

# Nationwide House Energy Rating Scheme®

## NatHERS® Certificate No. 0011930385-01

Generated on 24 Oct 2025 using BERS Pro v5.2.6 (3.23)

### Property

**Address** 51 Quirk Street,  
DEE WHY , NSW , 2099

**Lot/DP** Lot 64 DP 8139

**NCC class\*** 1a

**Floor/all Floors** G of 2 floors

**Type** New Home

### Plans

**Main plan** 2024-08 Issue-P2

**Prepared by** Jon Bianchino

### Construction and environment

<b>Assessed floor area [m2]*</b>		<b>Exposure type</b>
Conditioned*	343.2	Suburban
Unconditioned*	23.1	
Total	407.3	<b>NatHERS climate zone</b>
Garage	41.1	56 Mascot (Sydney Airport)



### Accredited assessor

**Name** Joseph Lorriman

**Business name** Evergreen Energy Consultants Pty Ltd

**Email** enquiries@evergreenec.com.au

**Phone** 1300 584 010

**Accreditation No.** DMN/16/1742

**Assessor Accrediting Organisation**

Design Matters National

**Declaration of interest** Declaration completed: no conflicts

### NCC Requirements

**NCC provisions** Volume Two

**Strate/Territory variation** Yes

### National Construction Code (NCC) requirements

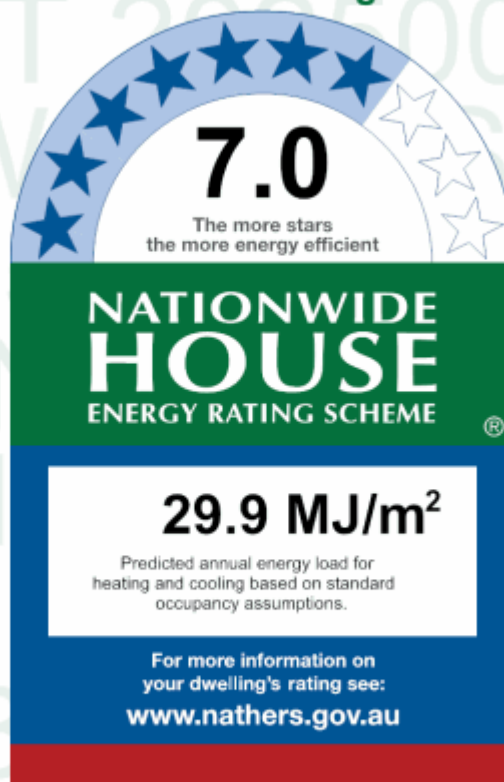
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

### Thermal performance Star rating



### Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.5	15.4
Load limits	N/A	N/A

### Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

### Whole of Home performance rating

No Whole of Home  
performance rating  
generated for this  
certificate.

### Verification

To verify this certificate,  
scan the QR code or visit  
[hstar.com.au/QR/Generate?](http://hstar.com.au/QR/Generate?p=nyRcsNIUr)  
[p=nyRcsNIUr](http://p=nyRcsNIUr) .  
When using either link,  
ensure you are visiting  
[hstar.com.au](http://hstar.com.au)



## About the ratings

### Thermal performance rating

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

### Whole of Home performance rating

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

## Heating & Cooling Load Limits

### Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABC Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

### Setting Options:

Floor Type:

CSOG – Concrete Slab on Ground  
SF – Suspended Floor (or a mixture of CSOG and SF)  
NA – Not Applicable

NCC Climate Zone 1 or 2:

Yes  
No  
NA – Not Applicable

Outdoor Living Area:

Yes  
No  
NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes  
No  
NA – Not Applicable



## Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

## Predicted Whole of Home annual impact by appliance

### Energy use

No Whole of Home performance assessment conducted for this certificate

### Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

### Cost

No Whole of Home performance assessment conducted for this certificate



## Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		Occupancy/Other
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	
<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 what is shown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Certificate check

Continued

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

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

#### Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?

☐ ☐ ☐ ☐

#### 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

Concrete used in lieu of Fibre-Reinforced Concrete for external ground floor ceilings with deck above as this is not an

option in the NatHERS software



## Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
Garage/Workshop	Garage	41.13
Family/Yoga	Living	62.69
Hallway 1	Daytime	14.45
Bedroom 2	Bedroom	19.95
Bedroom 3	Bedroom	20.97
Bath	Unconditioned	10.07
Laundry	Unconditioned	6.51
Kitchen/Living	Kitchen/Living	63.96
Butler Pantry	Daytime	9.95
Bedroom 1	Bedroom	23.16
WIR 1	Nighttime	5.5
ENS	Nighttime	8.66
PDR	Daytime	2.2
Study	Bedroom	13.14
GLiving	Living	35.26
GBedroom 1	Bedroom	12.83
GBedroom 2	Bedroom	11.61
GBath	Unconditioned	6.47
Hallway	Daytime	22.05
Gallery	Daytime	15.66
WIR 2	Nighttime	5.48

## 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
No Data Available					

### Custom windows\*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
EBS-003-004	Thermally Broken Aluminium Louvre Window DG 6ET/20Ar/6Clr	2.7	0.38	0.36	0.40

\* Refer to glossary.



## Custom windows\*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
DOW-023-009	Thermally Broken Aluminium Fixed Window DG LB ClrSI 6.38/10/4	1.7	0.47	0.44	0.49
DOW-022-009	Thermally Broken Aluminium Sliding Window DG LB ClrSI 6.38/10/4	2.1	0.47	0.44	0.49
A&L-108-023	Thermally Broken Aluminium Sliding Door DG 4PbAS2/12Ar/4PbG	1.7	0.44	0.42	0.46
DOW-021-010	Thermally Broken Aluminium Awning Window DG LB ClrSI 6.38/10/4	1.9	0.41	0.39	0.43

## Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Garage/Workshop	EBS-003-004-001	W1	2850	865	Louvre	90	NE	No
Garage/Workshop	DOW-023-009-001	W2	2850	865	Fixed	00	NE	No
Garage/Workshop	DOW-023-009-001	W3	2850	1730	Fixed	00	SE	No
Garage/Workshop	DOW-022-009-001	W5	1200	1350	Sliding	45	NE	No
Garage/Workshop	DOW-023-009-001	W58	1000	1000	Fixed	00	SW	No
Family/Yoga	A&L-108-023-002	W115	2400	6300	Sliding	45	NE	No
Family/Yoga	A&L-108-023-002	W130	2400	6000	Sliding	60	NE	No
Family/Yoga	DOW-023-009-001	W76	2400	4400	Fixed	00	SE	No
Family/Yoga	EBS-003-004-001	W10	750	1000	Louvre	90	SW	No
Family/Yoga	DOW-023-009-001	W128	1090	1000	Fixed	00	SW	No
Family/Yoga	DOW-023-009-001	W127	1700	1700	Fixed	00	SW	No
Family/Yoga	DOW-023-009-001	W129	2400	1150	Fixed	00	SW	No
Hallway 1	DOW-023-009-001	W74	2630	1000	Fixed	00	SW	No
Bedroom 2	A&L-108-023-002	W84	2400	3090	Sliding	45	NW	No
Bedroom 2	DOW-023-009-001	W86	600	800	Fixed	00	NE	No
Bedroom 2	EBS-003-004-001	W87	600	600	Louvre	90	NE	No
Bedroom 2	EBS-003-004-001	W88	600	600	Louvre	90	NE	No
Bedroom 3	DOW-023-009-001	W85	600	800	Fixed	00	NE	No
Bedroom 3	EBS-003-004-001	W89	600	600	Louvre	90	NE	No

\* Refer to glossary.





Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 3	EBS-003-004-001	W90	600	600	Louvre	90	NE	No
Bedroom 3	A&L-108-023-002	W83	2400	3090	Sliding	45	SE	No
Bath	DOW-022-009-001	W72	1100	1450	Sliding	45	SW	No
Laundry	DOW-022-009-001	W73	1100	1450	Sliding	45	SW	No
Kitchen/Living	DOW-023-009-001	W22	1700	1550	Fixed	00	NE	No
Kitchen/Living	DOW-023-009-001	W27	1700	1595	Fixed	00	SE	No
Kitchen/Living	EBS-003-004-001	W28	1700	1595	Louvre	90	SE	No
Kitchen/Living	A&L-108-023-002	W29	2700	4350	Sliding	60	SE	No
Kitchen/Living	DOW-023-009-001	W30	2700	1050	Fixed	00	SE	No
Kitchen/Living	DOW-023-009-001	W35	2700	1550	Fixed	00	SW	No
Kitchen/Living	EBS-003-004-001	W36	700	800	Louvre	90	SW	No
Kitchen/Living	DOW-023-009-001	W122	700	1300	Fixed	00	SW	No
Kitchen/Living	EBS-003-004-001	W123	1700	750	Louvre	90	NE	No
Kitchen/Living	DOW-023-009-001	W124	1700	750	Fixed	00	NE	No
Kitchen/Living	DOW-023-009-001	n/a	1700	750	Fixed	00	NE	No
Kitchen/Living	DOW-023-009-001	n/a	1700	750	Fixed	00	NE	No
Kitchen/Living	DOW-023-009-001	W125	1700	750	Fixed	00	NE	No
Kitchen/Living	EBS-003-004-001	n/a	1700	750	Louvre	90	NE	No
Kitchen/Living	EBS-003-004-001	n/a	1700	750	Louvre	90	NE	No
Kitchen/Living	EBS-003-004-001	n/a	1700	750	Louvre	90	NE	No
Kitchen/Living	EBS-003-004-001	W12	1700	800	Louvre	90	NW	No
Kitchen/Living	DOW-023-009-001	W13	1700	1590	Fixed	00	NW	No
Butler Pantry	EBS-003-004-001	W42	700	900	Louvre	90	SW	No
Butler Pantry	DOW-023-009-001	W43	700	900	Fixed	00	SW	No
Bedroom 1	DOW-023-009-001	W109	600	1200	Fixed	00	NE	No
Bedroom 1	EBS-003-004-001	W108	600	600	Louvre	90	NE	No
Bedroom 1	EBS-003-004-001	W110	600	600	Louvre	90	NE	No
Bedroom 1	A&L-108-023-002	W107	2400	3090	Sliding	45	SE	No
Bedroom 1	A&L-108-023-002	W44	2400	3090	Sliding	45	NW	No
ENS	DOW-022-009-001	W106	1500	2100	Sliding	45	NE	No
Study	DOW-022-009-001	W111	1200	1500	Sliding	10	NE	No



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
GLiving	DOW-023-009-001	W119	1240	1050	Fixed	00	NE	No
GLiving	EBS-003-004-001	W117	1240	660	Louvre	90	NE	No
GLiving	EBS-003-004-001	W118	1240	660	Louvre	90	NE	No
GLiving	A&L-108-023-002	W121	2400	1800	Sliding	45	NE	No
GLiving	DOW-023-009-001	W114	2400	800	Fixed	00	SW	No
GLiving	DOW-022-009-001	W112	1050	1200	Sliding	45	SW	No
GBedroom 1	DOW-022-009-001	W4	1200	665	Sliding	90	NE	No
GBedroom 1	DOW-023-009-001	W116	1200	1555	Fixed	00	NE	No
GBedroom 2	DOW-022-009-001	W113	900	1800	Sliding	45	SW	No
GBath	DOW-021-010-001	W120	1240	1000	Awning	90	NE	No
Hallway	EBS-003-004-001	W104	700	1000	Louvre	90	SW	No
Hallway	DOW-023-009-001	W105	2000	1000	Fixed	00	SW	No
Hallway	DOW-023-009-001	W103	650	1000	Fixed	00	SW	No
Hallway	DOW-023-009-001	W102	1780	1000	Fixed	00	SW	No
Hallway	DOW-023-009-001	W98	600	2100	Fixed	00	SW	No
Hallway	DOW-023-009-001	W100	600	2100	Fixed	00	SW	No
Hallway	EBS-003-004-001	W99	600	800	Louvre	90	SW	No
Hallway	EBS-003-004-001	W101	600	800	Louvre	90	SW	No
Gallery	DOW-023-009-001	W97	2700	600	Fixed	00	SW	No
Gallery	DOW-023-009-001	W93	600	1800	Fixed	00	SW	No
Gallery	DOW-023-009-001	W95	600	1800	Fixed	00	SW	No
Gallery	EBS-003-004-001	W94	600	800	Louvre	90	SW	No
Gallery	EBS-003-004-001	W96	600	800	Louvre	90	SW	No
Gallery	DOW-023-009-001	W92	2700	1150	Fixed	00	SW	No
Gallery	DOW-023-009-001	W91	2700	875	Fixed	00	NW	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
No Data Available					





## Custom roof windows\*

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

## Roof window\* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

## 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
Garage/Workshop	2200	5200	90	NW
Hallway 1	2100	820	90	SW
GLiving	2400	820	90	SW
Gallery	2700	920	90	NW

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Fibro Timber Stud Frame Panel Direct Fix	0.33		Anti-glare foil with bulk no gap R2.7	No
EW-2	Timber Stud Frame Brick Veneer	0.33		Anti-glare foil with bulk no gap R2.7	No
EW-3	Fibro Timber Stud Frame Panel Direct Fix	0.30		Anti-glare foil with bulk no gap R2.7	No



## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Garage/Workshop	EW-1	2930	5600	NE	300	No
Garage/Workshop	EW-1	2930	3800	SE	200	No
Garage/Workshop	EW-1	2700	2795	NE	400	No
Garage/Workshop	EW-1	2930	4400	SW	4000	No
Garage/Workshop	EW-1	2930	5800	NW	1500	No
Family/Yoga	EW-1	2800	6400	NE	1000	No
Family/Yoga	EW-1	2801	6400	NE	4300	No
Family/Yoga	EW-1	2800	4700	SE	1700	No
Family/Yoga	EW-1	2800	12795	SW	100	No
Hallway 1	EW-1	2630	3690	SW	100	No
Bedroom 2	EW-1	2630	3300	NW	100	No
Bedroom 2	EW-1	2630	3995	NE	100	No
Bedroom 3	EW-1	2630	3995	NE	100	No
Bedroom 3	EW-1	2631	3300	SE	1000	Yes
Bedroom 3	EW-1	2630	1000	NE	3400	No
Bedroom 3	EW-1	2630	895	SE	14500	No
Bath	EW-1	2630	2740	SW	100	No
Laundry	EW-1	2630	2490	SW	100	No
Kitchen/Living	EW-1	2700	4900	NE	400	No
Kitchen/Living	EW-1	2700	8900	SE	3200	No
Kitchen/Living	EW-1	2700	7295	SW	400	No
Kitchen/Living	EW-1	2700	6395	NE	400	No
Kitchen/Living	EW-1	2700	3300	NW	400	No
Butler Pantry	EW-1	2700	2690	SW	400	No
Bedroom 1	EW-1	2700	5000	NE	400	No
Bedroom 1	EW-1	2700	3300	SE	2600	Yes
Bedroom 1	EW-1	2700	3695	NW	1800	Yes
WIR 1	EW-1	2700	1395	NE	4100	No
ENS	EW-1	2700	2190	NE	3700	No



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Study	EW-1	2700	3395	NE	400	No
Study	EW-1	2700	400	SE	0	No
GLiving	EW-1	2740	3095	NE	4700	Yes
GLiving	EW-1	2741	1895	NE	900	No
GLiving	EW-1	2740	2395	SW	500	No
GLiving	EW-2	2740	700	SE	0	No
GLiving	EW-2	2740	3200	SW	100	No
GLiving	EW-2	1160	2400	SW	0	No
GLiving	EW-2	1581	2400	SW	100	No
GLiving	EW-2	2740	3895	NW	100	No
GBedroom 1	EW-1	2740	4245	NE	100	No
GBedroom 1	EW-3	2740	800	NW	8100	No
GBedroom 2	EW-1	2740	300	SE	100	No
GBedroom 2	EW-1	2740	4300	SW	100	No
GBedroom 2	EW-3	2740	700	NW	8100	No
GBath	EW-2	2740	3000	NE	3700	No
GBath	EW-2	2740	1000	SE	0	No
GBath	EW-2	2740	2195	NW	100	No
Hallway	EW-1	2701	1295	SW	400	No
Hallway	EW-1	2700	8595	SW	400	No
Gallery	EW-1	2700	7395	SW	400	No
Gallery	EW-1	2700	3595	NW	5900	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	14.31	Bulk Insulation, No Air Gap R2.7
IW-002	Timber Stud Frame, Direct Fix Plasterboard	245.84	No insulation
IW-003	Single Skin Brick	10.41	Bulk Insulation, No Air Gap R2



## Floor type

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Garage/Workshop / GLiving	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 100mm	7.29		No Insulation	Bare
Garage/Workshop / GBedroom 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 100mm	3.43		No Insulation	Bare
Garage/Workshop / GBath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 100mm	4.03		No Insulation	Bare
Garage/Workshop	Concrete Slab on Ground 100mm	24.27	None	No Insulation	Bare
Family/Yoga	Concrete Slab on Ground 100mm	62.69	None	Bulk Insulation in Contact with Floor R2.3	Vinyl 3mm
Hallway 1	Concrete Slab on Ground 100mm	14.45	None	Bulk Insulation in Contact with Floor R2.3	Vinyl 3mm
Bedroom 2	Concrete Slab on Ground 100mm	19.95	None	Bulk Insulation in Contact with Floor R2.3	Carpet+Rubber Underlay 18mm
Bedroom 3	Concrete Slab on Ground 100mm	20.97	None	Bulk Insulation in Contact with Floor R2.3	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab on Ground 100mm	10.07	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	6.51	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Kitchen/Living / Family/Yoga	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	37.62		No Insulation	Vinyl 3mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended 35mm Fibre-Reinforced Concrete Floor Timber Frame 42mm	26.05	Totally Open	Bulk+Foil Sided Bubble Wrap, Foil in Contact with Floor R2	Vinyl 3mm
Butler Pantry / Family/Yoga	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	9.95		No Insulation	Vinyl 3mm
Bedroom 1 / Hallway 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	1.16		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1 / Bedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	8.32		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1 / Bedroom 3	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	11.39		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1 / Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	1.17		No Insulation	Carpet+Rubber Underlay 18mm
WIR 1 / Bedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	4.22		No Insulation	Carpet+Rubber Underlay 18mm
WIR 1 / Bath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.70		No Insulation	Carpet+Rubber Underlay 18mm
ENS / Family/Yoga	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.55		No Insulation	Ceramic Tiles 8mm
ENS / Hallway 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	2.19		No Insulation	Ceramic Tiles 8mm
ENS / Bedroom 3	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	5.23		No Insulation	Ceramic Tiles 8mm
PDR / Hallway 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	1.78		No Insulation	Ceramic Tiles 8mm
Study / Bedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.26		No Insulation	Carpet+Rubber Underlay 18mm
Study / Bath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.42		No Insulation	Carpet+Rubber Underlay 18mm
Study / GBedroom 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	8.84		No Insulation	Carpet+Rubber Underlay 18mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Study / GBedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	2.24		No Insulation	Carpet+Rubber Underlay 18mm
GLiving	Concrete Slab on Ground 100mm	35.26	None	Bulk Insulation in Contact with Floor R2.3	Vinyl 3mm
GBedroom 1	Concrete Slab on Ground 100mm	12.83	None	Bulk Insulation in Contact with Floor R2.3	Carpet+Rubber Underlay 18mm
GBedroom 2	Concrete Slab on Ground 100mm	11.61	None	Bulk Insulation in Contact with Floor R2.3	Carpet+Rubber Underlay 18mm
GBath	Concrete Slab on Ground 100mm	6.47	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Hallway / Family/Yoga	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	1.89		No Insulation	Vinyl 3mm
Hallway / Hallway 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	3.11		No Insulation	Vinyl 3mm
Hallway / Bath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.00		No Insulation	Vinyl 3mm
Hallway / Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.00		No Insulation	Vinyl 3mm
Gallery / Bath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.10		No Insulation	Vinyl 3mm
Gallery / GLiving	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	6.28		No Insulation	Vinyl 3mm
Gallery / GBedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	7.25		No Insulation	Vinyl 3mm





Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Gallery	Suspended 35mm Fibre-Reinforced Concrete Floor Timber Frame 42mm	0.42	Totally Open	Bulk+Foil Sided Bubble Wrap, Foil in Contact with Floor R2	Cork Tiles or Parquetry 8mm
WIR 2 / Hallway 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.28		No Insulation	Carpet+Rubber Underlay 18mm
WIR 2 / Bath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	4.04		No Insulation	Carpet+Rubber Underlay 18mm
WIR 2 / Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard 42mm	0.59		No Insulation	Carpet+Rubber Underlay 18mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Garage/Workshop	Plasterboard on Timber	Bulk Insulation R6	
Garage/Workshop	Plasterboard on Timber	Bulk Insulation R3	
Family/Yoga	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Family/Yoga	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Hallway 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Bedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Bedroom 3	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Bedroom 3	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Bath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Laundry	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R6	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R3	
Butler Pantry	Plasterboard on Timber	Bulk Insulation R6	
Butler Pantry	Plasterboard on Timber	Bulk Insulation R3	



Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bedroom 1	Plasterboard on Timber	Bulk Insulation R6	
WIR 1	Plasterboard on Timber	Bulk Insulation R6	
ENS	Plasterboard on Timber	Bulk Insulation R6	
PDR	Plasterboard on Timber	Bulk Insulation R6	
Study	Plasterboard on Timber	Bulk Insulation R6	
Study	Plasterboard on Timber	Bulk Insulation R3	
GLiving	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
GLiving	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
GBedroom 1	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
GBedroom 2	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
GBedroom 2	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
GBath	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
GBath	35mm Fibre-Reinforced Concrete Timber Frame Above Plasterboard	No Insulation	
Hallway	Plasterboard on Timber	Bulk Insulation R6	
Hallway	Plasterboard on Timber	Bulk Insulation R3	
Gallery	Plasterboard on Timber	Bulk Insulation R6	
Gallery	Plasterboard on Timber	Bulk Insulation R3	
WIR 2	Plasterboard on Timber	Bulk Insulation R6	

### Ceiling penetrations\*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
ENS	1	Exhaust Fans	300	Sealed
PDR	1	Exhaust Fans	300	Sealed
GLiving	7	Downlights - LED	150	Sealed
GLiving	1	Exhaust Fans	300	Sealed
GBath	1	Exhaust Fans	300	Sealed

## Ceiling fans

Location	Quantity	Diameter [mm]
Family/Yoga	1	1800
Bedroom 2	1	1400
Bedroom 3	1	1400
Kitchen/Living	1	1800
Bedroom 1	1	1400
Study	1	1400
GLiving	1	2100
GBedroom 1	1	1400
GBedroom 2	1	1400

## Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.8	0.33	Light
Waterproofing Membrane	No Added Insulation, No air Gap	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]
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/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 Data Available				



## Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

## Hot water system

Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
					lower limit	upper limit	
No Data Available							

## Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

## Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

## Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



## Explanatory notes

### About this report

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

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

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

### Accredited assessors

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

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

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

### Disclaimer

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

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

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

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

## Glossary

<b>AFRC</b>	Australian Fenestration Rating Council
<b>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<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>COP</b>	Coefficient of performance
<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>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 home's 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</b>	see exposure categories below.
<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 – protected</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category – suburban</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 operability 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</b> (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.
<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>Skylight</b> (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.
<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>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 Regulator (CER)
<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 or continuous thermal breaks such as polystyrene insulation sheathing or plastic strips
<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>	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.