Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 0009543588

Generated on 20 Jun 2024 using BERS Pro v5.1.9 (3.23)

Property

Address	72 Frenchs Forest Road, SEAFORTH , NSW , 2092
Lot/DP	Lot A DP 338098
NCC class*	1a
Floor/all Floors	G of 2 floors
Type	New Home

Plans

Main plan	Clifftop House
Prepared by	D Lister Designs

Construction and environment

Assessed floor area [m2]*	
Conditioned*	219.4
Unconditioned*	17.7
Total	278.2
Garage	41.2

Exposure type
Suburban

NatHERS climate zone
56 Mascot (Sydney Airport)

Accredited assessor

Name	Terry Chapman
Business name	CHAPMAN ENVIRONMENTAL SERVICES PTY LTD
Email	terry@basixcertificates.com.au
Phone	0414 265 292
Accreditation No.	20920
Assessor Accrediting Organisation	ABSA
Declaration of interest	Declaration completed: no conflicts

NCC Requirements

NCC provisions	Volume Two
Strate/Territory variation	Yes

National Construction Code (NCC) requirements

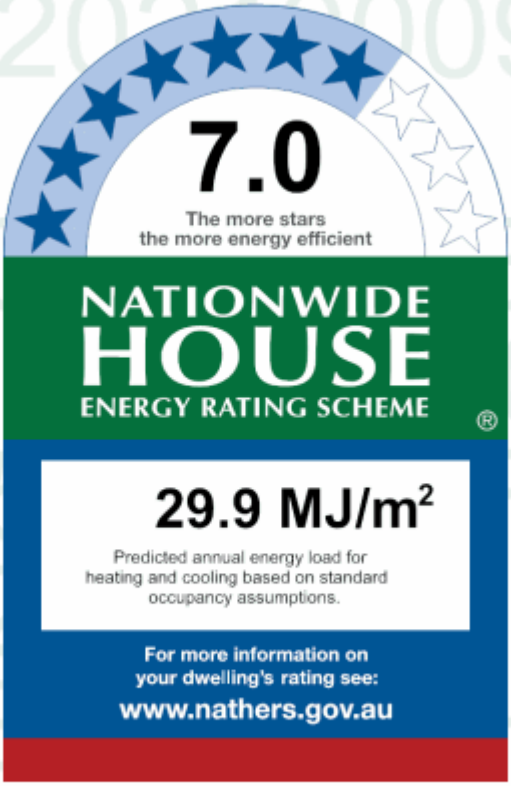
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	15.4	14.6
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=dpGKjJFHr . 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

Greenhouse gas emissions

Cost

* 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

** - 35mm Concrete flooring (alphaha Panel) to ground floor and also between levels to be used **

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m^2]
Garage 1	Garage	41.23
Laundry	Unconditioned	7.57
Entry	Daytime	25.79
Bath 1	Unconditioned	10.09
Day Time 2	Daytime	4.5
Rumpus	Living	40.85
Bedroom 2	Bedroom	19.62
Bedroom 3	Bedroom	19.62
Kitchen/Living 1	Kitchen/Living	55.14
Upper Hall/Stairs	Daytime	15.94
W C	Daytime	2.87
Butlers	Daytime	6.97
Master Bed	Bedroom	25.72
Ensuite	Nighttime	7.28

Window and glazed door *type and performance*

Default windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-025-04 A	702/704 SM Slidemaster AI Sliding Door DG 4/10/4ET	3.5	0.55	0.52	0.58
AWS-060-10 A	Commercial Series 456 Awning Windows DG 4/10/4ET	4.4	0.49	0.47	0.51
AWS-069-03 A	RES SERIES 517 FIXED WINDOW DG 638ClrLam-8Ar-4mmClr	3.6	0.62	0.59	0.65
VAN-004-08 A	SERIES 525 LOUVRE WINDOW SG 6ET	4.5	0.54	0.51	0.57

* Refer to glossary.

Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
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*
Entry	AWS-069-03 A	D2	2700	600	Fixed	00	S	No
Bath 1	VAN-004-08 A	W12	2100	600	Louvre	90	W	No
Bath 1	AWS-060-10 A	W13	1000	1000	Awning	90	W	No
Rumpus	AWS-069-03 A	W10	2700	600	Fixed	00	W	No
Rumpus	AWS-060-10 A	W11	2700	600	Awning	60	W	No
Rumpus	AWS-025-04 A	43	2400	4800	Sliding	75	N	No
Rumpus	VAN-004-08 A	W9	2100	600	Louvre	90	N	No
Bedroom 2	AWS-069-03 A	W3	2700	1200	Fixed	00	E	No
Bedroom 2	VAN-004-08 A	W4	2700	600	Louvre	90	E	No
Bedroom 2	AWS-060-10 A	W1	2700	600	Awning	60	S	No
Bedroom 2	AWS-069-03 A	W2	2700	600	Fixed	00	S	No
Bedroom 3	AWS-069-03 A	W7	2100	2400	Fixed	00	N	No
Bedroom 3	VAN-004-08 A	W8	2100	600	Louvre	90	N	No
Bedroom 3	AWS-069-03 A	W5	2700	1200	Fixed	00	E	No
Bedroom 3	VAN-004-08 A	W6	2700	600	Louvre	90	E	No
Kitchen/Living 1	AWS-069-03 A	W16	2400	1000	Fixed	00	N	No
Kitchen/Living 1	VAN-004-08 A	W17	2400	600	Louvre	90	N	No
Kitchen/Living 1	VAN-004-08 A	W18	2400	600	Louvre	90	N	No
Kitchen/Living 1	AWS-025-04 A	W21	2400	4800	Sliding	75	N	No
Kitchen/Living 1	AWS-069-03 A	W16	2400	1000	Fixed	00	E	No
Kitchen/Living 1	AWS-025-04 A	W22	2400	3500	Sliding	60	E	No
Master Bed	VAN-004-08 A	W15	2400	600	Louvre	90	E	Yes
Master Bed	AWS-025-04 A	W20	2400	2400	Sliding	45	E	Yes
Ensuite	AWS-060-10 A	W19	1500	1500	Awning	10	W	No

* Refer to glossary.

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
Upper Hall/Stairs	VEL-011-01 W	S1	0	1600	1600	W	Yes	Yes
Butlers	VEL-011-01 W	S2	0	720	1158	W	Yes	Yes
Ensuite	VEL-011-01 W	S3	0	1500	1500	W	Yes	Yes

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 1	2340	820	90	N
Garage 1	2200	5000	90	E
Laundry	2340	820	90	W
Entry	2623	1120	90	S

* Refer to glossary.

Location	Height [mm]	Width [mm]	Opening %	Orientation

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Timber Stud Frame Brick Veneer	0.304790588235294		Foil, Anti-glare one side + Bulk Insulation R2.7	No
EW-2	Fibro Timber Stud Frame Panel on Battens	0.304790588235294		Foil, Anti-glare one side + 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]
Garage 1	EW-1	2700	6300	W	0	No
Garage 1	EW-1	2700	1200	N	6100	No
Garage 1	EW-1	2700	6295	E	0	No
Garage 1	EW-1	2700	6600	S	0	No
Laundry	EW-2	2700	2290	W	0	No
Entry	EW-2	2700	2095	S	1600	No
Entry	EW-1	2700	1495	E	4700	No
Bath 1	EW-2	2700	3790	W	0	No
Rumpus	EW-2	2700	1300	S	6100	No
Rumpus	EW-2	2700	5600	W	0	No
Rumpus	EW-2	2700	8795	N	4325	No
Bedroom 2	EW-2	2700	5095	E	0	No
Bedroom 2	EW-2	2700	3895	S	1600	No
Bedroom 3	EW-2	2700	3895	N	2850	No
Bedroom 3	EW-2	2700	5095	E	0	No
Kitchen/Living 1	EW-2	3000	5595	W	200	No
Kitchen/Living 1	EW-2	2700	9900	N	200	No
Kitchen/Living 1	EW-2	3000	5595	E	1400	No
Upper Hall/Stairs	EW-2	2700	1190	E	1400	No
Butlers	EW-2	2700	2990	W	200	No
Master Bed	EW-2	2400	4895	E	1400	No
Master Bed	EW-2	2400	7495	S	200	No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Ensuite	EW-2	2400	2395	S	200	No
Ensuite	EW-2	2400	3095	W	200	No

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	31.05	Bulk Insulation, No Air Gap R2.5
IW-002	Timber Stud Frame, Direct Fix Plasterboard	176.79	No insulation

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Garage 1	Concrete Slab on Ground 100mm	41.16	None	No Insulation	Bare
Laundry	Suspended Concrete Slab 35mm	7.57	Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 35mm	25.79	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bath 1	Suspended Concrete Slab 35mm	10.09	Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Day Time 2	Suspended Concrete Slab 35mm	4.50	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Rumpus	Suspended Concrete Slab 35mm	40.85	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bedroom 2	Suspended Concrete Slab 35mm	19.62	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm

* Refer to glossary.

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 3	Suspended Concrete Slab 35mm	19.62	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Kitchen/Living 1 / Entry	Concrete Timber Framed Above Plasterboard 19mm	7.70		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living 1 / Rumpus	Concrete Timber Framed Above Plasterboard 19mm	33.71		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living 1 / Bedroom 2	Concrete Timber Framed Above Plasterboard 19mm	0.90		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living 1 / Bedroom 3	Concrete Timber Framed Above Plasterboard 19mm	11.94		No Insulation	Cork Tiles or Parquetry 8mm
Upper Hall/Stairs / Entry	Concrete Timber Framed Above Plasterboard 19mm	3.16		No Insulation	Cork Tiles or Parquetry 8mm
Upper Hall/Stairs / Day Time 2	Concrete Timber Framed Above Plasterboard 19mm	0.00		No Insulation	Cork Tiles or Parquetry 8mm
Upper Hall/Stairs / Bedroom 2	Concrete Timber Framed Above Plasterboard 19mm	0.00		No Insulation	Cork Tiles or Parquetry 8mm
W C / Entry	Concrete Timber Framed Above Plasterboard 19mm	1.33		No Insulation	Ceramic Tiles 8mm
W C / Bath 1	Concrete Timber Framed Above Plasterboard 19mm	1.32		No Insulation	Ceramic Tiles 8mm
Butlers / Bath 1	Concrete Timber Framed Above Plasterboard 19mm	6.97		No Insulation	Cork Tiles or Parquetry 8mm
Master Bed / Laundry	Concrete Timber Framed Above Plasterboard 35mm	2.16		No Insulation	Cork Tiles or Parquetry 8mm
Master Bed / Entry	Concrete Timber Framed Above Plasterboard 35mm	8.28		No Insulation	Cork Tiles or Parquetry 8mm
Master Bed / Bedroom 2	Concrete Timber Framed Above Plasterboard 35mm	7.79		No Insulation	Cork Tiles or Parquetry 8mm
Master Bed	Suspended Concrete Slab 35mm	6.38	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Ensuite / Laundry	Concrete Timber Framed Above Plasterboard 19mm	5.35		No Insulation	Ceramic Tiles 8mm
Ensuite / Bath 1	Concrete Timber Framed Above Plasterboard 19mm	1.76		No Insulation	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Garage 1	Plasterboard on Timber	Bulk Insulation R7	

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Laundry	Concrete Timber Framed Above Plasterboard	No Insulation	
Entry	Concrete Timber Framed Above Plasterboard	No Insulation	
Bath 1	Concrete Timber Framed Above Plasterboard	No Insulation	
Day Time 2	Concrete Timber Framed Above Plasterboard	No Insulation	
Rumpus	Plasterboard on Timber	Bulk Insulation R7	
Rumpus	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R7	
Bedroom 2	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 3	Plasterboard on Timber	Bulk Insulation R7	
Bedroom 3	Concrete Timber Framed Above Plasterboard	No Insulation	
Kitchen/Living 1	Plasterboard on Timber	Bulk Insulation R7	
Upper Hall/Stairs	Plasterboard on Timber	Bulk Insulation R7	
W C	Plasterboard on Timber	Bulk Insulation R7	
Butlers	Plasterboard on Timber	Bulk Insulation R7	
Master Bed	Plasterboard on Timber	Bulk Insulation R7	
Ensuite	Plasterboard on Timber	Bulk Insulation R7	

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Laundry	1	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Entry	3	Downlights - LED	150	Sealed
Bath 1	1	Downlights - LED	150	Sealed
Bath 1	1	Exhaust Fans	300	Sealed
Rumpus	6	Downlights - LED	150	Sealed
Bedroom 2	2	Downlights - LED	150	Sealed
Bedroom 3	2	Downlights - LED	150	Sealed
Kitchen/Living 1	16	Downlights - LED	150	Sealed
Kitchen/Living 1	1	Exhaust Fans	300	Sealed
Upper Hall/Stairs	2	Downlights - LED	150	Sealed
W C	1	Downlights - LED	150	Sealed
W C	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Butlers	1	Downlights - LED	150	Sealed
Master Bed	3	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Rumpus	2	1400
Bedroom 2	1	1400
Bedroom 3	1	1400
Kitchen/Living 1	2	1400
Master Bed	1	1400

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.5	0.3	Light
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.3	Light
Waterproofing Membrane	No Added Insulation, No air Gap	0.3	Light

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	

* Refer to glossary.

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)