Nationwide House Energy Rating Scheme® NatHERS® Certificate No. Z59AEIA94Z

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Property

Address	12 Lincoln Avenue, Collaroy, NSW, 2097
Lot/DP	15/-/DP16998
NCC Class*	Class 1a
Floor/all Floors Type	New Home

Plans

Main plan	REV F
Prepared by	ARCM

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	427	suburban
Unconditioned*	132.1	**NatHERS climate zone**
Total	559.1	56 Mascot AMO
Garage	116.5	

Accredited assessor

Name	Pranab chakma
Business name	PAUL & DAVID
Email	info@basixcertifier.com.au
Phone	0490511593
Accreditation No.	101225
Assessor Accrediting Organisation	ABSA
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

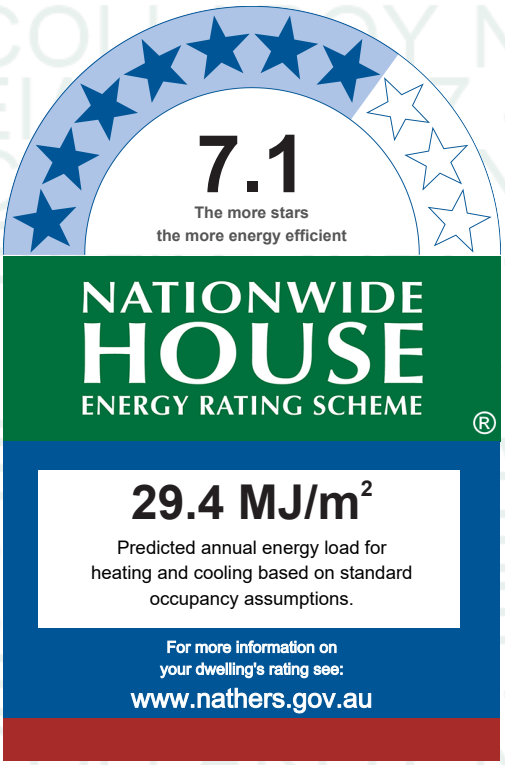
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.3	14.1
Load limits	N/A	N/A

Features determining load limits

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

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 https://www.fr5.com.au/QRCodeLanding?PublicId=Z59AEIA94Z When using either link, ensure you are visiting www.fr5.com.au.

*Refer to glossary.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB NatHERS heating and cooling load limits Standard 2022 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.

Graph key:

*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?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

*Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

*Refer to glossary.

Room *schedule*

Room	Zone Type	Area [m²]
Gym	dayTime	23.3
Basement Stairs	dayTime	9.2
LIFT 1	dayTime	2.6
Basement Garage	garage	116.5
Ground Living	living	24.6
Ground Storage	dayTime	6.2
Office	dayTime	18.1
GuestBed	bedroom	19.2
ENS GuestBed	nightTime	5
Powder	unconditioned	3.3
Laundry	unconditioned	7.3
Pantry	dayTime	8.7
Kitchen/Living/Dining	kitchen	89.8
Entry Hallway	dayTime	46.9
LIFT 2	dayTime	2.7
Bath	unconditioned	5
Study	dayTime	5.9
Bed4	bedroom	12.7
WIR Bed3	nightTime	7
Bed3	bedroom	13.7
ENS Bed3	nightTime	5
ENS MasterBed	nightTime	11.5
MasterBed	bedroom	24.8
WIR MasterBed	nightTime	17.1
Bed2	bedroom	13.8
ENS Bed2	nightTime	4.7
WIR Bed2	nightTime	7
Rumpus	living	23.4
Upstairs Hallway	dayTime	45.3
WIL	dayTime	4.9
LIFT3	dayTime	2.7

Window and glazed door *type and performance*

Default* windows

	Substitution tolerance ranges

*Refer to glossary.

Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
A&L-001-18 A	Al Awning SG 6EA	4.26	0.54	0.51	0.57
AWS-067-56 A	RES SERIES 516 FIXED WINDOW DG 4EnviroClr-10Ar-4KlymetShieldClr	2.42	0.64	0.61	0.67
AWS-003-62 A	502/504 Al Sliding Window DG 008_AGG PLUS Clr 4_12_4	3.23	0.48	0.46	0.5
AWS-089-10 A	RES SERIES 704 FLUSH SLIDING DOOR DG 638ComPlsClr_12_6mmClr	2.63	0.59	0.56	0.62
AWS-066-09 A	RES SERIES 516 FIXED WINDOW SG 6ETClr	3.93	0.63	0.6	0.66
A&L-012-18 A	Al Sliding Door SG 6EA	4.25	0.6	0.57	0.63

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Basement Garage	A&L-001-18 A	W05	1200	2975	awning	80.0	W	No
Ground Living	AWS-067-56 A	W16formalliving	3300	4610	fixed	0.0	S	No
Office	A&L-001-18 A	W06office	1800	3000	awning	70.0	W	No
Office	AWS-067-56 A	W18office	2700	4630	fixed	0.0	S	No
GuestBed	A&L-001-18 A	W06guest	1800	3000	awning	70.0	W	No
ENS GuestBed	A&L-001-18 A	W01ens	1800	1000	awning	90.0	W	No
Powder	A&L-001-18 A	W01pwdr	1800	1000	awning	90.0	W	No
Laundry	A&L-001-18 A	W02ldry	600	2090	awning	80.0	E	No
Pantry	AWS-067-56 A	W01-pantry	600	3000	fixed	0.0	E	No
Kitchen/Living/-Dining	AWS-003-62 A	W01	1150	5580	sliding	30.0	E	No
Kitchen/Living/-Dining	AWS-089-10 A	D11	3250	3580	sliding	60.0	N	No
Kitchen/Living/-Dining	AWS-089-10 A	D10	3250	4000	sliding	60.0	E	No
Kitchen/Living/-Dining	AWS-089-10 A	D13	3250	5217	sliding	60.0	N	No
Kitchen/Living/-Dining	AWS-066-09 A	W15kitchen/living/dining	3300	4000	fixed	0.0	W	No
Entry Hallway	AWS-067-56 A	W14stairs	3600	2700	fixed	0.0	E	No
Bath	A&L-001-18 A	W07	1200	1000	awning	90.0	W	No

*Refer to glossary.

Study	AWS-067-56 A	W08	3000	1710	fixed	0.0	S	No
Bed4	A&L-001-18 A	W04bed4	1200	3000	awning	70.0	W	No
Bed3	A&L-001-18 A	W04bed3	1200	3004	awning	70.0	W	No
ENS Bed3	A&L-001-18 A	W03ensbed3	1200	1800	awning	80.0	W	No
MasterBed	A&L-012-18 A	D09	2650	3610	sliding	60.0	N	No
Bed2	A&L-001-18 A	W04bed2	1200	3000	awning	70.0	E	No
ENS Bed2	A&L-001-18 A	W03ensmasterb-ed	1200	1800	awning	80.0	E	No
Rumpus	AWS-067-56 A	W17	3000	5440	fixed	0.0	W	No
Rumpus	AWS-089-10 A	D12	2950	3370	sliding	60.0	S	No
Rumpus	AWS-067-56 A	W10rumpus	3000	2430	fixed	0.0	S	No
Upstairs Hallway	AWS-067-56 A	Opening 74	900	1880	fixed	0.0	W	No
Upstairs Hallway	AWS-067-56 A	W11	900	2600	fixed	0.0	S	No
Upstairs Hallway	AWS-067-56 A	W13stairs	2700	2700	fixed	0.0	E	No
Upstairs Hallway	AWS-067-56 A	W12garden	2700	2660	fixed	0.0	E	No

Roof window* *type and performance value*

Default* roof windows

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

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
Velux: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 %**	**Area [m²]**	**Width [mm]**	**Orientation**	**Outdoor shade**	**Indoor shade**
WIR MasterBed	Velux:VEL-011-02 W	S2	0.0	2.9	0	N	None	None
Upstairs Hallway	Velux:VEL-011-02 W	S1	0.0	2.4	0	N	None	None

Skylight* *type and performance*

Skylight ID	**Skylight description**	**Skylight shaft reflectance**
No Data Available		

Skylight* *schedule*

*Refer to glossary.

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
Basement Garage	2700	3400	100.0	S
Entry Hallway	3250	1920	100.0	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	WALL-01 - WALL-BASEMENT	0.5	Medium	Polyurethane rigid foamed aged: R1.5 (R1.5)	No
2	WALL-01 - DOUBLE BRICK	0.5	Medium	Polyurethane rigid foamed aged: R2.0 (R2.0)	No
3	WALL-01 - SB	0.5	Medium		No
4	WALL-01 - DOUBLE BRICK	0.5	Medium	Polyurethane rigid foamed aged: R1.5 (R1.5)	No

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Gym	1	3500	1119	N	0	Yes
Gym	1	3500	729	E	0	Yes
Gym	2	3500	4586	S	0	No
Gym	1	3500	4530	E	0	No
Basement Stairs	1	3500	2691	E	0	Yes
Basement Garage	1	3500	5830	E	0	Yes
Basement Garage	1	3500	9745	N	0	Yes
Basement Garage	1	3500	2007	W	0	Yes
Basement Garage	1	3500	1026	N	0	Yes
Basement Garage	1	3500	2583	W	0	No
Basement Garage	1	2800	5496	W	0	No
Basement Garage	2	700	5496	W	0	Yes
Basement Garage	2	3500	3990	W	0	Yes
Basement Garage	2	3500	7208	S	0	No
Ground Living	2	3300	1065	N	134	Yes
Ground Living	2	3300	870	E	0	Yes
Ground Living	2	3300	1667	W	7309	Yes
Ground Living	2	3300	4611	S	1850	Yes

*Refer to glossary.

Ground Living	2	3300	4672	E	154	Yes
Ground Storage	2	3300	1861	W	146	Yes
Office	2	3300	581	E	1932	Yes
Office	2	3300	3571	W	154	Yes
Office	2	3300	4607	S	1548	Yes
GuestBed	2	3300	3577	W	152	Yes
ENS GuestBed	2	3300	1734	W	155	Yes
ENS GuestBed	2	3300	1044	N	150	Yes
Powder	2	3300	1376	W	0	Yes
Laundry	2	3300	684	E	0	Yes
Laundry	2	3300	1058	S	0	Yes
Laundry	2	3300	2092	E	0	Yes
Pantry	2	3300	3015	E	0	Yes
Kitchen/Living/Dining	2	3300	5577	E	0	Yes
Kitchen/Living/Dining	2	3300	4654	N	8072	Yes
Kitchen/Living/Dining	2	3300	4122	E	4651	Yes
Kitchen/Living/Dining	2	3300	5570	N	3926	Yes
Kitchen/Living/Dining	2	3300	143	N	0	Yes
Kitchen/Living/Dining	2	3300	199	N	0	Yes
Kitchen/Living/Dining	2	3300	210	NW	0	Yes
Kitchen/Living/Dining	2	3300	229	NW	0	Yes
Kitchen/Living/Dining	2	3300	9865	W	0	Yes
Entry Hallway	2	3300	2360	S	3517	Yes
Entry Hallway	2	3300	2645	E	0	Yes
Bath	2	3000	3200	W	197	Yes
Bath	2	3000	1572	S	1494	Yes
Study	2	3000	1848	S	1479	Yes
Bed4	2	3000	3593	W	203	Yes
Bed3	2	3000	3849	W	196	Yes
ENS Bed3	2	3000	2987	W	198	Yes
ENS MasterBed	3	3000	244	E	0	Yes
ENS MasterBed	2	3000	421	E	0	Yes
ENS MasterBed	2	3000	165	E	0	Yes
ENS MasterBed	2	3000	156	NE	0	Yes
ENS MasterBed	2	3000	1614	N	0	No
ENS MasterBed	2	3000	126	N	0	No
ENS MasterBed	2	3000	154	NW	0	No
ENS MasterBed	2	3000	5640	W	194	Yes
MasterBed	2	3000	213	N	0	Yes

*Refer to glossary.

MasterBed	2	3000	237	E	0	Yes
MasterBed	2	3000	3593	N	1425	Yes
MasterBed	3	3000	244	W	0	Yes
MasterBed	4	3000	218	N	0	Yes
WIR MasterBed	2	3000	116	E	0	No
WIR MasterBed	2	3000	138	E	0	No
WIR MasterBed	2	3000	158	NE	0	No
WIR MasterBed	2	3000	3171	N	1693	Yes
WIR MasterBed	2	3000	4681	E	194	No
Bed2	2	3000	3845	E	195	Yes
Bed2	2	3000	2156	S	2531	No
ENS Bed2	2	3000	2986	E	196	No
Rumpus	2	3000	3898	E	194	Yes
Rumpus	2	3000	3896	W	0	Yes
Rumpus	2	3000	6006	S	1464	No
Upstairs Hallway	2	900	3216	W	0	No
Upstairs Hallway	2	900	6018	S	0	No
Upstairs Hallway	2	3000	1767	W	194	Yes
Upstairs Hallway	2	3000	2683	E	169	Yes
Upstairs Hallway	2	3000	2938	E	2349	Yes
WIL	2	3000	2036	N	2555	Yes
WIL	2	3000	2819	E	206	Yes

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	WALL-01 - SB	68.4	Polyurethane rigid foamed aged: R1.0 (R1.0)
2	WALL-01 - SB	431.2	
3	FR5 - Internal Plasterboard Stud Wall	5.4	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Gym	FR5 - CSOG: Slab on Ground	15.2	Enclosed	R3.0	Tiles
Gym	FR5 - CSOG: Slab on Ground	8.1	Enclosed	R3.0	Tiles
Basement Stairs	FR5 - CSOG: Slab on Ground	9.2	Enclosed	R3.0	Tiles
LIFT 1	FR5 - CSOG: Slab on Ground	2.6	Enclosed	R3.0	Tiles

*Refer to glossary.

Basement Garage	FR5 - CSOG: Slab on Ground	5.8	Enclosed	R3.0	none
Basement Garage	FR5 - CSOG: Slab on Ground	110.7	Enclosed	R3.0	none
Ground Living	FR5 - 200mm concrete slab Lined	15.8	Enclosed	R2.5	Tiles
Ground Living	FR5 - 200mm concrete slab Lined	8.8	Enclosed	R2.5	Tiles
Ground Storage	FR5 - 200mm concrete slab Lined	6.2	Enclosed	R2.5	Tiles
Office	FR5 - 200mm concrete slab Lined	18.1	Enclosed	R2.5	Tiles
GuestBed	FR5 - 200mm concrete slab Lined	15.3	Enclosed	R2.5	Tiles
GuestBed	FR5 - 200mm concrete slab Lined	3.8	Enclosed	R2.5	Tiles
ENS GuestBed	FR5 - 200mm concrete slab Lined	3.6	Enclosed	R2.5	Tiles
ENS GuestBed	FR5 - 200mm concrete slab Lined	1.3	Enclosed	R2.5	Tiles
Powder	FR5 - 200mm concrete slab Lined	3.3	Enclosed	R2.5	Tiles
Laundry	FR5 - CSOG: Slab on Ground	1.7	Enclosed	R3.0	Tiles
Laundry	FR5 - 200mm concrete slab Lined	5.7	Enclosed	R2.5	Tiles
Pantry	FR5 - 200mm concrete slab Lined	6.3	Enclosed	R2.5	Tiles
Pantry	FR5 - CSOG: Slab on Ground	2.4	Enclosed	R3.0	Tiles
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	2.3	Enclosed	R2.5	Tiles
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	1.8	Enclosed	R2.5	Tiles
Kitchen/Living/D- ining	FR5 - CSOG: Slab on Ground	4	Enclosed	R3.0	Tiles
Kitchen/Living/D- ining	FR5 - CSOG: Slab on Ground	81.2	Enclosed	R3.0	Tiles
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	0.5	Enclosed	R2.5	Tiles
Entry Hallway	FR5 - 200mm concrete slab Lined	0.6	Enclosed	R2.5	Tiles
Entry Hallway	FR5 - 200mm concrete slab Lined	46.3	Enclosed	R2.5	Tiles
LIFT 2	FR5 - 200mm concrete slab Lined	2.7	Enclosed	R2.5	Tiles

*Refer to glossary.

Bath	FR5 - 200mm concrete slab Lined	5	Enclosed	R2.5	Tiles
Study	FR5 - 200mm concrete slab Lined	5.9	Enclosed	R2.5	Tiles
Bed4	FR5 - 200mm concrete slab Lined	12.7	Enclosed	R2.5	Tiles
WIR Bed3	FR5 - 200mm concrete slab Lined	7	Enclosed	R2.5	Tiles
Bed3	FR5 - 200mm concrete slab Lined	13.7	Enclosed	R2.5	Tiles
ENS Bed3	FR5 - 200mm concrete slab Lined	5	Enclosed	R2.5	Tiles
ENS MasterBed	FR5 - 200mm concrete slab Lined	5.7	Elevated	R2.5	Tiles
ENS MasterBed	FR5 - 200mm concrete slab Lined	5.8	Enclosed	R2.5	Tiles
MasterBed	FR5 - 200mm concrete slab Lined	15.9	Enclosed	R2.5	Tiles
MasterBed	FR5 - 200mm concrete slab Lined	8.9	Elevated	R2.5	Tiles
WIR MasterBed	FR5 - 200mm concrete slab Lined	0.4	Enclosed	R2.5	Tiles
WIR MasterBed	FR5 - 200mm concrete slab Lined	16.6	Elevated	R2.5	Tiles
Bed2	FR5 - 200mm concrete slab Lined	13.8	Enclosed	R2.5	Tiles
ENS Bed2	FR5 - 200mm concrete slab Lined	3	Enclosed	R2.5	Tiles
ENS Bed2	FR5 - 200mm concrete slab Lined	1.6	Elevated	R2.5	Tiles
WIR Bed2	FR5 - 200mm concrete slab Lined	5.3	Enclosed	R2.5	Tiles
WIR Bed2	FR5 - 200mm concrete slab Lined	1.7	Elevated	R2.5	Tiles
Rumpus	FR5 - 200mm concrete slab Lined	23.4	Enclosed	R2.5	Tiles
Upstairs Hallway	FR5 - 200mm concrete slab Lined	45.3	Enclosed	R2.5	Tiles
WIL	FR5 - 200mm concrete slab Lined	4.9	Enclosed	R2.5	Tiles
LIFT3	FR5 - 200mm concrete slab Lined	2.7	Enclosed	R2.5	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*

*Refer to glossary.

Gym	FR5 - 200mm concrete slab Lined	R2.5	No
Gym	FR5 - 200mm concrete slab Lined	R2.5	No
Basement Stairs	FR5 - 200mm concrete slab Lined	R2.5	No
LIFT 1	FR5 - 200mm concrete slab Lined	R2.5	No
Basement Garage	Plasterboard	R4.0	No
Basement Garage	FR5 - 200mm concrete slab Lined	R2.5	No
Ground Living	FR5 - 200mm concrete slab Lined	R2.5	No
Ground Living	Plasterboard	R4.0	No
Ground Storage	Plasterboard	R4.0	No
Office	Plasterboard	R4.0	No
GuestBed	FR5 - 200mm concrete slab Lined	R2.5	No
GuestBed	Plasterboard	R4.0	No
ENS GuestBed	FR5 - 200mm concrete slab Lined	R2.5	No
ENS GuestBed	Plasterboard	R4.0	No
Powder	FR5 - 200mm concrete slab Lined	R2.5	No
Laundry	Plasterboard	R4.0	No
Laundry	FR5 - 200mm concrete slab Lined	R2.5	No
Pantry	FR5 - 200mm concrete slab Lined	R2.5	No
Pantry	Plasterboard	R0.0	No
Pantry	Plasterboard	R4.0	No
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	R2.5	No
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	R2.5	No
Kitchen/Living/D- ining	Plasterboard	R0.0	No
Kitchen/Living/D- ining	Plasterboard	R4.0	No
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	R2.5	No
Kitchen/Living/D- ining	Plasterboard	R0.0	No
Kitchen/Living/D- ining	FR5 - 200mm concrete slab Lined	R2.5	No
Entry Hallway	Plasterboard	R4.0	No

*Refer to glossary.

Entry Hallway	FR5 - 200mm concrete slab Lined	R2.5	No
LIFT 2	FR5 - 200mm concrete slab Lined	R2.5	No
Bath	Plasterboard	R4.0	No
Study	Plasterboard	R4.0	No
Bed4	Plasterboard	R4.0	No
WIR Bed3	Plasterboard	R4.0	No
Bed3	Plasterboard	R4.0	No
ENS Bed3	Plasterboard	R4.0	No
ENS MasterBed	Plasterboard	R4.0	No
ENS MasterBed	Plasterboard	R4.0	No
MasterBed	Plasterboard	R4.0	No
MasterBed	Plasterboard	R4.0	No
WIR MasterBed	Plasterboard	R4.0	No
Bed2	Plasterboard	R4.0	No
ENS Bed2	Plasterboard	R4.0	No
ENS Bed2	Plasterboard	R4.0	No
WIR Bed2	Plasterboard	R4.0	No
WIR Bed2	Plasterboard	R4.0	No
Rumpus	Plasterboard	R4.0	No
Upstairs Hallway	Plasterboard	R4.0	No
WIL	Plasterboard	R4.0	No
LIFT3	Plasterboard	R4.0	No

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Ground Living	4	Downlights	100	100	Sealed
Ground Storage	1	Downlights	100	100	Sealed
Office	2	Downlights	100	100	Sealed
Pantry	1	Downlights	100	100	Sealed
Kitchen/Living/Dining	8	Downlights	100	100	Sealed
Entry Hallway	4	Downlights	100	100	Sealed
LIFT 2	1	Downlights	100	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
Ground Living	1	1800
Office	1	1800
Kitchen/Living/Dining	1	2100

*Refer to glossary.

Rumpus	1	1800

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
SlabExt:Slab - Suspended Slab - External Insul : 200mm: 200mm Suspended Slab - External Insul	0.0	0.5	Medium
Ceil: Ceiling	0.0	0.5	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 Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

*Refer to glossary.

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

*Refer to glossary.

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary. Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

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 homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure 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 air gap 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.

*Refer to glossary.

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.