

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-WHIZIV-01

Thermal performance
star rating

Generated on 01 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address 48 Park St, Narrabeen, NSW, 2101
Lot/DP 1/-/DP950606
NCC Class* 1a
Floor/all Floors 1 of 3 floors
Type New

Plans

Main Plan Rev. 6
Prepared by Arkh Design Studi

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 290.7	Suburban
Unconditioned* 11.5	NatHERS climate zone
Total 453.7	56 - Mascot AMO
Garage 151.5	



Accredited assessor

Name John Boutros
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Accreditation No. DMN/16/1763
Assessor Accrediting Organisation DMN
Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2
State/Territory variation Yes

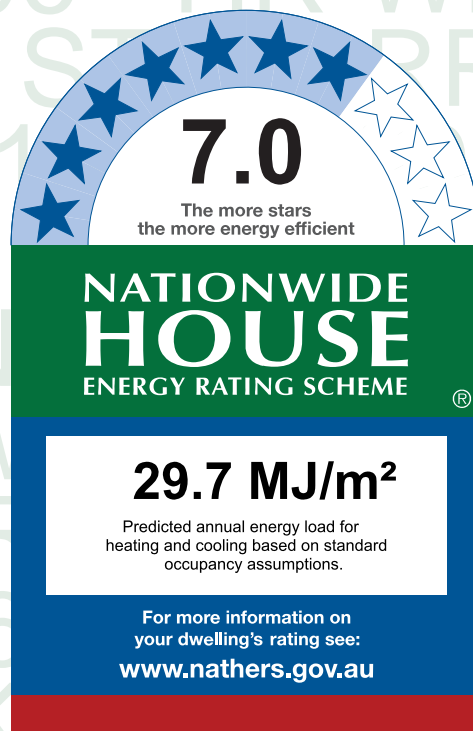
National Construction Code (NCC) requirements

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 (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	16.8	12.8
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-WHIZIV-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 onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

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.

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?

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Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

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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?

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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?

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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?

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Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

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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?

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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?

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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?

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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?

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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.

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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".

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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?

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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"/>
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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 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"/>
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

- Downlights (90mm) modelled @ 1 per 5m², with continuous insulation over.
- Exhaust fans modelled as sealed and ducted externally, as per BASIX.
- Ceiling fans MUST be installed if present in this certificate, in nominated rooms.
- External walls modelled as 'medium' if not specified as per 'BASIX Thermal Protocol – June 2024'.
- Roof colour modelled as default 'medium' (solar absorptance = 0.5) if not specified as per 'NatHERS Technical Note 20241023' – 9.1.

Room schedule

Room	Zone Type	Area (m ²)
GARAGE	Garage	135.42
MUD/LOBBY	Garage	16.08
KITCHEN/LIVING	Kitchen/Living	107.66
BUTLERS	Living	8.16
BATH	Day Time	5.38
GF CORRIDOR	Day Time	9.33
GUEST BED	Bedroom	13.21
LAUNDRY	Unconditioned	8.00
LOUNGE	Living	38.41
MASTER	Bedroom	19.93
MASTER WIR	Night Time	10.51
MASTER ENSUITE	Night Time	12.97
FF CORRIDOR	Day Time	14.18
OFFICE	Day Time	9.86
LINEN	Day Time	2.69
WC	Unconditioned	3.48
NOAHS WIR	Night Time	5.11
NOAHS ENS	Night Time	5.65
LILYS ENS	Night Time	4.47
LILYS WIR	Night Time	4.08
NOAHS BEDROOM	Bedroom	15.97



Room schedule

Room	Zone Type	Area (m²)
LILYS BEDROOM	Bedroom	15.92

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
PVC-004-03 W	uPVC B DG Air Fill High Solar Gain low-E -Clear	2.30	0.32	0.30	0.34
PVC-005-03 W	uPVC A DG Argon Fill High Solar Gain low-E -Clear	2.00	0.25	0.24	0.26
PVC-006-03 W	uPVC B DG Argon Fill High Solar Gain low-E -Clear	2.00	0.31	0.29	0.33

Custom* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BUTLERS	PVC-005-03 W	W09	2400	900	Awning	22	S	None
GF CORRIDOR	PVC-005-03 W	W03	2400	900	Awning	22	N	None
GUEST BED	PVC-005-03 W	W10	900	2400	Awning	40	S	None
KITCHEN/LIVING	PVC-006-03 W	ED1-1	3000	400	Fixed	0	E	None
KITCHEN/LIVING	PVC-006-03 W	ED1-2	3000	400	Fixed	0	E	None
KITCHEN/LIVING	PVC-006-03 W	W06	3000	7600	Sliding Door	60	E	None
KITCHEN/LIVING	PVC-005-03 W	W07	2400	900	Awning	22	S	None
KITCHEN/LIVING	PVC-005-03 W	W08	2400	900	Awning	22	S	None
KITCHEN/LIVING	PVC-006-03 W	W04	2700	2750	Sliding Door	45	N	None
KITCHEN/LIVING	PVC-006-03 W	W05	2400	1200	Fixed	0	N	None
KITCHEN/LIVING	PVC-004-03 W	W05-Lvr	2400	600	Louvre	90	N	None
LAUNDRY	PVC-005-03 W	W02	2700	1000	Hinged Door	90	N	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
LILYS BEDROOM	PVC-005-03 W	W22	600	3000	Awning	30	S	None
LILYS BEDROOM	PVC-006-03 W	W23	2400	3000	Sliding Door	45	W	None
LILYS ENS	PVC-006-03 W	W21	2400	900	Sliding Door	45	S	None
LOUNGE	PVC-006-03 W	W15	1700	1200	Fixed	0	W	None
LOUNGE	PVC-004-03 W	W15-Lvr	1700	600	Louvre	90	W	None
LOUNGE	PVC-006-03 W	W16	1700	695	Fixed	0	N	None
LOUNGE	PVC-004-03 W	W16-Lvr	1700	695	Louvre	90	N	None
LOUNGE	PVC-006-03 W	W17	1700	1800	Fixed	0	E	None
LOUNGE	PVC-004-03 W	W17-Lvr	1700	600	Louvre	90	E	None
LOUNGE	PVC-006-03 W	W18	2700	3200	Sliding Door	45	E	None
MASTER	PVC-006-03 W	W19	2700	3200	Sliding Door	45	E	None
MASTER ENSUITE	PVC-006-03 W	W20	2400	1500	Sliding Door	45	S	None
NOAHS BEDROOM	PVC-006-03 W	W24	2400	3000	Sliding Door	45	W	None
NOAHS BEDROOM	PVC-005-03 W	W11	600	3000	Awning	30	N	None
NOAHS ENS	PVC-005-03 W	W12	2400	900	Awning	25	N	None
OFFICE	PVC-005-03 W	W14	2400	1500	Awning	25	N	None
WC	PVC-005-03 W	W13	2400	900	Awning	25	N	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-011-01 W	FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.58	0.24	0.23	0.25



Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
FF CORRIDOR	VEL-011-01 W	SK9	0	800	1600	N	None	None
FF CORRIDOR	VEL-011-01 W	SK8	0	800	1600	N	None	None
FF CORRIDOR	VEL-011-01 W	SK6	0	800	1600	N	None	None
LOUNGE	VEL-011-01 W	SK4	0	1350	2700	N	None	None
MASTER ENSUITE	VEL-011-01 W	SK7	0	1700	1100	S	None	None
MASTER WIR	VEL-011-01 W	SK5	0	900	1800	S	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)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
GARAGE	3000	5600	90	E
GARAGE	2100	820	90	N
KITCHEN/LIVING	3000	1300	90	E

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-200-EXP	Precast 200mm Concrete - Exposed	0.50	Medium	0.00	No
FC-REFL-CAV	Fibre-Cement Clad Battened (Refl Cavity) Stud Wall	0.73	Dark (Monument)	4.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BUTLERS	FC-REFL-CAV	3000	2412	S	434	Yes
GARAGE	CONC-200-EXP	3900	3342	S		Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
GARAGE	CONC-200-EXP	3900	8886	W		No
GARAGE	CONC-200-EXP	3900	6626	N		No
GARAGE	CONC-200-EXP	3900	7605	E		Yes
GARAGE	CONC-200-EXP	3900	999	N		Yes
GARAGE	CONC-200-EXP	3900	3124	E		No
GARAGE	CONC-200-EXP	3900	4304	N		Yes
GARAGE	CONC-200-EXP	1100	10278	S		No
GARAGE	CONC-200-EXP	1600	10278	S		Yes
GF CORRIDOR	FC-REFL-CAV	3000	4324	N		Yes
GUEST BED	FC-REFL-CAV	3000	3008	S	434	Yes
KITCHEN/LIVING	FC-REFL-CAV	3000	11568	E	4034	Yes
KITCHEN/LIVING	FC-REFL-CAV	3000	9785	S	434	Yes
KITCHEN/LIVING	FC-REFL-CAV	3000	2929	N		Yes
KITCHEN/LIVING	FC-REFL-CAV	3000	3099	W	434	Yes
KITCHEN/LIVING	FC-REFL-CAV	3000	6856	N	434	Yes
LAUNDRY	FC-REFL-CAV	3000	1848	N		Yes
LILYS BEDROOM	FC-REFL-CAV	2700	4010	S	434	Yes
LILYS BEDROOM	FC-REFL-CAV	2700	4175	W	434	Yes
LILYS ENS	FC-REFL-CAV	2700	2519	S	434	Yes
LOUNGE	FC-REFL-CAV	2700	605	N		Yes
LOUNGE	FC-REFL-CAV	2700	3099	W	434	Yes
LOUNGE	FC-REFL-CAV	2700	5346	N	408	Yes
LOUNGE	FC-REFL-CAV	2700	6918	E	2234	No
MASTER	FC-REFL-CAV	2700	4546	E	2234	No
MASTER	FC-REFL-CAV	2700	4504	S	434	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
MASTER ENSUITE	FC-REFL-CAV	2700	3715	S	434	Yes
MASTER WIR	FC-REFL-CAV	2700	3012	S	434	Yes
MUD/LOBBY	CONC-200-EXP	2700	2958	W		No
MUD/LOBBY	CONC-200-EXP	2700	3015	S		No
MUD/LOBBY	CONC-200-EXP	2700	1253	E		No
MUD/LOBBY	CONC-200-EXP	2700	1093	S		No
MUD/LOBBY	CONC-200-EXP	2700	2342	W		No
MUD/LOBBY	CONC-200-EXP	2700	5205	N		No
MUD/LOBBY	CONC-200-EXP	2700	2390	E		No
MUD/LOBBY	CONC-200-EXP	3900	3499	N		No
MUD/LOBBY	CONC-200-EXP	3900	3093	S		No
NOAHS BEDROOM	FC-REFL-CAV	2700	4188	W	434	Yes
NOAHS BEDROOM	FC-REFL-CAV	2700	4010	N	435	Yes
NOAHS ENS	FC-REFL-CAV	2700	3172	N	435	Yes
OFFICE	FC-REFL-CAV	2700	2817	N	435	Yes
WC	FC-REFL-CAV	2700	1817	N	435	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
CONC-100-PB	Precast 100mm Concrete - Plasterboard Internally	27.4	2.70
CONC-200-EXP	Precast 200mm Concrete - Exposed	10.2	0.00
INT-PB	Internal Plasterboard Stud Wall	217.4	0.00
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	24.0	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	CSOG-100: Concrete Slab on Ground (100mm)	5.4	N/A	2.50	Tile (8mm)
BUTLERS	CSOG-100: Concrete Slab on Ground (100mm)	8.2	N/A	2.50	Timber (8mm)
FF CORRIDOR	TIMB-002: Suspended Timber Floor - Lined Below	11.8	N/A	2.50	Timber (8mm)
FF CORRIDOR	SUSP-CONC-100: Suspended Concrete Slab Floor (100mm)	2.4	Enclosed (Disc.)	2.50	Carpet
GARAGE	CSOG-100: Concrete Slab on Ground (100mm)	135.4	N/A	0.00	Exposed
GF CORRIDOR	CSOG-100: Concrete Slab on Ground (100mm)	9.3	N/A	2.50	Timber (8mm)
GUEST BED	CSOG-100: Concrete Slab on Ground (100mm)	13.2	N/A	2.50	Timber (8mm)
KITCHEN/LIVING	SUSP-CONC-100: Suspended Concrete Slab Floor (100mm)	13.0	N/A	0.15	Timber (8mm)
KITCHEN/LIVING	CSOG-100: Concrete Slab on Ground (100mm)	94.6	N/A	2.50	Timber (8mm)
LAUNDRY	CSOG-100: Concrete Slab on Ground (100mm)	8.0	N/A	2.50	Tile (8mm)
LILYS BEDROOM	CSOG-100: Concrete Slab on Ground (100mm)	14.2	N/A	2.50	Carpet
LILYS BEDROOM	SUSP-CONC-100: Suspended Concrete Slab Floor (100mm)	1.7	Enclosed (Disc.)	2.50	Carpet
LILYS ENS	TIMB-002: Suspended Timber Floor - Lined Below	4.5	N/A	2.50	Tile (8mm)
LILYS WIR	TIMB-002: Suspended Timber Floor - Lined Below	4.0	N/A	2.50	Carpet
LINEN	TIMB-002: Suspended Timber Floor - Lined Below	2.7	N/A	2.50	Timber (8mm)
LOUNGE	TIMB-002: Suspended Timber Floor - Lined Below	38.4	N/A	2.50	Timber (8mm)
MASTER	TIMB-002: Suspended Timber Floor - Lined Below	19.9	N/A	2.50	Carpet
MASTER ENSUITE	TIMB-002: Suspended Timber Floor - Lined Below	12.9	N/A	2.50	Tile (8mm)
MASTER WIR	TIMB-002: Suspended Timber Floor - Lined Below	10.5	N/A	2.50	Timber (8mm)
MUD/LOBBY	CSOG-100: Concrete Slab on Ground (100mm)	16.1	N/A	0.00	Exposed
NOAHS BEDROOM	TIMB-002: Suspended Timber Floor - Lined Below	1.8	N/A	2.50	Carpet
NOAHS BEDROOM	CSOG-100: Concrete Slab on Ground (100mm)	11.9	N/A	2.50	Carpet
NOAHS BEDROOM	SUSP-CONC-100: Suspended Concrete Slab Floor (100mm)	2.3	Enclosed (Disc.)	2.50	Carpet
NOAHS ENS	TIMB-002: Suspended Timber Floor - Lined Below	5.7	N/A	2.50	Tile (8mm)
NOAHS WIR	TIMB-002: Suspended Timber Floor - Lined Below	5.1	N/A	2.50	Carpet

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
OFFICE	TIMB-002: Suspended Timber Floor - Lined Below	9.9	N/A	2.50	Carpet
WC	TIMB-002: Suspended Timber Floor - Lined Below	3.5	N/A	2.50	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
FF CORRIDOR	FLAT-04: Flat Framed / Skillion Tile Roof & Cathedral PB Ceiling (11°-33°)	7.00	No
FF CORRIDOR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
GARAGE	SLAB-100-EXP-01: Concrete Slab (100mm) with Exposed Concrete Ceiling	0.00	No
KITCHEN/LIVING	SLAB-100-EXP-01: Concrete Slab (100mm) with Exposed Concrete Ceiling	0.00	No
LILYS BEDROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
LILYS ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
LILYS WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
LINEN	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
LOUNGE	FLAT-04: Flat Framed / Skillion Tile Roof & Cathedral PB Ceiling (11°-33°)	7.00	No
LOUNGE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
MASTER	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
MASTER ENSUITE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
MASTER ENSUITE	FLAT-04: Flat Framed / Skillion Tile Roof & Cathedral PB Ceiling (11°-33°)	7.00	No
MASTER WIR	FLAT-04: Flat Framed / Skillion Tile Roof & Cathedral PB Ceiling (11°-33°)	7.00	No
MASTER WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
MUD/LOBBY	SLAB-100-EXP-01: Concrete Slab (100mm) with Exposed Concrete Ceiling	0.00	No
NOAHS BEDROOM	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
NOAHS ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
NOAHS WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No
OFFICE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
WC	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	2	Downlight	100	Sealed
BATH	1	Exhaust Fan	350	Sealed
BUTLERS	3	Downlight	100	Sealed
BUTLERS	1	Exhaust Fan	350	Sealed
FF CORRIDOR	3	Downlight	100	Sealed
GF CORRIDOR	4	Downlight	100	Sealed
GUEST BED	4	Downlight	100	Sealed
KITCHEN/LIVING	20	Downlight	100	Sealed
KITCHEN/LIVING	1	Exhaust Fan	350	Sealed
LAUNDRY	2	Downlight	100	Sealed
LAUNDRY	1	Exhaust Fan	350	Sealed
LILYS BEDROOM	3	Downlight	100	Sealed
LILYS ENS	1	Downlight	100	Sealed
LILYS ENS	1	Exhaust Fan	350	Sealed
LILYS WIR	1	Downlight	100	Sealed
LINEN	1	Downlight	100	Sealed
LOUNGE	8	Downlight	100	Sealed
MASTER	4	Downlight	100	Sealed
MASTER ENSUITE	3	Downlight	100	Sealed
MASTER ENSUITE	2	Exhaust Fan	350	Sealed
MASTER WIR	2	Downlight	100	Sealed
MUD/LOBBY	4	Downlight	100	Sealed

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
NOAHS BEDROOM	3	Downlight	100	Sealed
NOAHS ENS	1	Downlight	100	Sealed
NOAHS ENS	1	Exhaust Fan	350	Sealed
NOAHS WIR	1	Downlight	100	Sealed
OFFICE	2	Downlight	100	Sealed
WC	1	Downlight	100	Sealed
WC	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
KITCHEN/LIVING	4	2400
LILYS BEDROOM	1	1500
LOUNGE	2	1800
MASTER	1	1500
NOAHS BEDROOM	1	1500
OFFICE	1	1500

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)
FLAT-04: Flat Framed / Skillion Tile Roof & Cathedral PB Ceiling (11°-33°)	1.80	0.73	Dark (Monument)
SLAB-100-EXP-01: Concrete Slab (100mm) with Exposed Concrete Ceiling	0.00	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				

Appliance schedule

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

**Cooling system**

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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.