

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-9VBND-01

Generated on 02 Nov 2023 using Hero 3.1.0.6

Property

Address	12-14 Rock Bath Road, Palm Beach, NSW, 2108
Lot/DP	289-290/16362
NCC Class*	1a
Floor/all Floors	1 of 4 floors
Type	New

Plans

Main Plan	A
Prepared by	NA

Construction and environment

Assessed floor area (m ²)*	Exposure Type
Conditioned* 511.5	Exposed
Unconditioned* 9.8	NatHERS climate zone
Total 562.5	56 - Mascot AMO
Garage 41.2	



Accredited assessor

Name	Paul Gradwell
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Phone	+61 410315381
Accreditation No.	DMN/18/4423
Assessor Accrediting Organisation	DMN
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

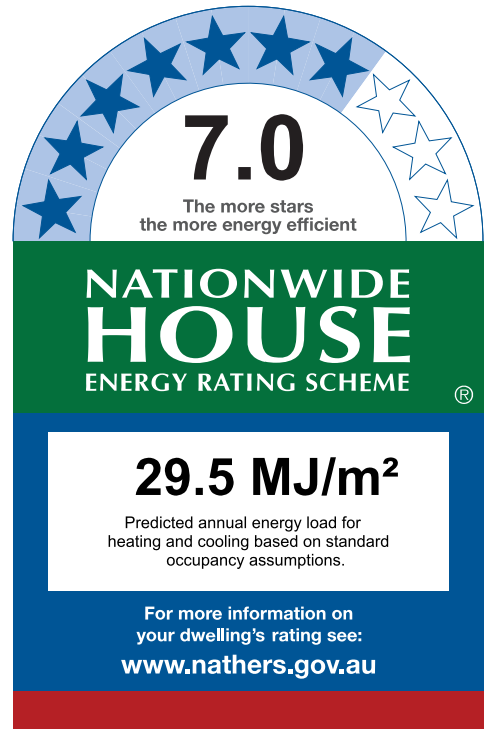
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) 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	18.2	11.3
Load limits	25	18

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-9VBND-01>.

When using either link, ensure you are visiting <http://www.hero-software.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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

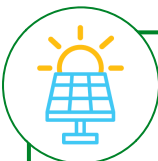
No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.



Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

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?	<input type="checkbox"/>	<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"/>	<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"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* 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?	<input type="checkbox"/>	<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"/>	<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"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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 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 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"/>	<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"/>	<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"/>	<input type="checkbox"/>	<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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m ²)
STORE	Day Time	3.74
HALLWAY LG	Day Time	12.17
RUMPUS	Living	40.40
STUDY GF	Day Time	8.14
HALLWAY GF	Day Time	70.11
COMM	Day Time	5.43
LDRY	Unconditioned	9.78
LIFT GF	Day Time	4.07
ENS 6	Night Time	4.52
ENS 5	Night Time	3.70
BED 5	Bedroom	15.07
BED 4	Bedroom	16.59
ENS 4	Night Time	4.66
BED 3	Bedroom	20.97
ENS 3	Night Time	4.63
ENS 2	Night Time	4.93
BED 2	Bedroom	17.87
ENS 1	Night Time	4.30
BED 1	Bedroom	14.17
STUDY L1	Day Time	7.78
WC	Day Time	3.04
LIFT L1	Day Time	4.22
LIVING	Day Time	32.38
ENTRY L1	Day Time	35.24

Room schedule

Room	Zone Type	Area (m ²)
KITCHEN/LIVING	Kitchen/Living	86.81
FAMILY	Living	27.28
LIFT L2	Day Time	3.26
GARAGE	Garage	41.23
HALLWAY L2	Day Time	17.03
M.BED	Bedroom	24.39
ENS MASTER	Night Time	8.98
BED 6	Bedroom	22.94

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALS-009-21 A	Commercial Sliding Door SG AGG 6EA	4.97	0.53	0.50	0.56
DOW-021-15 B	Thermally Broken Aluminium Awning Window DG LightBridge_ClrSI_6.38-8-5	2.02	0.41	0.39	0.43
REY-030-02 A	Hi Finity 147 Sliding Door Embedded DG 6SolT-24Ar-6	2.05	0.42	0.40	0.44

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BED 1	REY-030-02 A	DG02	2400	1800	Sliding Door	45	SE	None
BED 1	REY-030-02 A	DG01	2400	4490	Sliding Door	45	NE	None
BED 2	REY-030-02 A	DG04	2400	3899	Sliding Door	45	NE	None
BED 2	REY-030-02 A	DG03	2400	3079	Sliding Door	45	NW	None
BED 3	REY-030-02 A	DG05	2400	3728	Sliding Door	45	NE	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BED 4	REY-030-02 A	DG06	2400	3300	Sliding Door	45	NE	None
BED 5	REY-030-02 A	DG07	2400	3906	Sliding Door	45	NE	None
BED 6	REY-030-02 A	WG07A	1500	4300	Sliding	45	NE	None
COMM	REY-030-02 A	WG04	650	3178	Sliding	45	SW	None
ENS 6	REY-030-02 A	WG07B	1500	1500	Sliding	45	NE	None
ENS MASTER	REY-030-02 A	W203	1600	2343	Sliding	30	NE	None
ENTRY L1	ALS-009-21 A	W114	2620	400	Louvre	90	NW	None
ENTRY L1	ALS-009-21 A	W115	2400	1380	Louvre	90	NW	None
ENTRY L1	DOW-021-15 B	D104	2400	1560	Hinged Door	90	NW	None
ENTRY L1	ALS-009-21 A	D103-SIDELIGHT	2400	720	Louvre	90	SW	None
ENTRY L1	REY-030-02 A	W111	600	3910	Sliding	45	SW	None
ENTRY L1	DOW-021-15 B	W112	2620	2645	Double Hung	60	NW	None
ENTRY L1	DOW-021-15 B	W113	2620	1400	Double Hung	60	NE	None
FAMILY	ALS-009-21 A	W117	2900	400	Louvre	90	NE	None
FAMILY	ALS-009-21 A	W116	2900	400	Louvre	90	SW	None
FAMILY	REY-030-02 A	D106	2400	4126	Sliding Door	45	SW	None
FAMILY	ALS-009-21 A	W101A	2150	600	Louvre	90	NW	None
FAMILY	ALS-009-21 A	W101B	2150	600	Louvre	90	NW	None
FAMILY	REY-030-02 A	W101C	2150	4200	Sliding	45	NW	None
FAMILY	REY-030-02 A	W102	2150	4100	Sliding	10	NE	None
GARAGE	REY-030-02 A	W209	1600	3680	Sliding	10	NE	None
HALLWAY GF	REY-030-02 A	WG01	2400	1748	Sliding	45	NE	None
HALLWAY GF	REY-030-02 A	WG05A	650	1731	Fixed	0	SW	None
HALLWAY GF	REY-030-02 A	WG05B	650	1184	Sliding	10	SW	None
HALLWAY GF	REY-030-02 A	WG02	650	3540	Sliding	45	SW	None
HALLWAY L2	REY-030-02 A	W204	800	6440	Sliding	45	SW	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
HALLWAY L2	DOW-021-15 B	W205	2620	2645	Double Hung	60	NW	None
HALLWAY L2	DOW-021-15 B	W206	2620	1400	Double Hung	60	NE	None
HALLWAY LG	DOW-021-15 B	WLG03	2900	2030	Awning	90	SW	None
HALLWAY LG	DOW-021-15 B	DLG02	2900	3120	Hinged Door	30	NW	None
KITCHEN/LIVING	ALS-009-21 A	W103	2650	600	Louvre	10	SE	None
KITCHEN/LIVING	REY-030-02 A	W104	2400	3670	Sliding	10	NE	None
KITCHEN/LIVING	ALS-009-21 A	W104 - 105	2400	400	Louvre	10	NE	None
KITCHEN/LIVING	REY-030-02 A	W105	2400	3400	Sliding	10	NE	None
KITCHEN/LIVING	ALS-009-21 A	W106	2400	1100	Louvre	10	SE	None
KITCHEN/LIVING	REY-030-02 A	D101	2650	9371	Sliding Door	60	NE	None
KITCHEN/LIVING	REY-030-02 A	D105	2400	2400	Sliding Door	90	SW	None
KITCHEN/LIVING	REY-030-02 A	D106	3250	9400	Sliding Door	90	SW	None
LDRY	REY-030-02 A	WG03	650	5721	Sliding	45	SW	None
LIVING	REY-030-02 A	W107	2400	2590	Sliding	10	NE	None
LIVING	REY-030-02 A	W108	2400	2590	Sliding	10	NE	None
LIVING	ALS-009-21 A	W107 - 108	1350	900	Louvre	10	NE	None
LIVING	DOW-021-15 B	W109	2400	490	Casement	10	SE	None
LIVING	REY-030-02 A	W109A	750	4130	Sliding	45	SE	None
M.BED	ALS-009-21 A	W207	2620	400	Louvre	90	NW	None
M.BED	DOW-021-15 B	D201	2400	840	Hinged Door	90	NW	None
M.BED	REY-030-02 A	W208	1785	2890	Sliding	45	NW	None
M.BED	REY-030-02 A	W201	2400	5130	Sliding	10	NE	None
M.BED	REY-030-02 A	W202	1600	409	Fixed	0	NE	None
RUMPUS	REY-030-02 A	DLG01	2400	4600	Sliding Door	45	NE	None
RUMPUS	DOW-021-15 B	WLG01	745	3770	Awning	90	NE	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Shading device*
RUMPUS	DOW-021-15 B	WLG02	745	6563	Awning	90	NW	None
STUDY GF	REY-030-02 A	WG05C	650	4388	Sliding	10	SW	None
STUDY L1	REY-030-02 A	W110	2400	3060	Sliding	45	SE	None
HALLWAY LG	REY-030-02 A	WG06	2200	3080	Sliding	30	NW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
VEL-011-02 W	Velux FS - Fixed Skylight DG 3mm LoE 366 / 10.5mm Argon Gap / 3mm Clear	2.66	0.24	0.23	0.25

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
KITCHEN/LIVING	VEL-011-02 W	SKYRW 01	0	1293.87	1293.87	NE	None	None

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
ENTRY L1	2400	1640	90	SW
GARAGE	2400	6250	90	SW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-PB-A	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	2.70	No
CONC-200-PB-B	Precast 200mm Concrete - Plasterboard Internally	0.50	Medium	0.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 1	CONC-200-PB-A	2400	3079	SE	1395	Yes
BED 1	CONC-200-PB-A	2400	1026	SW		No
BED 1	CONC-200-PB-A	2400	2703	NW		No
BED 1	CONC-200-PB-A	2400	4726	NE	1688	Yes
BED 2	CONC-200-PB-A	2400	108	SE		Yes
BED 2	CONC-200-PB-A	2400	3899	NE	1688	Yes
BED 2	CONC-200-PB-A	2400	3079	NW	1356	Yes
BED 3	CONC-200-PB-A	2400	1965	SE	7644	Yes
BED 3	CONC-200-PB-A	2400	3728	NE	1796	Yes
BED 4	CONC-200-PB-A	2400	3330	NE	1568	Yes
BED 5	CONC-200-PB-A	2400	1310	SE	6390	Yes
BED 5	CONC-200-PB-A	2400	3906	NE	1568	Yes
BED 6	CONC-200-PB-A	2400	4735	NE	577	Yes
BED 6	CONC-200-PB-A	2400	3459	SW		No
BED 6	CONC-200-PB-A	2400	1887	SE		No
COMM	CONC-200-PB-A	2400	3178	SW	138	Yes
ENS 1	CONC-200-PB-A	2400	3542	SW		No
ENS 1	CONC-200-PB-A	2400	1215	NW		No
ENS 6	CONC-200-PB-A	2400	1528	NE	577	Yes
ENS 6	CONC-200-PB-A	2400	2957	SE		Yes
ENS 6	CONC-200-PB-A	2400	1528	SW		No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
ENS MASTER	CONC-200-PB-A	2620	2343	NE	991	Yes
ENS MASTER	CONC-200-PB-A	2620	3834	SE		Yes
ENTRY L1	CONC-200-PB-A	2620	3815	NW	2450	Yes
ENTRY L1	CONC-200-PB-A	2400	6503	SW		Yes
ENTRY L1	CONC-200-PB-A	2620	2645	NW		Yes
ENTRY L1	CONC-200-PB-A	2620	3491	NE	1680	Yes
FAMILY	CONC-200-PB-A	2400	678	SE		Yes
FAMILY	CONC-200-PB-A	2900	743	NE		Yes
FAMILY	CONC-200-PB-A	2900	743	SW		Yes
FAMILY	CONC-200-PB-A	2400	551	SE		Yes
FAMILY	CONC-200-PB-A	2400	4126	SW		Yes
FAMILY	CONC-200-PB-A	2400	5791	NW	1341	Yes
FAMILY	CONC-200-PB-A	2400	4126	NE	467	No
GARAGE	CONC-200-PB-B	2620	5813	SE		Yes
GARAGE	CONC-200-PB-B	2620	6442	SW		No
GARAGE	CONC-200-PB-B	2620	2491	NW		Yes
GARAGE	CONC-200-PB-B	2620	4362	NE		Yes
HALLWAY GF	CONC-200-PB-A	2400	5968	NE		No
HALLWAY GF	CONC-200-PB-A	2400	3995	NW		No
HALLWAY GF	CONC-200-PB-A	2400	1748	NE	4767	Yes
HALLWAY GF	CONC-200-PB-A	2400	888	SE		No
HALLWAY GF	CONC-200-PB-A	2400	2822	SW		No
HALLWAY GF	CONC-200-PB-A	2400	3119	SW	138	Yes
HALLWAY GF	CONC-200-PB-A	2400	3545	SW	138	Yes
HALLWAY L2	CONC-200-PB-A	2800	6828	SW		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
HALLWAY L2	CONC-200-PB-A	2620	2645	NW	1312	No
HALLWAY L2	CONC-200-PB-A	2620	3551	NE		Yes
HALLWAY LG	CONC-200-PB-A	2400	1295	SE		No
HALLWAY LG	CONC-200-PB-A	2900	2910	SW		Yes
HALLWAY LG	CONC-200-PB-A	2900	3121	NW	799	Yes
KITCHEN/LIVING	CONC-200-PB-A	2650	1517	SE	3613	Yes
KITCHEN/LIVING	CONC-200-PB-A	2400	7922	NE	1189	Yes
KITCHEN/LIVING	CONC-200-PB-A	2400	2367	SE	7237	Yes
KITCHEN/LIVING	CONC-200-PB-A	2400	475	NW		Yes
KITCHEN/LIVING	CONC-200-PB-A	2650	9371	NE	1201	No
KITCHEN/LIVING	CONC-200-PB-A	3250	14342	SW		Yes
KITCHEN/LIVING	CONC-200-PB-A	2400	678	NW		Yes
LDRY	CONC-200-PB-A	2400	5721	SW	138	Yes
LIFT GF	CONC-200-PB-A	2400	1710	SE		No
LIFT GF	CONC-200-PB-A	2400	2379	SW		No
LIFT GF	CONC-200-PB-A	2400	1104	NE		No
LIFT L1	CONC-200-PB-A	2400	2331	SW		Yes
LIFT L2	CONC-200-PB-A	2620	1822	SW		Yes
LIVING	CONC-200-PB-A	2400	6723	NE	1068	Yes
LIVING	CONC-200-PB-A	2400	4816	SE	265	Yes
M.BED	CONC-200-PB-A	2620	749	NW		Yes
M.BED	CONC-200-PB-A	2620	305	SW		Yes
M.BED	CONC-200-PB-A	2620	3613	NW	1112	Yes
M.BED	CONC-200-PB-A	2620	5857	NE	991	Yes
RUMPUS	CONC-200-PB-A	3800	4875	NE	4431	Yes

* Refer to glossary.

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
RUMPUS	CONC-200-PB-A	2400	6563	SE		No
RUMPUS	CONC-200-PB-A	3800	6563	NW		Yes
RUMPUS	CONC-200-PB-A	2400	862	SW	3473	Yes
RUMPUS	CONC-200-PB-A	2400	1280	NE		No
STORE	CONC-200-PB-A	2400	1684	SE		No
STORE	CONC-200-PB-A	2400	2218	SW		Yes
STUDY GF	CONC-200-PB-A	2400	4485	SW	138	Yes
STUDY L1	CONC-200-PB-A	2400	3352	SE	2111	Yes
STUDY L1	CONC-200-PB-A	2400	2321	SW	2359	Yes
HALLWAY LG	CONC-200-PB-A	2400	1934	NE		No
HALLWAY LG	CONC-200-PB-A	2400	1934	SW		Yes
HALLWAY LG	CONC-200-PB-A	2400	3253	NW		Yes
WC	CONC-200-PB-A	2400	1650	SW	2359	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-CONCRETE-PLASTERBOARD	Internal Concrete Plasterboard Stud Wall	262.3	0.00
INT-CONCRETE-PLASTERBOARD	Internal Concrete Plasterboard Stud Wall	27.7	2.70

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	3.3	N/A	0.00	Tile
BED 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	10.9	Enclosed (Disc.)	1.10	Tile
BED 2	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	17.9	Enclosed (Disc.)	1.10	Tile
BED 3	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	21.0	Enclosed (Disc.)	1.10	Tile
BED 4	CSOG-200: Concrete Slab on Ground (200mm)	16.6	N/A	2.30	Tile

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 5	CSOG-200: Concrete Slab on Ground (200mm)	15.1	N/A	2.30	Tile
BED 6	CSOG-200: Concrete Slab on Ground (200mm)	22.9	N/A	2.30	Tile
COMM	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	5.4	Enclosed (Disc.)	1.10	Tile
ENS 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	2.6	N/A	0.00	Tile
ENS 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	1.7	Enclosed (Disc.)	1.10	Tile
ENS 2	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	4.9	Enclosed (Disc.)	1.10	Tile
ENS 3	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	4.6	Enclosed (Disc.)	1.10	Tile
ENS 4	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	4.7	Enclosed (Disc.)	1.10	Tile
ENS 5	CSOG-200: Concrete Slab on Ground (200mm)	3.7	N/A	2.30	Tile
ENS 6	CSOG-200: Concrete Slab on Ground (200mm)	4.5	N/A	2.30	Tile
ENS MASTER	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	9.0	N/A	0.00	Tile
ENTRY L1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	35.3	N/A	0.00	Tile
FAMILY	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	22.1	N/A	0.00	Tile
FAMILY	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	5.2	N/A	1.10	Tile
GARAGE	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	18.6	N/A	0.00	Exposed
GARAGE	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	22.6	N/A	1.10	Exposed
HALLWAY GF	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	3.9	N/A	0.00	Tile
HALLWAY GF	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	36.8	Enclosed (Disc.)	1.10	Tile
HALLWAY GF	CSOG-200: Concrete Slab on Ground (200mm)	29.4	N/A	2.30	Tile
HALLWAY L2	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	17.0	N/A	0.00	Tile
HALLWAY LG	CSOG-200: Concrete Slab on Ground (200mm)	12.2	N/A	2.30	Tile
KITCHEN/LIVING	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	58.4	N/A	0.00	Tile
KITCHEN/LIVING	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	28.4	N/A	1.10	Tile
LDRY	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	9.8	Enclosed (Disc.)	1.10	Tile

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
LIFT GF	CSOG-200: Concrete Slab on Ground (200mm)	4.1	N/A	2.30	Exposed
LIFT L1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	4.2	N/A	0.00	Exposed
LIFT L2	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	3.3	N/A	0.00	Exposed
LIVING	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	23.8	N/A	0.00	Tile
LIVING	CSOG-200: Concrete Slab on Ground (200mm)	8.5	N/A	2.30	Tile
M.BED	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	24.4	N/A	0.00	Tile
RUMPUS	CSOG-200: Concrete Slab on Ground (200mm)	40.4	N/A	2.30	Tile
STORE	CSOG-200: Concrete Slab on Ground (200mm)	3.7	N/A	2.30	Tile
STUDY GF	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	6.3	N/A	0.00	Tile
STUDY GF	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	1.8	Enclosed (Disc.)	1.10	Tile
STUDY L1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	0.1	N/A	0.00	Tile
STUDY L1	CSOG-200: Concrete Slab on Ground (200mm)	7.7	N/A	2.30	Tile
WC	CSOG-200: Concrete Slab on Ground (200mm)	3.0	N/A	2.30	Tile

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 3	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
BED 4	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
BED 5	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
COMM	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
ENS 2	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
ENS 3	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
ENS 4	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
ENS MASTER	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
FAMILY	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
GARAGE	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
HALLWAY GF	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
HALLWAY L2	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
KITCHEN/LIVING	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
LDRY	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
LIFT L2	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
LIVING	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
M.BED	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
RUMPUS	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
STUDY GF	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No
HALLWAY LG	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BED 1	6	Downlight	150	Sealed
BED 2	7	Downlight	150	Sealed
BED 3	8	Downlight	150	Sealed
BED 4	6	Downlight	150	Sealed
BED 5	6	Downlight	150	Sealed
BED 6	9	Downlight	150	Sealed
COMM	2	Downlight	150	Sealed
ENS 1	1	Exhaust Fan	250	Sealed
ENS 1	2	Downlight	150	Sealed
ENS 2	1	Exhaust Fan	250	Sealed
ENS 2	2	Downlight	150	Sealed

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
ENS 3	1	Exhaust Fan	250	Sealed
ENS 3	2	Downlight	150	Sealed
ENS 4	1	Exhaust Fan	250	Sealed
ENS 4	2	Downlight	150	Sealed
ENS 5	1	Exhaust Fan	250	Sealed
ENS 5	2	Downlight	150	Sealed
ENS 6	1	Exhaust Fan	250	Sealed
ENS 6	2	Downlight	150	Sealed
ENS MASTER	1	Exhaust Fan	250	Sealed
ENS MASTER	4	Downlight	150	Sealed
ENTRY L1	14	Downlight	150	Sealed
FAMILY	11	Downlight	150	Sealed
GARAGE	16	Downlight	150	Sealed
HALLWAY GF	28	Downlight	150	Sealed
HALLWAY L2	7	Downlight	150	Sealed
HALLWAY LG	5	Downlight	150	Sealed
KITCHEN/LIVING	1	Exhaust Fan	250	Sealed
KITCHEN/LIVING	34	Downlight	150	Sealed
LDRY	1	Exhaust Fan	250	Sealed
LDRY	4	Downlight	150	Sealed
LIVING	13	Downlight	150	Sealed
M.BED	8	Downlight	150	Sealed
RUMPUS	16	Downlight	150	Sealed
STORE	2	Downlight	150	Sealed
STUDY GF	3	Downlight	150	Sealed
STUDY L1	3	Downlight	150	Sealed

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
WC	1	Exhaust Fan	250	Sealed
WC	1	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 1	1	1400
BED 2	1	1400
BED 3	1	1400
BED 4	1	1400
BED 5	1	1400
BED 6	1	1400
FAMILY	1	1400
KITCHEN/LIVING	1	1400
LIVING	1	1400
M.BED	1	1400
RUMPUS	1	1400

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.10	0.50	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)
None				

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
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.
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.
COP	Coefficient of performance
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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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.