3000	895	E	100	No
Ensuite Bed 1	EW-3	3000	3395	N	100	No
Ensuite Bed 1	EW-3	3000	3600	E	1100	No
Ensuite Bed 1	EW-3	3000	1400	S	100	No
Ensuite Bed 1	EW-4	3000	1995	S	100	No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bed 1	EW-4	3000	3695	E	100	No
Bed 1	EW-3	3000	6300	S	600	No
Bed 1	EW-4	3000	4295	W	100	No

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	88.63	Bulk Insulation, No Air Gap R2.5
IW-002	Timber Stud Frame, Direct Fix Plasterboard	195.24	No insulation

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Garage	Concrete Slab on Ground 100mm	65.49	None	No Insulation	Bare
Passage	Concrete Slab on Ground 100mm	15.60	None	No Insulation	Carpet+Rubber Underlay 18mm
WC	Concrete Slab on Ground 100mm	3.31	None	No Insulation	Ceramic Tiles 8mm
Cellar	Concrete Slab on Ground 100mm	18.21	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2 / Garage	Concrete Timber Framed Above Plasterboard 100mm	10.68		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 2	Concrete Slab on Ground 100mm	0.74	None	No Insulation	Carpet+Rubber Underlay 18mm
Bed 2	Suspended Concrete Slab 150mm	6.00	None	No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 2 / Garage	Concrete Timber Framed Above Plasterboard 100mm	3.22		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 2	Concrete Slab on Ground 100mm	2.00	None	No Insulation	Ceramic Tiles 8mm
Hallway / Garage	Concrete Timber Framed Above Plasterboard 100mm	5.74		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hallway / Passage	Concrete Timber Framed Above Plasterboard 100mm	10.97		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab on Ground 100mm	7.89	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Living/Gym / Passage	Concrete Timber Framed Above Plasterboard 100mm	1.66		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Living/Gym / WC	Concrete Timber Framed Above Plasterboard 100mm	0.00		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Living/Gym / Cellar	Concrete Timber Framed Above Plasterboard 100mm	3.09		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Living/Gym	Concrete Slab on Ground 100mm	55.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	4.66	None	No Insulation	Ceramic Tiles 8mm
Powder	Concrete Slab on Ground 100mm	4.22	None	No Insulation	Ceramic Tiles 8mm
Butlers	Concrete Slab on Ground 100mm	6.69	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	71.34	None	No Insulation	Ceramic Tiles 8mm
Bed 5 / Garage	Concrete Timber Framed Above Plasterboard 100mm	16.18		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 4 / Garage	Concrete Timber Framed Above Plasterboard 100mm	4.81		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 4 / Cellar	Concrete Timber Framed Above Plasterboard 100mm	11.21		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bath / Garage	Concrete Timber Framed Above Plasterboard 100mm	7.59		Bulk Insulation R2	Ceramic Tiles 8mm
Bed 3 / Garage	Concrete Timber Framed Above Plasterboard 150mm	13.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bed 3	Suspended Concrete Slab 150mm	3.77	Totally Open	No Insulation	Carpet+Rubber Underlay 18mm
Stairwell / Living/Gym	50mm Concrete Timber Frame Above Plasterboard 50mm	9.52		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Stairwell	Suspended Concrete Slab 50mm	1.40	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Robe / Living/Gym	50mm Concrete Timber Frame Above Plasterboard 50mm	9.93		Bulk Insulation R2	Carpet+Rubber Underlay 18mm

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Robe / Laundry	50mm Concrete Timber Frame Above Plasterboard 50mm	2.43		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Robe / Powder	50mm Concrete Timber Frame Above Plasterboard 50mm	1.19		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Robe	Suspended Concrete Slab 50mm	2.86	Totally Open	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Ensuite Bed 1 / Living/Gym	50mm Concrete Timber Frame Above Plasterboard 50mm	3.19		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 1 / Powder	50mm Concrete Timber Frame Above Plasterboard 50mm	1.07		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 1 / Butlers	50mm Concrete Timber Frame Above Plasterboard 50mm	2.89		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 1 / Kitchen/Living	50mm Concrete Timber Frame Above Plasterboard 50mm	3.22		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 1	Suspended Concrete Slab 50mm	0.71	Totally Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bed 1 / Living/Gym	50mm Concrete Timber Frame Above Plasterboard 19mm	25.72		Bulk Insulation R2	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Garage	Concrete Timber Framed Above Plasterboard	Bulk Insulation R2	
Passage	Concrete Timber Framed Above Plasterboard	Bulk Insulation R2	
WC	Concrete Timber Framed Above Plasterboard	Bulk Insulation R2	
Cellar	Concrete Timber Framed Above Plasterboard	Bulk Insulation R2	
Bed 2	Plasterboard on Timber	Bulk Insulation R6	
Ensuite Bed 2	Plasterboard on Timber	Bulk Insulation R6	
Hallway	Plasterboard on Timber	Bulk Insulation R6	
Living/Gym	Plasterboard on Timber	Bulk Insulation R6	

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Living/Gym	50mm Concrete Timber Frame Above Plasterboard	Bulk Insulation R2	
Laundry	Plasterboard on Timber	Bulk Insulation R6	
Laundry	50mm Concrete Timber Frame Above Plasterboard	Bulk Insulation R2	
Powder	Plasterboard on Timber	Bulk Insulation R6	
Powder	50mm Concrete Timber Frame Above Plasterboard	Bulk Insulation R2	
Butlers	Plasterboard on Timber	Bulk Insulation R6	
Butlers	50mm Concrete Timber Frame Above Plasterboard	Bulk Insulation R2	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R6	
Kitchen/Living	50mm Concrete Timber Frame Above Plasterboard	Bulk Insulation R2	
Bed 5	Plasterboard on Timber	Bulk Insulation R6	
Bed 4	Plasterboard on Timber	Bulk Insulation R6	
Bath	Plasterboard on Timber	Bulk Insulation R6	
Bed 3	Plasterboard on Timber	Bulk Insulation R6	
Stairwell	Plasterboard on Timber	Bulk Insulation R6	
Robe	Plasterboard on Timber	Bulk Insulation R6	
Ensuite Bed 1	Plasterboard on Timber	Bulk Insulation R6	
Bed 1	Plasterboard on Timber	Bulk Insulation R6	

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
WC	1	Exhaust Fans	0	Sealed
Ensuite Bed 2	1	Exhaust Fans	300	Sealed
Powder	1	Exhaust Fans	0	Sealed
Bath	1	Exhaust Fans	300	Sealed
Ensuite Bed 1	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Bed 2	1	1200
Bed 5	1	1200
Bed 4	1	1200
Bed 3	1	1200

* Refer to glossary.

Location	Quantity	Diameter [mm]
Bed 1	1	1200

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
Waterproofing Membrane	No Insulation, Only an Air Gap	0.845552941176471	Dark
Waterproofing Membrane	No Insulation, Only an Air Gap	0.85	Dark
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.845552941176471	Dark
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.85	Dark

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m^2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
					lower limit	upper limit	
No Data Available							

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

Onsite Renewable Energy *Schedule*

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery *Schedule*

System Type	Size [Battery Storage Capacity]
No Data Available	

Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below.
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 – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)