

# Nationwide House Energy Rating Scheme<sup>®</sup>

## NatHERS<sup>®</sup> Certificate No. 0009322066

Generated on 22 Mar 2024 using AccuRate Home v1.3.3.23

### Property

**Address** Unit B, 4 Leemon Street,  
Condell Park , NSW , 2200

**Lot/DP** Lot 6 DP 222976

**NCC class\*** 1a

**Floor/all Floors** Ground of 3 floors

**Type** New Home

### Plans

**Main plan** Nov 2023

**Prepared by** tim+sarah .k

### Construction and environment

<b>Assessed floor area [m2]*</b>		<b>Exposure type</b>
Conditioned*	155.1	Suburban
Unconditioned*	64.6	
<b>Total</b>	<b>219.7</b>	<b>NatHERS climate zone</b>
<b>Garage</b>	<b>33.0</b>	56 Mascot (Sydney Airport)



### Accredited assessor

**Name** Brian Teplicanec

**Business name** Thermal Certificates

**Email** brian.teplicanec@gmail.com

**Phone** 0407929659

**Accreditation No.** 100588

**Assessor Accrediting Organisation**  
ABSA

**Declaration of interest** <Select...>

### NCC Requirements

**NCC provisions** Volume Two

**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.

### Thermal performance Star rating



**NATIONWIDE  
HOUSE**  
ENERGY RATING SCHEME<sup>®</sup>

**29.8 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>	19.2	10.6
<b>Load limits</b>	N/A	N/A

### Features determining load limits

Floor Type (lowest conditioned area)	N/A
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?p=YIMhfxuKf](http://hstar.com.au/QR/Generate?p=YIMhfxuKf). 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 *ABCB 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"/>

\* Refer to glossary.



## Certificate check

Continued

	Approval Stage		Construction Stage		Occupancy/Other
	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?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--	--------------------------	--------------------------	--------------------------	--------------------------

#### Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--	--	--------------------------	--------------------------	--------------------------

#### Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--	--------------------------	--------------------------	--------------------------	--------------------------

### 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?	<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"/>				
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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"/>				
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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"/>				
---	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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"/>				
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

### Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--	--------------------------	--------------------------	--------------------------	--------------------------

### Provisional values\* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--	--------------------------	--------------------------	--	--	--

### 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 [m <sup>2</sup> ]
foyer	Day time	18.6
garage	Garage	33
storage	Unconditioned	15.6
lift	Day time	2.5
wir	Night time	6.9
ensuite	Night time	4.2
master	Bedroom	19.4
rumpus	Day time	16.9
bed 4	Bedroom	9.3
bed 3	Bedroom	11.6
bed 2	Bedroom	11.9
bath	Unconditioned	7.8
laundry	Unconditioned	3.8
pantry	Day time	4.3
powder 1	Unconditioned	2.1
kit/liv	Living/Kitchen	49.5
powder 2	Unconditioned	2.3

## 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
PVC-005-01 W	uPVC A DG Argon Fill Clear-Clear	2.6	0.50	0.48	0.53
PVC-006-01 W	uPVC B DG Argon Fill Clear-Clear	2.6	0.53	0.50	0.56

### Custom windows\*

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

## Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
garage	PVC-006-01 W	W01	1000	1600	Sliding	00	SW	None
ensuite	PVC-005-01 W	W03	1500	600	Awning	90	SE	None
ensuite	PVC-005-01 W	W02	1500	600	Awning	90	SE	None
master	PVC-006-01 W	W05	1800	1250	Other	00	SE	None
master	PVC-005-01 W	W04	2700	600	Awning	90	SE	None
master	PVC-006-01 W	SD01	2700	2200	Sliding	45	SE	None
master	PVC-006-01 W	W06	1800	1750	Other	00	SW	None
rumpus	PVC-006-01 W	SD02	2500	1800	Sliding	45	SW	None
rumpus	PVC-006-01 W	W13	1200	600	Other	00	NW	None
bed 4	PVC-006-01 W	W07	1200	550	Other	00	SE	None
bed 4	PVC-006-01 W	W08	1200	500	Other	00	SW	None
bed 4	PVC-006-01 W	W09	1200	800	Sliding	45	SW	None
bed 3	PVC-006-01 W	W10	1000	1400	Sliding	45	SW	None
bed 2	PVC-005-01 W	W11	1200	1400	Awning	90	NE	None
bath	PVC-005-01 W	W12	1000	1200	Awning	90	NE	None
laundry	PVC-005-01 W	W27	900	600	Awning	90	NE	None
pantry	PVC-005-01 W	W26	900	600	Awning	90	NE	None
powder 1	PVC-005-01 W	W25	900	600	Awning	90	NE	None
kit/liv	PVC-006-01 W	W24	1150	3200	Sliding	45	NW	None
kit/liv	PVC-006-01 W	W23	1100	2800	Other	00	SW	None
kit/liv	PVC-005-01 W	W22	2700	1525	Awning	90	NW	None
kit/liv	PVC-006-01 W	W20	2100	800	Other	00	SW	None
kit/liv	PVC-005-01 W	W21	2100	600	Awning	45	SW	None
kit/liv	PVC-006-01 W	W19	2100	1050	Other	00	SE	None
kit/liv	PVC-005-01 W	W18	2100	800	Awning	90	SW	None
kit/liv	PVC-006-01 W	W17	2100	1750	Other	00	SW	None
kit/liv	PVC-006-01 W	W16	2100	600	Other	00	SE	None
kit/liv	PVC-006-01 W	SD03	2700	2600	Sliding	60	SE	None
kit/liv	PVC-005-01 W	W15	2700	800	Awning	45	SE	None

\* Refer to glossary.



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
kit/liv	PVC-006-01 W	W28	1200	600	Other	00	NW	None
powder 2	PVC-005-01 W	W14	1500	600	Awning	90	SE	None

## 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
foyer	2400	1000	100	SE
garage	2400	4800	0	SE
powder 1	2100	700	100	NW
kit/liv	2100	820	100	SW

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-001	Brick wall/Plasterboard	50	Medium	Polystyrene extruded: R2.0	No
EW-002	Retaining Brick wall/Plasterboard	50	Medium	Polystyrene extruded: R2.0	No
EW-003	Brick wall/Plasterboard	85	Dark	Polystyrene extruded: 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]
foyer	EW-001	3400	3200	NE	1470	Yes
foyer	EW-001	3400	1000	SE	2700	Yes
foyer	EW-002	3400	3400	NW		No
garage	EW-001	3400	900	NE	1040	Yes
garage	EW-001	3400	5500	SE	1500	Yes
garage	EW-002	1750	6000	SW		No
garage	EW-001	1650	6000	SW		No
storage	EW-002	3400	4650	SW		No
storage	EW-002	3400	3300	NW		No
lift	EW-003	2700	1570	NE	900	Yes
wir	EW-001	2700	3750	NE	6700	Yes
ensuite	EW-001	2700	2000	NE	6700	Yes
ensuite	EW-001	2700	2250	SE	2700	Yes
master	EW-001	2700	4500	SE	2700	Yes
master	EW-001	2700	4300	SW		No
master	EW-001	2700	1550	NW	3510	Yes
rumpus	EW-001	2700	3510	SW	1800	Yes
rumpus	EW-002	1250	750	NW		No
rumpus	EW-001	1450	750	NW		No
bed 4	EW-001	2700	2850	SE	3510	Yes
bed 4	EW-001	2700	3600	SW	900	Yes
bed 3	EW-001	2700	3700	SW	900	Yes
bed 3	EW-002	1250	3000	NW		No

\* Refer to glossary.



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
bed 3	EW-001	1450	3000	NW	900	Yes
bed 2	EW-002	1250	3950	NW		No
bed 2	EW-001	1450	3950	NW	900	Yes
bed 2	EW-002	1250	3000	NE		No
bed 2	EW-001	1450	3000	NE		No
bath	EW-002	1250	2800	NE		No
bath	EW-001	1450	2800	NE		No
laundry	EW-003	2700	1450	NE		No
pantry	EW-003	2700	3450	NE		No
powder 1	EW-003	2700	1850	NE		No
powder 1	EW-003	2700	1300	NW		No
kit/liv	EW-003	2700	3850	NW		No
kit/liv	EW-003	2700	5150	SW	1800	Yes
kit/liv	EW-003	2700	1525	NW	5400	Yes
kit/liv	EW-003	2700	3000	SW		No
kit/liv	EW-003	2700	1050	SE		No
kit/liv	EW-003	2700	3700	SW		No
kit/liv	EW-003	2700	4950	SE	4400	Yes
kit/liv	EW-003	2700	900	NE	7080	Yes
kit/liv	EW-003	2700	1400	NE	900	Yes
kit/liv	EW-003	1450	750	NW		No
powder 2	EW-003	2700	700	SW		No
powder 2	EW-003	2700	850	SE	3100	Yes
powder 2	EW-003	2700	600	SE		No
powder 2	EW-003	2700	1500	NE	7080	Yes

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Plasterboard/Brick wall	25.32	
IW-002	Plasterboard/Brick wall	107.02	
IW-003	Plasterboard/Brick wall	108.44	Polystyrene extruded: R3.0



## Floor type

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
foyer/Ground	Concrete Slab 200 mm: bare/bare + R3.0	18.60		R3.0	
garage/Ground	Concrete Slab 200 mm: bare/bare	33.00			
storage/Ground	Concrete Slab 200 mm: bare/bare	15.60			
lift/Ground	Concrete Slab 200 mm: bare/bare + R3.0	2.50		R3.0	
wir/foyer	Concrete Slab 250mm: bare/bare + R4.0	4.80		R4.0	
wir/garage	Concrete Slab 250mm: bare/bare + R4.0	2.10		R4.0	
ensuite/foyer	Concrete Slab 250mm: ceramic tiles/bare + R4.0	2.40		R4.0	Ceramic tile
ensuite/garage	Concrete Slab 250mm: ceramic tiles/bare + R4.0	1.80		R4.0	Ceramic tile
master/garage	Concrete Slab 250mm: bare/bare + R4.0	19.40		R4.0	
rumpus/garage	Concrete Slab 250mm: bare/bare + R4.0	1.20		R4.0	
rumpus/foyer	Concrete Slab 250mm: bare/bare + R4.0	10.90		R4.0	
rumpus/storage	Concrete Slab 250mm: bare/bare + R4.0	6.90		R4.0	
rumpus/Ground	Concrete Slab 250 mm: bare/bare + R3.0	3.20		R3.0	
bed 4/storage	Concrete Slab 250mm: bare/bare + R4.0	2.10		R4.0	
bed 4/Ground	Concrete Slab 250 mm: bare/bare + R3.0	7.20		R3.0	
bed 3/Ground	Concrete Slab 250 mm: bare/bare + R3.0	11.60		R3.0	
bed 2/Ground	Concrete Slab 250 mm: bare/bare + R3.0	11.90		R3.0	
bath/Ground	Concrete Slab 250 mm: tiles/bare + R3.0	7.80		R3.0	Ceramic tile
laundry/bath	Concrete Slab 250mm: ceramic tiles/bare + R4.0	3.80		R4.0	Ceramic tile
pantry/bath	Concrete Slab 250mm: ceramic tiles/bare + R4.0	1.60		R4.0	Ceramic tile
pantry/bed 2	Concrete Slab 250mm: ceramic tiles/bare + R4.0	2.70		R4.0	Ceramic tile
powder 1/bed 2	Concrete Slab 250mm: ceramic tiles/bare + R4.0	1.10		R4.0	Ceramic tile

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
powder 1/Outdoor Air	Concrete Slab 250mm: ceramic tiles/bare + R4.0	1.00		R4.0	Ceramic tile
kit/liv/Outdoor Air	Concrete Slab 250mm: bare/bare + R4.0	2.90		R4.0	
kit/liv/bed 3	Concrete Slab 250mm: bare/bare + R4.0	5.00		R4.0	
kit/liv/bed 4	Concrete Slab 250mm: bare/bare + R4.0	9.10		R4.0	
kit/liv/Outdoor Air	Concrete Slab 250mm: bare/bare + R4.0	5.40		R4.0	
kit/liv/wir	Concrete Slab 250mm: bare/bare + R4.0	1.40		R4.0	
kit/liv/bed 2	Concrete Slab 250mm: bare/bare + R4.0	7.50		R4.0	
kit/liv/bath	Concrete Slab 250mm: bare/bare + R4.0	1.80		R4.0	
kit/liv/rumpus	Concrete Slab 250mm: bare/bare + R4.0	22.40		R4.0	
powder 2/wir	Concrete Slab 250mm: ceramic tiles/bare + R4.0	2.30		R4.0	Ceramic tile

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
wir/foyer	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
ensuite/foyer	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
rumpus/foyer	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
wir/garage	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
ensuite/garage	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
master/garage	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
rumpus/garage	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
rumpus/storage	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
bed 4/storage	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
kit/liv/wir	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
powder 2/wir	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
kit/liv/rumpus	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
kit/liv/bed 4	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
kit/liv/bed 3	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No



Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
pantry/bed 2	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
powder 1/bed 2	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
kit/liv/bed 2	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No
laundry/bath	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
pantry/bath	Concrete Slab 250mm: ceramic tiles/bare + R4.0	R4.0	No
kit/liv/bath	Concrete Slab 250mm: bare/bare + R4.0	R4.0	No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
No Data Available				

## Ceiling fans

Location	Quantity	Diameter [mm]
No Data Available		

## Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
Concrete slab 250mm + tiles + airgap and plasterboard + R4.0	R4.0	50	Medium
Concrete slab 250mm + airgap and plasterboard + R4.0	R4.0	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	

\* 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 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 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</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 sheeting 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.