

# Nationwide House Energy Rating Scheme® NatHERS® Certificate No. J0JOVCAY4E-01

Thermal performance  
star rating

Generated on 28 Apr 2025 using FirstRate5: 5.5.5a (3.22)

## Property

**Address** 43 Idaline Street,  
Collaroy Plateau, NSW, 2097

**Lot/DP** 9/L/33000

**NCC Class\*** Class 1a

**Floor/all Floors**

**Type** New Home

## Plans

**Main plan** 2\_24\_20, ISSUE J, 24.03.2025

**Prepared by** MAP Architects

## Construction and environment

Assessed floor area [m <sup>2</sup> ]*	Exposure type
Conditioned* 253.4	suburban
Unconditioned* 74.5	<b>NatHERS climate zone</b>
Total 327.9	56 Mascot AMO
Garage 40.4	



## Accredited assessor

**Name** Dimitri Harakidas

**Business name** AENEC

**Email** info@aenec.com.au

**Phone** 0416316204

**Accreditation No.** HERA10042

**Assessor Accrediting Organisation**  
HERA

**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](http://www.abcb.gov.au).

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



**NATIONWIDE  
HOUSE**  
ENERGY RATING SCHEME®

**29.6 MJ/m<sup>2</sup>**

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see:  
[www.nathers.gov.au](http://www.nathers.gov.au)

## Thermal performance [MJ/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
<b>Modelled</b>	16.6	13
<b>Load limits</b>	N/A	N/A
<b>Features determining load limits</b>		
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=J0JOVCAY4E-01> When using either link, ensure you are visiting [www.fr5.com.au](http://www.fr5.com.au).





## About the ratings

### Thermal performance rating

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

### Whole of Home performance rating

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

## Heating & Cooling Load Limits

### Additional information

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



### Greenhouse gas emissions:



### Cost:



### Graph key:



## Predicted onsite renewable energy impact

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		Occupancy/other
	Assessor checked	Consent authority/surveyor checked	Builder checked	Consent authority/surveyor checked	
<b>Genuine certificate check</b>					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Thermal performance check</b>					
<b>Windows and glazed doors</b>					
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"/>
<b>External walls</b>					
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"/>
<b>Floor</b>					
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"/>
<b>Ceiling penetrations*</b>					
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"/>
<b>Ceiling</b>					
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"/>
<b>Roof</b>					
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"/>
<b>Apartment entrance doors (NCC Class 2 assessments only)</b>					
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"/>
<b>Exposure*</b>					
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"/>
<b>Heating and cooling load limits*</b>					
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Refer to glossary.



## Certificate check

Continued

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

### 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

Default ceiling penetration density calculated as lighting plan has not been provided. All openable windows are assumed to be fully openable as per NCC 2022 > Volume 2 > H5P2 (fall prevention barriers) are in place. North Pointer shown on the plans has been calculated to be the True North. No trees have been modelled as no relevant information has been provided. For all insulation installed the rating called out in the NatHERS is the primary factor and not its description. If these are not in place then this NatHERS must be revised.



## Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
STORAGE	unconditioned	22.9
GYM - OFFICE	dayTime	40.9
PTY	dayTime	4.7
LDY	unconditioned	8.7
ENTRY	dayTime	17.7
PDR	unconditioned	2.4
Kitchen/Living	kitchen	71
Garage	garage	40.4
ENS	nightTime	4.2
Bedroom	bedroom	13.8
ENS	nightTime	3.5
ENS	nightTime	3.7
Bedroom	bedroom	18.1
Bedroom	bedroom	16.3
ENS	nightTime	8.5
ROBE	nightTime	17.2
Bedroom	bedroom	15.6
STUDY	dayTime	7.2
LANDING	dayTime	25.6

## Window and glazed door type and performance

### Default\* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.6
ATB-006-03 B	AI Thermally Broken B DG Argon Fill High Solar Gain low-E -Clear	2.9	0.51	0.48	0.54

### Custom\* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-089-70 A	RES SERIES 704 FLUSH SLIDING DOOR DG FGIOptEmaPrivacy_ProTekta_638_12Ar_4mm	2.2	0.5	0.48	0.53
AWS-067-41 A	RES SERIES 516 FIXED WINDOW DG 010_AGG PLUS Clr 6_10_4	2.19	0.54	0.51	0.57



AWS-088-08 A	Series 755 Comfort Edge Awning Window DG AGG Is PI Cl 4/12Ar/4	2.35	0.43	0.41	0.45
--------------	---	------	------	------	------

## Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
GYM - OFFICE	AWS-089-70 A	W-21	600	2410	sliding	45.0	N	No
LDY	ALM-002-01 A	W-05	2700	900	double_hung	45.0	S	No
ENTRY	AWS-067-41 A	W-02	3300	2420	fixed	0.0	N	No
ENTRY	AWS-067-41 A	W-01	2720	567	fixed	0.0	NE	No
ENTRY	AWS-067-41 A	W-01	2720	567	fixed	0.0	E	No
PDR	ALM-001-01 A	D-03	2340	820	casement	90.0	S	No
Kitchen/Living	AWS-089-70 A	D-02	3860	6370	sliding	75.0	E	No
Kitchen/Living	AWS-067-41 A	W-19	3900	900	fixed	0.0	N	No
Kitchen/Living	AWS-067-41 A	W-03	3300	567	fixed	0.0	NW	No
Kitchen/Living	AWS-067-41 A	W-03	3300	567	fixed	0.0	N	No
Kitchen/Living	AWS-067-41 A	W-20	3900	900	fixed	0.0	S	No
Kitchen/Living	AWS-067-41 A	W-04	900	4400	fixed	0.0	S	No
ENS	AWS-089-70 A	W-08	850	1750	sliding	45.0	N	No
Bedroom	AWS-067-41 A	W-07	2600	2204	fixed	0.0	W	No
Bedroom	AWS-067-41 A	W-06	2600	900	fixed	0.0	W	No
ENS	AWS-088-08 A	W-16	1200	900	awning	90.0	S	No
Bedroom	AWS-067-41 A	W-17	2600	1544	fixed	0.0	W	No
Bedroom	ATB-006-03 B	W-18	2600	900	double_hung	45.0	W	No
Bedroom	ATB-006-03 B	W-14	2600	800	double_hung	30.0	S	No
Bedroom	ATB-006-03 B	W-15	2600	800	double_hung	30.0	S	No
ENS	ALM-002-01 A	W-13	2300	1100	double_hung	30.0	S	No
Bedroom	ATB-006-03 B	W-12	2600	900	double_hung	45.0	E	No
Bedroom	AWS-067-41 A	W-12	2600	3300	fixed	0.0	E	No
STUDY	ATB-006-03 B	W-11	2600	600	double_hung	45.0	E	No
STUDY	AWS-067-41 A	W-11	2600	1210	fixed	0.0	E	No
LANDING	AWS-067-41 A	W-09	2600	2420	fixed	0.0	N	No
LANDING	AWS-067-41 A	W-10	2600	1600	fixed	0.0	N	No
LANDING	ATB-006-03 B	W-10	2600	1050	double_hung	30.0	N	No

## Roof window\* *type and performance value*

Default\* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit

\*Refer to glossary.



No Data Available

Custom\* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				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 [m <sup>2</sup> ]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	Velux:VEL-011-02 W	SK.01	0.0	3.4	0	N	None	None
ENS	Velux:VEL-011-02 W	SK.02	0.0	0.7	0	N	None	None
ENS	Velux:VEL-011-02 W	SK.04	0.0	1.1	0	N	None	None
ROBE	Velux:VEL-011-02 W	SK.05	0.0	1.3	0	N	None	None
ROBE	Velux:VEL-011-02 W	SK.06	0.0	1.3	0	N	None	None
LANDING	Velux:VEL-011-02 W	SK.03	0.0	5	0	N	None	None

Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m <sup>2</sup> ]	Orientation	Outdoor shade	Diffuser
No Data Available							

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
ENTRY	2700	1400	100.0	W
Garage	2700	5400	100.0	W
Garage	2100	897	100.0	S

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
No Data Available					

\*Refer to glossary.



1	AENEC - BRICK + CONCRETE WALL RETAINING	0.5	Medium	Polyisocyanurate (PIR) aged foam (K = 0.022) (R2.9)	No
2	FR5 - Brick Cavity	0.3	Light	Polyisocyanurate (PIR) aged foam (K = 0.022) (R2.9)	No
3	FR5 - Earth Retaining Wall	0.5	Medium		No
4	FR5 - Brick Cavity	0.3	Light		No
5	FR5 - Brick Cavity	0.3	Light		No
6	AENEC - BRICK VENEER - INSULATED	0.3	Light	Polyisocyanurate (PIR) aged foam (K = 0.022) (R4.3)	No
7	FR5 - Internal Plasterboard Stud Wall	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

### External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
STORAGE	1	2400	3910	N	0	No
STORAGE	1	2400	5869	W	0	No
STORAGE	1	2400	3910	S	0	No
GYM - OFFICE	1	2400	2180	W	0	No
GYM - OFFICE	1	2400	4830	S	0	No
GYM - OFFICE	1	2400	2530	E	0	No
GYM - OFFICE	1	2400	1370	S	0	No
GYM - OFFICE	1	2400	2580	E	0	No
GYM - OFFICE	1	2400	410	N	0	No
GYM - OFFICE	1	2400	1560	E	0	No
GYM - OFFICE	1	2400	3180	N	0	No
GYM - OFFICE	1	2400	1380	E	0	No
GYM - OFFICE	2	800	2620	N	0	Yes
GYM - OFFICE	1	1600	2620	N	0	No
PTY	3	1200	1500	S	0	No
PTY	3	1200	490	E	0	No
PTY	3	1200	2110	E	0	No
PTY	2	3900	2200	S	0	No
LDY	2	2700	1596	S	0	No
ENTRY	2	3320	2416	N	0	Yes
ENTRY	2	3320	829	NE	0	Yes
ENTRY	2	3320	804	E	0	Yes
ENTRY	2	2700	313	E	0	Yes

\*Refer to glossary.



ENTRY	2	2700	2789	N	0	Yes
ENTRY	2	2700	1510	W	5003	Yes
ENTRY	3	620	3215	S	0	No
PDR	2	3900	1200	E	2290	Yes
PDR	2	3900	2000	N	6311	Yes
PDR	2	3900	2000	S	0	No
Kitchen/Living	2	3900	7049	E	4400	Yes
Kitchen/Living	2	3900	8001	N	0	Yes
Kitchen/Living	2	3900	410	W	0	Yes
Kitchen/Living	2	3900	766	NW	0	Yes
Kitchen/Living	2	3900	752	N	0	Yes
Kitchen/Living	3	580	2307	W	0	No
Kitchen/Living	3	1200	130	S	0	No
Kitchen/Living	3	1200	1550	W	0	No
Kitchen/Living	2	3900	8001	S	0	No
Garage	4	2770	480	W	5070	Yes
Garage	5	2770	3770	N	2181	Yes
Garage	5	2770	103	N	2636	Yes
Garage	5	2770	103	N	3289	Yes
Garage	5	2770	103	NW	3562	Yes
Garage	5	2770	103	NW	2078	Yes
Garage	5	2770	5828	W	1010	Yes
Garage	4	2770	7298	S	0	No
ENS	6	3000	684	E	0	Yes
ENS	6	3000	2829	N	0	Yes
Bedroom	6	3000	3731	N	0	Yes
Bedroom	6	3000	3712	W	0	Yes
Bedroom	6	3000	810	S	0	Yes
ENS	6	3000	1400	S	0	No
Bedroom	6	3000	3197	W	0	Yes
Bedroom	6	3000	6571	S	0	No
Bedroom	7	3000	167	E	0	Yes
Bedroom	6	3000	3890	S	0	No
ENS	6	3000	1700	S	0	No
ROBE	6	3000	3584	S	0	No
Bedroom	6	3000	3720	S	0	No
Bedroom	6	3000	4190	E	0	No
Bedroom	6	3000	720	N	0	Yes
STUDY	6	3000	2403	E	0	Yes



STUDY	6	3000	3013	N	0	Yes
STUDY	6	3000	548	W	0	Yes
LANDING	6	3000	11611	N	0	Yes

### Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	194	Glass fibre batt: R2.0 (R2.0)
2	FR5 - Single Brick Finished	39.4	
3	FR5 - Internal Plasterboard Stud Wall	4.5	
4	FR5 - Single Brick Finished	24.7	Polystyrene extruded: R1.0 (R1.0)

### Floor type

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
STORAGE	FR5 - CSOG: Slab on Ground	22.9	Enclosed	R2.0	none
GYM - OFFICE	FR5 - CSOG: Slab on Ground	40.9	Enclosed	R2.0	none
PTY	FR5 - CSOG: Slab on Ground	3.5	Enclosed	R2.0	Timber
PTY	FR5 - CSOG: Slab on Ground	1.3	Enclosed	R2.0	Timber
LDY	FR5 - 200mm concrete slab Lined	8.7	Enclosed	R1.0	Tiles
ENTRY	FR5 - 200mm concrete slab Lined	1.7	Enclosed	R1.0	Timber
ENTRY	FR5 - CSOG: Slab on Ground	0.3	Enclosed	R2.0	Timber
ENTRY	FR5 - CSOG: Slab on Ground	0.5	Enclosed	R2.0	Timber
ENTRY	FR5 - 200mm concrete slab Lined	15.1	Enclosed	R1.0	Timber
ENTRY	FR5 - CSOG: Slab on Ground	0.1	Enclosed	R2.0	Timber
PDR	FR5 - CSOG: Slab on Ground	1.3	Enclosed	R2.0	Tiles
PDR	FR5 - CSOG: Slab on Ground	1.1	Enclosed	R2.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	57	Enclosed	R2.0	Timber
Kitchen/Living	FR5 - CSOG: Slab on Ground	9.4	Enclosed	R2.0	Timber
Kitchen/Living	FR5 - CSOG: Slab on Ground	4.6	Enclosed	R2.0	Timber



Garage	FR5 - 200mm concrete slab Lined	4.5	Enclosed	R0.0	none
Garage	FR5 - 200mm concrete slab Lined	35.9	Enclosed	R0.0	none
ENS	FR5 - 200mm concrete slab Lined	1.3	Elevated	R2.0	Tiles
ENS	FR5 - 200mm concrete slab Lined	1.9	Enclosed	R0.0	Tiles
ENS	FR5 - 200mm concrete slab Lined	1.1	Enclosed	R2.0	Tiles
Bedroom	FR5 - 200mm concrete slab Lined	6.8	Elevated	R2.0	Timber
Bedroom	FR5 - 200mm concrete slab Lined	7	Enclosed	R2.0	Timber
ENS	FR5 - 200mm concrete slab Lined	1.6	Enclosed	R0.0	Tiles
ENS	FR5 - 200mm concrete slab Lined	2	Enclosed	R2.0	Tiles
ENS	FR5 - 200mm concrete slab Lined	3.1	Enclosed	R2.0	Tiles
ENS	FR5 - 200mm concrete slab Lined	0.7	Enclosed	R0.0	Tiles
Bedroom	FR5 - 200mm concrete slab Lined	0	Enclosed	R0.0	Timber
Bedroom	FR5 - 200mm concrete slab Lined	18.1	Enclosed	R2.0	Timber
Bedroom	FR5 - 200mm concrete slab Lined	1.4	Enclosed	R0.0	Timber
Bedroom	FR5 - 200mm concrete slab Lined	15	Enclosed	R0.0	Timber
ENS	FR5 - 200mm concrete slab Lined	8.5	Enclosed	R0.0	Tiles
ROBE	FR5 - 200mm concrete slab Lined	17.2	Enclosed	R0.0	Timber
Bedroom	FR5 - 200mm concrete slab Lined	6.5	Elevated	R2.0	Timber
Bedroom	FR5 - 200mm concrete slab Lined	9.1	Enclosed	R0.0	Timber
STUDY	FR5 - 200mm concrete slab Lined	4.7	Enclosed	R0.0	Timber
STUDY	FR5 - 200mm concrete slab Lined	2.6	Elevated	R2.0	Timber
LANDING	FR5 - 200mm concrete slab Lined	4.4	Enclosed	R2.0	Timber
LANDING	FR5 - 200mm concrete slab Lined	21.2	Enclosed	R0.0	Timber



## Ceiling type

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
STORAGE	FR5 - 200mm concrete slab Lined	R0.0	No
GYM - OFFICE	FR5 - 200mm concrete slab Lined	R1.0	No
GYM - OFFICE	FR5 - 200mm concrete slab Lined	R0.0	No
PTY	FR5 - 200mm concrete slab Lined	R0.0	No
PTY	Plasterboard	R2.0	No
LDY	FR5 - 200mm concrete slab Lined	R0.0	No
LDY	FR5 - 200mm concrete slab Lined	R2.0	No
ENTRY	Plasterboard	R2.0	No
ENTRY	FR5 - 200mm concrete slab Lined	R0.0	No
ENTRY	FR5 - 200mm concrete slab Lined	R0.0	No
ENTRY	FR5 - 200mm concrete slab Lined	R0.0	No
PDR	FR5 - 200mm concrete slab Lined	R0.0	No
PDR	Plasterboard	R2.0	No
Kitchen/Living	FR5 - 200mm concrete slab Lined	R0.0	No
Kitchen/Living	Plasterboard	R2.0	No
Kitchen/Living	Plasterboard	R2.0	No
Garage	Plasterboard	R2.0	No
Garage	FR5 - 200mm concrete slab Lined	R2.0	No
Garage	FR5 - 200mm concrete slab Lined	R0.0	No
ENS	Plasterboard	R4.0	No
ENS	Plasterboard	R4.0	No
ENS	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
ENS	Plasterboard	R4.0	No
ENS	Plasterboard	R4.0	No
ENS	Plasterboard	R4.0	No

\*Refer to glossary.



ENS	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
ENS	Plasterboard	R4.0	No
ROBE	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
Bedroom	Plasterboard	R4.0	No
STUDY	Plasterboard	R4.0	No
STUDY	Plasterboard	R4.0	No
LANDING	Plasterboard	R4.0	No
LANDING	Plasterboard	R4.0	No

### Ceiling penetrations\*

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
STORAGE	4	Downlights	90	90	Sealed
GYM - OFFICE	7	Downlights	90	90	Sealed
PTY	1	Downlights	90	90	Sealed
LDY	1	Exhaust Fans	250	250	Sealed
LDY	1	Downlights	90	90	Sealed
ENTRY	2	Downlights	90	90	Sealed
PDR	1	Exhaust Fans	250	250	Sealed
PDR	1	Downlights	90	90	Sealed
Kitchen/Living	14	Downlights	90	90	Sealed
Kitchen/Living	1	Exhaust Fans	250	250	Sealed
Garage	10	Downlights	90	90	Sealed
ENS	1	Downlights	90	90	Sealed
ENS	1	Exhaust Fans	250	250	Sealed
Bedroom	2	Downlights	90	90	Sealed
ENS	1	Exhaust Fans	250	250	Sealed
ENS	1	Downlights	90	90	Sealed
ENS	1	Downlights	90	90	Sealed
ENS	1	Exhaust Fans	250	250	Sealed
Bedroom	3	Downlights	90	90	Sealed
Bedroom	3	Downlights	90	90	Sealed
ENS	1	Downlights	90	90	Sealed
ENS	1	Exhaust Fans	250	250	Sealed
ROBE	3	Downlights	90	90	Sealed
Bedroom	3	Downlights	90	90	Sealed

\*Refer to glossary.



STUDY	2	Downlights	90	90	Sealed
LANDING	5	Downlights	90	90	Sealed

## Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	2700
Bedroom	1	1400
STUDY	1	1200

## Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Slab:Slab - Suspended Slab : 200mm: 200mm Suspended Slab	0.0	0.5	Medium
Framed:Flat - Flat Framed (Metal Deck)	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]
Cathedral ceiling/flat roof	200 x 75	900	1.50	0.2

## Appliance *schedule*

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

Note: A flat assumption of 5W/m<sup>2</sup> 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



<b>Appliance/ system type</b>	<b>Fuel type</b>	<b>Minimum efficiency/ performance</b>	<b>Recommended capacity</b>
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)

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

### **Battery *schedule***

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

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

## 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

<b>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<b>AFRC</b>	Australian Fenestration Rating Council
<b>Assessed floor area</b>	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.
<b>Ceiling penetrations</b>	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.
<b>Conditioned</b>	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.
<b>COP</b>	Coefficient of performance
<b>Custom windows</b>	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
<b>Default windows</b>	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
<b>EER</b>	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
<b>Energy use</b>	This is your homes rating without solar or batteries.
<b>Energy value</b>	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).
<b>Entrance door</b>	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.
<b>Exposure category – exposed</b>	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
<b>Exposure category – open</b>	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).
<b>Exposure category – suburban</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category – protected</b>	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
<b>Horizontal shading feature</b>	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
<b>National Construction Code (NCC) Class</b>	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 <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> .
<b>Net zero home</b>	a home that achieves a net zero energy value*.
<b>Opening percentage</b>	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
<b>Provisional value</b>	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 <a href="http://www.nathers.gov.au">www.nathers.gov.au</a>
<b>Recommended capacity</b>	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.
<b>Reflective wrap (also known as foil)</b>	is applied to walls, roofs and ceilings. When combined with an appropriate air gap and emissivity value, it provides insulative properties.
<b>Roof window</b>	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.
<b>Shading features</b>	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
<b>Solar heat gain coefficient (SHGC)</b>	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.
<b>Skylight (also known as roof lights)</b>	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.

\*Refer to glossary.



<b>STCs</b>	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
<b>Thermal breaks</b>	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.
<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b>	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
<b>Vertical shading features</b>	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).
<b>Window shading device</b>	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.