

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. 0011596459

Generated on 04 Dec 2024 using AccuRate Home v1.3.3.23

Property

Address	Unit 1, 41 Ferguson Street, Forestville , NSW , 2087
Lot/DP	Lot 13 DP 25368
NCC class*	1a
Floor/all Floors	Ground of 3 floors
Type	New Home

Plans

Main plan	202426, 04-12-2024
Prepared by	Mark Makhoul

Construction and environment

Assessed floor area [m2]*	Exposure type
Conditioned* 242.6	Suburban
Unconditioned* 91.0	NatHERS climate zone
Total 333.6	56 Mascot (Sydney Airport)
Garage 72.7	



Accredited assessor

Name	Raymond Sleiman
Business name	Taylor Smith Consulting
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Phone	02 9890 8002
Accreditation No.	DMN/12/1472
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	No

NCC Requirements

NCC provisions	Volume Two
State/Territory variation	Yes

National Construction Code (NCC) requirements

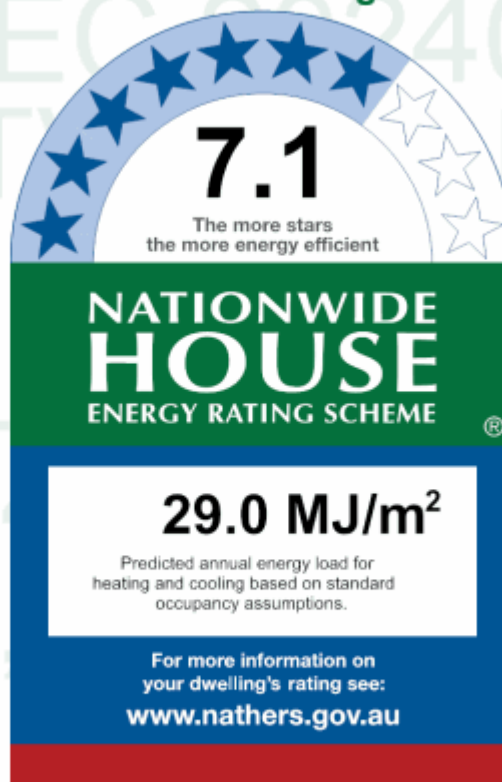
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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	16.3	12.7
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 www.hstar.com.au/QR/Generate?p=CdSTYrXjV. When using either link, ensure you are visiting www.hstar.com.au



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

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		Occupancy/Other
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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

Room schedule

Room	Zone Type	Area [m ²]
GARAGE	Garage	72.7
FOYER	Day time	25
STORE 1	Day time	10.4
WC 1	Day time	2.4
STORE 2	Day time	7.6
ENS G	Night time	3.9
GUEST	Bedroom	18.7
WC 2	Unconditioned	4.8
LDRY	Unconditioned	4.7
KIT/DIN/VOID	Living/Kitchen	77
PANTRY	Day time	4.5
GALLERY	Day time	23.7
BED 1	Bedroom	17.3
ENS 1	Night time	8.1
WIR 1	Night time	8.6
BED 2	Bedroom	19.3
BED 3	Bedroom	16.1
BATH	Unconditioned	8.8

Window and glazed door type and performance

Default windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61

Custom windows*

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



Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
ENS G	ALM-001-03 A	W5	850	610	Awning	90	SE	None
GUEST	ALM-002-03 A	W3	1975	2290	Other	00	NE	None
GUEST	ALM-002-03 A	W4	850	2400	Sliding	45	SE	None
WC 2	ALM-001-03 A	W11	2400	720	Casement	100	SW	None
LDRY	ALM-002-03 A	W7	685	2170	Sliding	45	SE	None
LDRY	ALM-001-03 A	W8	2140	610	Awning	45	SW	None
KIT/DIN/VOID	ALM-002-03 A	W10	2600	4250	Sliding	60	SW	None
KIT/DIN/VOID	ALM-001-03 A	W9	2140	610	Awning	45	SW	None
KIT/DIN/VOID	ALM-002-03 A	W1	2575	750	Other	00	NE	None
KIT/DIN/VOID	ALM-002-03 A	W21	2400	2050	Other	00	NE	None
KIT/DIN/VOID	ALM-002-03 A	W2	2575	2650	Sliding	30	NE	None
PANTRY	ALM-002-03 A	W6	685	2170	Sliding	45	SE	None
BED 1	ALM-002-03 A	W22	2700	2650	Sliding	30	NE	None
ENS 1	ALM-001-03 A	W23	850	1500	Awning	90	NE	None
ENS 1	ALM-001-03 A	W24	850	730	Awning	90	SE	None
BED 2	ALM-002-03 A	W28	1800	2200	Sliding	10	SW	None
BED 3	ALM-002-03 A	W26	850	2100	Sliding	45	SE	None
BED 3	ALM-002-03 A	W27	1800	1500	Sliding	10	SW	None
BATH	ALM-001-03 A	W25	850	1500	Awning	90	SE	None

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-011-02 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 10.5mm Argon Gap / 3mm Clear	2.7	0.24	0.23	0.25

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
KIT/DIN/VOID	VEL-011-02 W	SK2	0	1414	1414	SE	None	None
GALLERY	VEL-011-02 W	SK1	0	1414	1414	SE	None	None
WIR 1	VEL-011-02 W	SK2	0	1330	1330	SE	None	None

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 [m²]	Orientation	Outdoor shade	Diffuser
No Data Available							

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
GARAGE	2400	2900	0	NE
KIT/DIN/VOID	2575	1300	100	NE

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-001	Retaining Bituminous roof membrane/Concrete wall/Plasterboard	50.00	Medium	Polystyrene extruded: R2.5	No
EW-002	Sandstone/Concrete block/Plasterboard	30.00	Light	Polystyrene extruded: R2.5	No
EW-003	Retaining Bituminous roof membrane/Concrete block/Plasterboard	50.00	Medium		No



Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-004	Brick wall/Plasterboard	30.00	Light	Polystyrene expanded (k = 0.039): R0.3	Yes
EW-005	Concrete block/Plasterboard	30.00	Light		No
EW-007	Fibre-cement sheet/Plasterboard	85.00	Dark	Rockwool batt: R2.5	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
GARAGE	EW-003	2500	6400	SW		No
GARAGE	EW-005	2500	3400	NE	3800	Yes
GARAGE	EW-003	2500	11100	SE		No
STORE 1	EW-001	2400	3100	SW		No
WC 1	EW-001	2400	1300	NE		No
STORE 2	EW-001	1600	2700	NE		No
STORE 2	EW-002	800	2700	NE		No
ENS G	EW-004	2700	2600	SE		No
GUEST	EW-004	2700	3290	NE	900	Yes
GUEST	EW-004	2700	4280	SE		No
WC 2	EW-004	2700	1500	SW	3200	Yes
LDRY	EW-004	2700	3100	SE		No
LDRY	EW-004	2700	1500	SW		No
KIT/DIN/VOID	EW-004	2700	6380	SW	800	Yes
KIT/DIN/VOID	EW-004	5800	2050	NE	2100	Yes
KIT/DIN/VOID	EW-004	2700	600	NW	2300	Yes
KIT/DIN/VOID	EW-004	2700	3600	NE	1200	Yes
PANTRY	EW-004	2700	3000	SE		No
BED 1	EW-007	2700	3680	NE	300	Yes
BED 1	EW-007	2700	300	NW		No
ENS 1	EW-007	2700	1400	NW	1700	Yes
ENS 1	EW-007	2700	1800	NE		No
ENS 1	EW-007	2700	1600	SE		No

* Refer to glossary.

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
WIR 1	EW-007	2700	3300	SE		No
BED 2	EW-004	2700	1350	NW		No
BED 2	EW-007	2700	5300	SW		No
BED 2	EW-007	2700	2300	SE		No
BED 3	EW-007	2700	4600	SE		No
BED 3	EW-007	2700	2400	SW		No
BATH	EW-007	2700	2500	SE		No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Plasterboard/Brick wall	96.45	
IW-002	Plasterboard/Brick wall	35.18	Polystyrene extruded: R2.5
IW-003	Plasterboard	104.54	
IW-004	Plasterboard/Concrete wall	104.24	

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
GARAGE/Ground	Concrete Slab 200 mm: bare/bare	72.70			
FOYER/Ground	Concrete Slab 200 mm: ceramic tiles/bare	25.00			Ceramic tile
STORE 1/Ground	Concrete Slab 200 mm: ceramic tiles/bare	10.40			Ceramic tile
WC 1/Ground	Concrete Slab 200 mm: ceramic tiles/bare	2.40			Ceramic tile
STORE 2/Ground	Concrete Slab 200 mm: ceramic tiles/bare	7.60			Ceramic tile
ENS G/GARAGE	GAR Concrete Slab 200 mm: ceramic tiles/plasterboard R3.0 XPS	3.90		R3.0	Ceramic tile
GUEST/GARAGE	GAR Concrete Slab 200 mm: timber/plasterboard R3.0 XPS	11.50		R3.0	
GUEST/Outdoor Air	S/S Concrete Slab 200 mm: timber/bare R3.0 XPS	7.20		R3.0	
WC 2/STORE 1	Concrete Slab 200 mm: ceramic tiles/plasterboard	4.80			Ceramic tile



Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
LDRY/GARAGE	GAR Concrete Slab 200 mm: ceramic tiles/plasterboard R3.0 XPS	4.70		R3.0	Ceramic tile
KIT/DIN/VOID/GARAGE	GAR Concrete Slab 200 mm: timber/plasterboard R3.0 XPS	46.90		R3.0	
KIT/DIN/VOID/STORE 2	Concrete Slab 200 mm: timber/plasterboard	3.80			
KIT/DIN/VOID/STORE 1	Concrete Slab 200 mm: timber/plasterboard	5.60			
KIT/DIN/VOID/FOYER	Concrete Slab 200 mm: timber/plasterboard	25.00			
KIT/DIN/VOID/Outdoor Air	S/S Concrete Slab 200 mm: timber/bare R3.0 XPS	3.30		R3.0	
PANTRY/GARAGE	GAR Concrete Slab 200 mm: ceramic tiles/plasterboard R3.0 XPS	4.50		R3.0	Ceramic tile
GALLERY/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard	22.20			
GALLERY/WC 2	Concrete Slab 200 mm: timber/plasterboard	3.80			
BED 1/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard	17.30			
ENS 1/GUEST	Concrete Slab 200 mm: ceramic tiles/plasterboard	8.10			Ceramic tile
WIR 1/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard	3.20			
WIR 1/GUEST	Concrete Slab 200 mm: timber/plasterboard	5.40			
BED 2/WC 2	Concrete Slab 200 mm: timber/plasterboard	1.00			
BED 2/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard	1.90			
BED 2/Outdoor Air	S/S Concrete Slab 200 mm: timber/bare R3.0 XPS	16.40		R3.0	
BED 3/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard	12.70			
BED 3/Outdoor Air	S/S Concrete Slab 200 mm: timber/bare R3.0 XPS	3.40		R3.0	
BATH/KIT/DIN/VOID	Concrete Slab 200 mm: ceramic tiles/plasterboard	8.80			Ceramic tile

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
KIT/DIN/VOID/GARAGE	GAR Concrete Slab 200 mm: timber/plasterboard R3.0 XPS	R3.0	No
ENS G/GARAGE	GAR Concrete Slab 200 mm: ceramic tiles/plasterboard R3.0 XPS	R3.0	No
GUEST/GARAGE	GAR Concrete Slab 200 mm: timber/plasterboard R3.0 XPS	R3.0	No
PANTRY/GARAGE	GAR Concrete Slab 200 mm: ceramic tiles/plasterboard R3.0 XPS	R3.0	No
LDRY/GARAGE	GAR Concrete Slab 200 mm: ceramic tiles/plasterboard R3.0 XPS	R3.0	No
KIT/DIN/VOID/FOYER	Concrete Slab 200 mm: timber/plasterboard		No
WC 2/STORE 1	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
KIT/DIN/VOID/STORE 1	Concrete Slab 200 mm: timber/plasterboard		No
KIT/DIN/VOID/STORE 2	Concrete Slab 200 mm: timber/plasterboard		No
WIR 1/GUEST	Concrete Slab 200 mm: timber/plasterboard		No
ENS 1/GUEST	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
BED 2/WC 2	Concrete Slab 200 mm: timber/plasterboard		No
GALLERY/WC 2	Concrete Slab 200 mm: timber/plasterboard		No
WIR 1/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard		No
GALLERY/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard		No
BATH/KIT/DIN/VOID	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
BED 1/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard		No
BED 2/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard		No
BED 3/KIT/DIN/VOID	Concrete Slab 200 mm: timber/plasterboard		No

Ceiling penetrations*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
FOYER	5	Downlight	0	Sealed
STORE 1	2	Downlight	250	Sealed
WC 1	1	Downlight	0	Sealed
WC 1	1	Ceiling exhaust fan	250	Sealed
STORE 2	2	Downlight	0	Sealed
ENS G	1	Downlight	0	Sealed

* Refer to glossary.



Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
ENS G	1	Ceiling exhaust fan	250	Sealed
GUEST	5	Downlight	0	Sealed
WC 2	1	Downlight	0	Sealed
WC 2	1	Ceiling exhaust fan	250	Sealed
LDRY	1	Downlight	0	Sealed
LDRY	1	Ceiling exhaust fan	250	Sealed
KIT/DIN/VOID	16	Downlight	250	Sealed
KIT/DIN/VOID	1	Ceiling exhaust fan	250	Sealed
PANTRY	1	Downlight	250	Sealed
GALLERY	5	Downlight	0	Sealed
BED 1	3	Downlight	0	Sealed
ENS 1	2	Downlight	0	Sealed
ENS 1	1	Ceiling exhaust fan	250	Sealed
WIR 1	2	Downlight	0	Sealed
BED 2	4	Downlight	0	Sealed
BED 3	3	Downlight	0	Sealed
BATH	2	Downlight	0	Sealed
BATH	1	Ceiling exhaust fan	250	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
No Data Available		

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
BALC_ROOF-B012.rof #2047 © Concrete slab 200mm - Tiles, WP Membrane surface - R3.0 insulation under slab - PB ceiling under	R3.0	50.00	Medium
Metal_ROOF-A021 #E015 © Horiz pitch Colourbond steel roof + Anticon R1.5 insul with R3.0 bulk insul + Plasterb'd ceiling under	R4.5	50.00	Medium



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/m² 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 home's 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 home's 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 operability 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 sheathing 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)

* Refer to glossary.