Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 0011635810

Generated on 19 Dec 2024 using BERS Pro v5.2.3 (3.23)

Property

Address	32 Macmillan Street, SEAFORTH , NSW , 2092
Lot/DP	Lot 12 DP 6210
NCC class*	1a
Floor/all Floors	G of 2 floors
Type	New Home

Plans

Main plan	22065-8
Prepared by	Accurate Design and Drafting

Construction and environment

Assessed floor area [m2]*	
Conditioned*	227.9
Unconditioned*	21.5
Total	249.4
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
56 Mascot (Sydney Airport)

Accredited assessor

Name	Thomas Ruck
Business name	Building & Energy Consultants Australia
Email	thomas@beca.net.au
Phone	9533 2388
Accreditation No.	DMN/20/1999
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

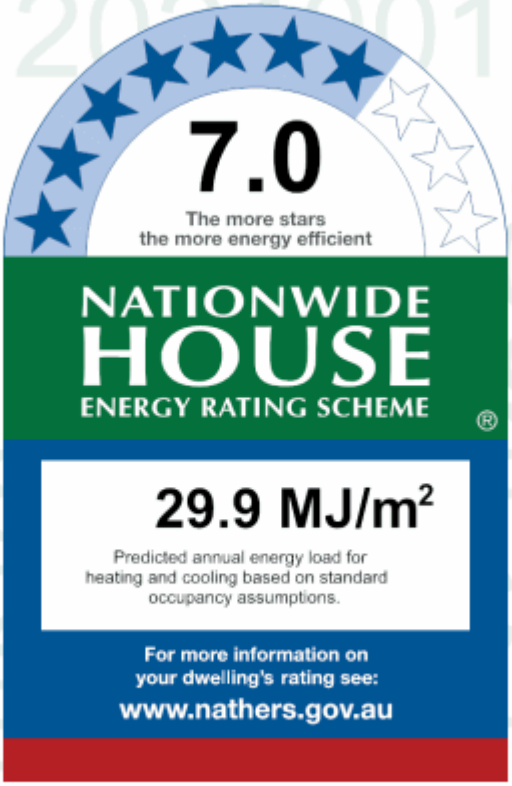
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	19.0	10.9
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=JYlskjHoW . 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

Vapour barrier to be added to external wall insulation.

HD R2.7 first floor walls adjacent to roof space has been modelled as R4.6 to include the R1.3 anticon blanket under

roof sheeting and R0.6 reflective air gap.

* Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m^2]
Guest Bed	Bedroom	13.7
Pwd	Unconditioned	5.75
Laundry	Unconditioned	7.9
Butler	Daytime	4.12
Kitchen/Family	Kitchen/Living	60.06
Study	Bedroom	13.74
Stair	Daytime	5.71
Media	Living	14.24
Entry Hall	Daytime	14.46
Master Suite	Bedroom	20.56
Dressing	Nighttime	9.83
Ensuite	Nighttime	6.26
Bath	Unconditioned	7.8
WC	Daytime	2.45
WIR Bed 2	Nighttime	2.35
Bedroom 2	Bedroom	13.79
WIR Bed3	Nighttime	3.5
Bedroom 3	Bedroom	14.22
Sitting	Living	31.62

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-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
WID-115-020	Aluminium Sliding Window DG 4ETClr/12Ar/4Clr	3.7	0.46	0.44	0.49
WID-112-022	Aluminium Awning Window DG 4ET/12Ar/4Clr	4.2	0.43	0.41	0.45

* Refer to glossary.

Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
WID-012-001	Aluminium Awning Window SG 5Clr	6.3	0.63	0.60	0.66
WID-108-022	Aluminium Fixed Window DG 4ETClr/12Ar/4Clr	2.8	0.57	0.54	0.60
WID-123-022	Aluminium Sliding Door DG 4ET/12Ar/4Clr	3.4	0.48	0.45	0.50
WID-007-006	Aluminium Hinged Door DG 4Clr/6/4EA	3.9	0.46	0.44	0.48
WID-006-018	Aluminium Sliding Window SG 5Clr	6.4	0.72	0.69	0.76

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Guest Bed	WID-115-020-002	Guest	900	2700	Sliding	45	E	No
Guest Bed	WID-112-022-002	Guest	1500	2400	Awning	60	N	No
Pwd	WID-012-001-001	W4	600	1000	Awning	90	E	No
Laundry	TIM-001-01 W	Laundry	1200	820	Casement	90	E	No
Butler	WID-108-022-002	W5	700	1200	Fixed	00	E	No
Butler	WID-108-022-002	W5	700	300	Fixed	00	E	No
Kitchen/Family	WID-108-022-002	Kitchen	700	3000	Fixed	00	E	No
Kitchen/Family	WID-123-022-002	Family sliding door	2400	6000	Sliding	66	S	No
Kitchen/Family	WID-007-006-001	W8	2400	820	Casement	90	S	No
Kitchen/Family	WID-112-022-002	W9	1800	900	Awning	60	W	No
Kitchen/Family	WID-112-022-002	W10	1800	900	Awning	60	W	No
Study	WID-115-020-002	W11	1200	2700	Sliding	45	W	No
Media	WID-112-022-002	W1	1500	2400	Awning	60	N	No
Master Suite	WID-115-020-002	Master suite	1200	2700	Sliding	10	S	No
Master Suite	WID-115-020-002	W20	1200	2700	Sliding	10	W	Yes
Master Suite	WID-115-020-002	Master suite	700	2700	Sliding	10	E	No
Ensuite	WID-115-020-002	Ens	1000	1200	Sliding	10	E	No
Bath	WID-006-018-001	Bath	1000	1200	Sliding	10	E	No
Bedroom 2	WID-112-022-002	Bed 2	1500	2400	Awning	60	N	No
Bedroom 2	WID-115-020-002	Bed 2	600	2700	Sliding	45	E	No

* Refer to glossary.

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
WIR Bed3	WID-112-022-002	WIR	1500	700	Awning	70	N	No
Bedroom 3	WID-115-020-002	Bed 3	600	2700	Sliding	45	W	No
Bedroom 3	WID-112-022-002	Bed 3	1500	2400	Awning	60	N	No
Sitting	WID-115-020-002	Sitting	1200	2700	Sliding	10	S	No
Sitting	WID-108-022-002	Stairs	1800	1200	Fixed	00	W	No

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
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	Skylight shaft reflectance
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame	0.5

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m^2]	Orientation	Outdoor shade	Diffuser
Sitting	GEN-04-008a	S1	800	0.39	W	None	No

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
Laundry	1140	820	90	E

* Refer to glossary.

Location	Height [mm]	Width [mm]	Opening %	Orientation
Entry Hall	2340	1020	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Fibro Timber Stud Frame Panel Direct Fix	0.30		Bulk Insulation R2.7	No
EW-2	Single Skin Panel Timber Frame	0.30		Bulk Insulation R4.6	No
EW-3	Fibro Timber Stud Frame Panel Direct Fix	0.50		Bulk Insulation R2.7	No
EW-4	Single Skin Panel Timber Frame	0.50		Bulk Insulation R4.6	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Guest Bed	EW-1	2750	4195	E	0	Yes
Guest Bed	EW-1	2750	1200	W	5200	No
Guest Bed	EW-1	2750	700	N	1050	No
Guest Bed	EW-1	2750	2800	N	0	No
Pwd	EW-1	2750	1590	E	0	Yes
Laundry	EW-1	2750	2490	E	0	Yes
Butler	EW-1	2750	1295	E	0	Yes
Butler	EW-1	2750	495	E	1550	Yes
Kitchen/Family	EW-1	2750	1000	N	550	No
Kitchen/Family	EW-1	2750	6100	E	550	No
Kitchen/Family	EW-1	2750	9700	S	4550	No
Kitchen/Family	EW-1	2750	6095	W	550	No
Study	EW-1	2750	3895	W	0	No
Study	EW-1	2750	900	N	2200	No
Stair	EW-1	2750	2190	W	0	No
Media	EW-1	2750	900	S	2200	No
Media	EW-1	2750	4000	W	0	No
Media	EW-1	2750	3600	N	0	No
Media	EW-1	2750	1200	E	5100	No
Entry Hall	EW-1	2750	1590	N	2250	No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Master Suite	EW-1	2750	5000	S	550	No
Master Suite	EW-2	900	5395	W	0	Yes
Master Suite	EW-3	1850	5395	W	550	No
Master Suite	EW-1	2750	3795	E	550	No
Dressing	EW-1	2750	2590	E	550	No
Ensuite	EW-1	2750	1890	E	550	No
Bath	EW-1	2750	2390	E	550	No
WIR Bed 2	EW-1	2750	1490	E	550	No
Bedroom 2	EW-1	2750	600	W	5750	No
Bedroom 2	EW-1	2750	3500	N	550	No
Bedroom 2	EW-1	2750	3995	E	550	No
WIR Bed3	EW-1	2750	1590	N	1150	No
Bedroom 3	EW-1	2750	600	E	5650	No
Bedroom 3	EW-1	2750	900	S	6650	No
Bedroom 3	EW-1	2750	4000	W	550	No
Bedroom 3	EW-1	2750	3600	N	550	No
Sitting	EW-4	900	695	W	0	No
Sitting	EW-3	1850	695	W	4250	No
Sitting	EW-1	2750	3700	S	550	Yes
Sitting	EW-1	2750	3900	W	550	No
Sitting	EW-1	2750	900	N	6750	No
Sitting	EW-1	2750	2195	W	1450	No

Internal wall *type*

Wall ID	Wall type	Area [m^2]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	53.08	Bulk Insulation, No Air Gap R2.5
IW-002	Timber Stud Frame, Direct Fix Plasterboard	165.00	No insulation

* Refer to glossary.

Floor *type*

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
Guest Bed	Waffle pod slab 300 mm 100mm	13.66	None	Waffle Pod 300mm	Carpet+Rubber Underlay 18mm
Pwd	Waffle pod slab 300 mm 100mm	5.75	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Laundry	Waffle pod slab 300 mm 100mm	7.90	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Butler	Waffle pod slab 300 mm 100mm	4.12	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Kitchen/Family	Waffle pod slab 300 mm 100mm	60.06	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Study	Waffle pod slab 300 mm 100mm	13.74	None	Waffle Pod 300mm	Carpet+Rubber Underlay 18mm
Stair	Waffle pod slab 300 mm 100mm	5.71	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Media	Waffle pod slab 300 mm 100mm	14.24	None	Waffle Pod 300mm	Carpet+Rubber Underlay 18mm
Entry Hall	Waffle pod slab 300 mm 100mm	14.46	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Master Suite / Kitchen/Family	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	20.55		No Insulation	Carpet+Rubber Underlay 18mm
Dressing / Butler	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	0.23		No Insulation	Carpet+Rubber Underlay 18mm
Dressing / Kitchen/Family	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	9.17		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite / Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	0.77		No Insulation	Ceramic Tiles 8mm
Ensuite / Butler	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	3.52		No Insulation	Ceramic Tiles 8mm
Ensuite / Kitchen/Family	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	0.29		No Insulation	Ceramic Tiles 8mm
Ensuite / Entry Hall	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	0.51		No Insulation	Ceramic Tiles 8mm
Bath / Pwd	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	0.44		No Insulation	Ceramic Tiles 8mm
Bath / Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	6.63		No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

Location	Construction	Area [m^2]	Sub-floor ventilation	Added insulation [R-value]	Covering
WC / Pwd	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	2.30		No Insulation	Ceramic Tiles 8mm
WIR Bed 2 / Pwd	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	2.01		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2 / Guest Bed	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	13.35		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed3 / Entry Hall	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	2.53		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed3	Suspended 35mm Fibre-Reinforced Concrete Floor Timber Frame 42mm	0.77	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Bedroom 3 / Media	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	14.21		No Insulation	Carpet+Rubber Underlay 18mm
Sitting / Kitchen/Family	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	0.00		No Insulation	Carpet+Rubber Underlay 18mm
Sitting / Study	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	10.81		No Insulation	Carpet+Rubber Underlay 18mm
Sitting / Stair	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	2.71		No Insulation	Carpet+Rubber Underlay 18mm
Sitting / Entry Hall	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 19mm	8.16		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Guest Bed	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Pwd	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Butler	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Kitchen/Family	Plasterboard on Timber	Bulk Insulation R6	

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Family	Plasterboard on Timber	Bulk Insulation R3	
Kitchen/Family	Plasterboard on Timber	Bulk Insulation R3	
Kitchen/Family	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Study	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Stair	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Media	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Entry Hall	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Master Suite	Plasterboard on Timber	Bulk Insulation R6	
Master Suite	Plasterboard on Timber	Bulk Insulation R3	
Dressing	Plasterboard on Timber	Bulk Insulation R6	
Dressing	Plasterboard on Timber	Bulk Insulation R3	
Ensuite	Plasterboard on Timber	Bulk Insulation R6	
Ensuite	Plasterboard on Timber	Bulk Insulation R3	
Bath	Plasterboard on Timber	Bulk Insulation R6	
Bath	Plasterboard on Timber	Bulk Insulation R3	
WC	Plasterboard on Timber	Bulk Insulation R6	
WIR Bed 2	Plasterboard on Timber	Bulk Insulation R6	
WIR Bed 2	Plasterboard on Timber	Bulk Insulation R3	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R3	
WIR Bed3	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 3	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 3	Plasterboard on Timber	Bulk Insulation R3	
Sitting	Plasterboard on Timber	Bulk Insulation R6	
Sitting	Plasterboard on Timber	Bulk Insulation R3	

Ceiling *penetrations**

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Guest Bed	2	Downlights - LED	100	Sealed
Pwd	1	Downlights - LED	100	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Pwd	1	Exhaust Fans	300	Sealed
Laundry	2	Downlights - LED	100	Sealed
Butler	1	Downlights - LED	100	Sealed
Kitchen/Family	12	Downlights - LED	100	Sealed
Kitchen/Family	1	Exhaust Fans	300	Sealed
Study	3	Downlights - LED	100	Sealed
Media	3	Downlights - LED	100	Sealed
Master Suite	4	Downlights - LED	100	Sealed
Dressing	2	Downlights - LED	100	Sealed
Ensuite	1	Downlights - LED	100	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Bath	2	Downlights - LED	100	Sealed
Bath	1	Exhaust Fans	300	Sealed
WC	1	Downlights - LED	100	Sealed
WC	1	Exhaust Fans	300	Sealed
WIR Bed 2	1	Downlights - LED	100	Sealed
Bedroom 2	3	Downlights - LED	100	Sealed
WIR Bed3	1	Downlights - LED	100	Sealed
Bedroom 3	3	Downlights - LED	100	Sealed
Sitting	6	Downlights - LED	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Guest Bed	1	1200
Kitchen/Family	1	1400
Study	1	1200
Media	1	1200
Master Suite	1	1400
Bedroom 2	1	1200
Bedroom 3	1	1200
Sitting	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 R1.3	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)

NatHERS - THERMAL COMFORT SUMMARY

Address: 32 Macmillan Street SEAFORTH NSW 2092		***Date: 19/12/2024***
Software: BERS v5	***Certificate number: 0011635810***	***Star rating: 7.0***

Building Elements	Material	Detail
External walls	FC cladding	HD R2.7 bulk insulation
Internal walls	Plasterboard on studs	R2.5 bulk insulation internal walls Powder, Laundry and Bath HD R2.7 bulk insulation first floor walls adjacent to roof space
Ceilings	Plasterboard	R6.0 all ceilings adjacent to roof space (Including Alfresco) R3.0 eaves edge
Floors	225mm waffle pod	-
	35mm Alpha Floor	R2.5 under suspended floor to outside
Roof	Colorbond (Dark)	R1.3 anticon blanket

Window/doors

Windows	*Glass & frame type*	*U and SHGC values*	*Details*
WID-012-001	Aluminium framed single clear	U value: 6.32 and SHGC 0.63	Awning windows - Powder
WID-006-018	Aluminium framed single clear	U value: 6.37 and SHGC 0.72	Sliding windows - Bath
WID-115-020	Aluminium framed double low e	U value: 3.73 and SHGC 0.46	Sliding windows – Guest, Study, Bed 2, Ensuite, Master Suite, Sitting, Bed 3
WID-112-022	Aluminium framed double low e	U value: 4.18 and SHGC 0.43	Awning windows – Media, Guest, Bed 3, Bed 3 WIR, Bed 2
WID-108-022	Aluminium framed double low e	U value: 2.82 and SHGC 0.57	Fixed windows – Butlers, Kitchen, Stair
WID-123-022	Aluminium framed double low e	U value: 3.40 and SHGC 0.48	Sliding doors – Family/Meals
WID-007-006	Aluminium framed double low e	U value: 3.93 and SHGC 0.46	Hinged doors – Family/Meals
	Aluminium framed double glazed		Skylight

U and SHGC values are according to NFRC. Alternate products may be used if the U value is the same or lower and the SHGC is within 5% of the above figures. This also applies to changes to the type and thickness of glass required to meet Bushfire and acoustic regulations.

Ceiling fans
1200mm ceiling fans to Guest Bed, Media, Study, Bed 2, Bed 3
1400mm ceiling fans to Family, Master Suite, Sitting

Lighting: This dwelling has been rated with non-ventilated LED downlights as per NatHERS certificate.

Note: Insulation specified must be installed in accordance with BCA Volume Two.

Note: If metal frames are used, a revised assessment is required

Note: In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Note: Self-closing damper to bath, ensuite and laundry exhaust fans.