

# Nationwide House Energy Rating Scheme®

## NatHERS® Certificate No. 0011657145

Generated on 14 Jan 2025 using BERS Pro v5.2.4 (3.23)

### Property

**Address** 34 Cook Street,  
FORESTVILLE, NSW, 2087

**Lot/DP** Lot 1 DP 238311

**NCC class\*** 1a

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

**Type** New Home

### Plans

**Main plan** 1289/24

**Prepared by** JJ Drafting

### Construction and environment

<b>Assessed floor area [m2]*</b>	<b>Exposure type</b>
Conditioned* 391.1	Suburban
Unconditioned* 21.0	<b>NatHERS climate zone</b>
Total 448.5	56 Mascot (Sydney Airport)
Garage 36.4	



### Accredited assessor

**Name** Terry Chapman

**Business name** CHAPMAN ENVIRONMENTAL SERVICES  
PTY LTD

**Email** terry@cesenergy.com.au

**Phone** 0414 265 292

**Accreditation No.** 20920

**Assessor Accrediting Organisation**  
ABSA

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

### NCC Requirements

**NCC provisions** Volume Two

**Strate/Territory variation** Yes

### National Construction Code (NCC) requirements

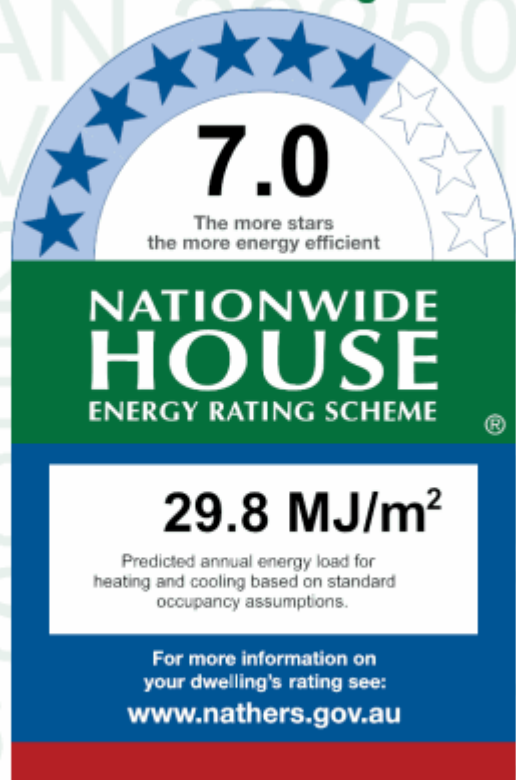
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. 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
<b>Modelled</b>	18.6	11.2
<b>Load limits</b>	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=XbstQRbUp)  
[p=XbstQRbUp](http://hstar.com.au/QR/Generate?p=XbstQRbUp).  
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		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
<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	Occupancy/Other

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

#### Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?

☐ ☐ ☐ ☐

#### Insulation installation method

Has the insulation been installed according to the NCC requirements?

☐ ☐ ☐

#### Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?

☐ ☐ ☐ ☐

### Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)

#### Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?

☐ ☐ ☐ ☐ ☐

Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?

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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?

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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



## Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
Garage 1	Garage	36.43
Entertainment	Daytime	22.1
Hall	Daytime	7.72
Billiards	Daytime	15.04
Bathroom	Unconditioned	5.94
Kitchen/Living1	Kitchen/Living	66.75
Laundry	Unconditioned	6.94
Guest Bed	Bedroom	24.12
Ensuite	Nighttime	4.71
Bathroom 2	Daytime	3.41
Entry/Hall/Stai	Daytime	28.67
Living	Living	44.26
Guest - Office	Bedroom	23.9
WIR	Nighttime	15.05
Master Bed	Bedroom	33.86
Ensuite	Nighttime	7.57
Stair / Hall	Daytime	30.04
Upper Bath	Unconditioned	8.1
Bedroom 2	Bedroom	28.1
Bedroom 3	Bedroom	28.59
Bedroom 4	Bedroom	20.43
Linen	Daytime	5.43

## 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
AWS-008-025	Aluminium Awning Window DG LB Clr 5/10/5	3.4	0.43	0.41	0.45
AWS-019-038	Aluminium Hinged Door DG AGG Is PI EA Clr 4/12Ar/4	3.2	0.35	0.33	0.36
AWS-047-323	Aluminium Sliding Window DG 4Clr-12Ar90-4LB	3.7	0.45	0.42	0.47
AWS-036-053	Aluminium Sliding Door DG LB Clr 5/10/5	3.0	0.47	0.44	0.49
AWS-071-009	Aluminium Fixed Window DG LB Clr 4/12/4	2.7	0.51	0.48	0.53
VAN-002-042	Aluminium Double Hung Window DG LB Clr 4/12/4	3.7	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 1	AWS-008-025-001	W3	900	4000	Awning	90	N	No
Entertainment	AWS-008-025-001	W2	1700	3200	Sliding	45	N	No
Hall	AWS-019-038-001	D2	2500	900	Casement	90	N	No
Billiards	AWS-008-025-001	W25	800	3000	Awning	90	W	No
Bathroom	AWS-008-025-001	W1	800	500	Awning	90	N	No
Kitchen/Living1	AWS-047-323-002	W15	1700	2800	Sliding	45	S	No
Kitchen/Living1	AWS-047-323-002	W16	1700	2800	Sliding	45	S	No
Kitchen/Living1	AWS-019-038-001	D6	2500	900	Casement	90	W	No
Kitchen/Living1	AWS-008-025-001	W24	800	3400	Awning	90	W	No
Kitchen/Living1	AWS-036-053-001	D1	2500	3000	Sliding	45	N	No
Laundry	AWS-047-323-002	W17	1700	2800	Sliding	45	S	No
Laundry	AWS-019-038-001	D5	2500	820	Casement	90	W	No
Guest Bed	AWS-008-025-001	W8	1700	3900	Awning	90	E	No
Guest Bed	AWS-047-323-002	W12	1700	2500	Sliding	45	S	No
Guest Bed	AWS-008-025-001	W13	500	1300	Awning	90	S	No

\* Refer to glossary.





Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Ensuite	AWS-008-025-001	W14	500	1300	Awning	90	S	No
Entry/Hall/Stai	AWS-019-038-001	D3	2500	1900	Casement	90	E	No
Entry/Hall/Stai	AWS-071-009-001	W20	1240	1000	Fixed	00	S	No
Living	AWS-047-323-002	W5	1290	2000	Sliding	10	N	No
Living	AWS-008-025-001	W6	1290	4900	Awning	10	N	No
Guest - Office	AWS-008-025-001	W7	1290	4000	Awning	10	N	No
Guest - Office	AWS-047-323-002	W9	1290	3000	Sliding	10	E	No
WIR	AWS-008-025-001	W10	1290	900	Awning	10	E	No
Master Bed	AWS-036-053-001	D4	2400	3900	Sliding	45	E	No
Master Bed	VAN-002-042-001	W11	2400	1300	Double Hung	45	E	No
Ensuite	AWS-008-025-001	W18	590	900	Awning	10	S	No
Ensuite	AWS-008-025-001	W19	590	900	Awning	10	S	No
Stair / Hall	AWS-071-009-001	W20	2400	1000	Fixed	00	S	No
Upper Bath	AWS-008-025-001	W21	590	1300	Awning	10	S	No
Bedroom 2	AWS-008-025-001	W23	590	3000	Awning	10	S	No
Bedroom 2	AWS-008-025-001	W26	1290	4000	Awning	10	W	No
Bedroom 3	AWS-008-025-001	W28	1290	4000	Awning	10	W	No
Bedroom 3	AWS-047-323-002	W4	1290	2000	Sliding	10	N	No
Bedroom 4	AWS-008-025-001	W22	1290	3000	Sliding	45	S	No
Linen	AWS-008-025-001	W27	590	1300	Awning	10	W	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 1	2400	5300	90	E

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.30		Bulk Insulation R1.2	No
EW-2	Timber Stud Frame Brick Veneer	0.30		Foil, Anti-glare one side + Bulk Insulation R2.5	No

## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Garage 1	EW-1	2700	6200	N	0	No
Garage 1	EW-1	2700	6000	E	0	No
Garage 1	EW-1	2700	1200	S	7200	No
Garage 1	EW-1	2700	600	W	5800	No
Entertainment	EW-1	2700	4190	N	0	No
Hall	EW-1	2700	1490	N	0	No
Billiards	EW-1	2700	4190	W	3500	No





Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bathroom	EW-1	2700	1645	W	3500	No
Bathroom	EW-1	2700	3700	N	0	No
Bathroom	EW-1	2700	600	E	100	No
Kitchen/Living1	EW-1	2700	500	E	2600	No
Kitchen/Living1	EW-1	2700	6400	S	0	No
Kitchen/Living1	EW-1	2700	5345	W	0	No
Kitchen/Living1	EW-1	2700	3500	N	6000	No
Laundry	EW-1	2700	4045	S	0	No
Laundry	EW-1	2700	1745	W	0	No
Guest Bed	EW-1	2700	2500	N	2800	No
Guest Bed	EW-1	2700	4600	E	0	No
Guest Bed	EW-1	2700	5445	S	0	No
Ensuite	EW-1	2700	1945	S	0	No
Ensuite	EW-1	2700	500	W	2600	No
Entry/Hall/Stai	EW-1	2700	2490	E	2500	No
Entry/Hall/Stai	EW-1	2700	2490	S	0	No
Living	EW-2	2500	2295	N	1000	No
Living	EW-2	2500	600	E	13300	No
Living	EW-2	2500	5895	N	1600	No
Guest - Office	EW-2	2500	6200	N	1000	No
Guest - Office	EW-2	2500	3895	E	1200	No
Guest - Office	EW-2	2500	600	W	14100	No
WIR	EW-2	2500	2490	E	3000	No
Master Bed	EW-2	2500	6795	E	3000	No
Master Bed	EW-2	2500	2095	S	1000	No
Ensuite	EW-2	2500	4100	S	1000	No
Ensuite	EW-2	2500	500	W	14100	No
Stair / Hall	EW-2	2500	2590	S	1500	No
Upper Bath	EW-2	2500	500	E	11800	No
Upper Bath	EW-2	2500	1995	S	1000	No
Bedroom 2	EW-2	2500	4895	S	1000	No



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 2	EW-2	2500	5795	W	1000	No
Bedroom 3	EW-2	2500	5895	W	1000	No
Bedroom 3	EW-2	2500	4895	N	1000	No
Bedroom 4	EW-2	2500	3595	S	1000	No
Linen	EW-2	2500	1490	W	1000	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Single Skin Brick	156.06	No insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	183.75	No insulation

## Floor type

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Garage 1	Concrete Slab on Ground 100mm	36.43	None	Bulk Insulation in Contact with Floor R2.3	Bare
Entertainment	Concrete Slab on Ground 100mm	22.10	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Hall	Concrete Slab on Ground 100mm	7.72	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Billiards	Concrete Slab on Ground 100mm	15.04	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Bathroom	Concrete Slab on Ground 100mm	5.94	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living1	Concrete Slab on Ground 100mm	66.75	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Laundry	Concrete Slab on Ground 100mm	6.94	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Guest Bed	Concrete Slab on Ground 100mm	24.12	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Ensuite	Concrete Slab on Ground 100mm	4.71	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Bathroom 2	Concrete Slab on Ground 100mm	3.41	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Entry/Hall/Stai	Concrete Slab on Ground 100mm	28.67	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Living / Entertainment	Timber Framed Timber Above Plasterboard 19mm	22.21		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Living / Hall	Timber Framed Timber Above Plasterboard 19mm	7.89		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Living / Billiards	Timber Framed Timber Above Plasterboard 19mm	9.08		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Living / Bathroom	Timber Framed Timber Above Plasterboard 19mm	3.33		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Guest - Office / Garage 1	Timber Framed Timber Above Plasterboard 19mm	23.89		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
WIR / Garage 1	Timber Framed Timber Above Plasterboard 19mm	12.57		Bulk Insulation R2	Cork Tiles or Parquetry 8mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
WIR / Entry/Hall/Stai	Timber Framed Timber Above Plasterboard 19mm	1.55		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Master Bed / Guest Bed	Timber Framed Timber Above Plasterboard 19mm	14.81		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Master Bed / Ensuite	Timber Framed Timber Above Plasterboard 19mm	0.89		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Master Bed / Bathroom 2	Timber Framed Timber Above Plasterboard 19mm	3.49		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Master Bed / Entry/Hall/Stai	Timber Framed Timber Above Plasterboard 19mm	10.50		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Master Bed	Suspended Floor Timber Frame 19mm	2.13	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Ensuite / Guest Bed	Timber Framed Timber Above Plasterboard 19mm	3.77		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite / Ensuite	Timber Framed Timber Above Plasterboard 19mm	3.57		Bulk Insulation R2	Ceramic Tiles 8mm
Stair / Hall / Kitchen/Living1	Timber Framed Timber Above Plasterboard 19mm	0.57		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Stair / Hall / Entry/Hall/Stai	Timber Framed Timber Above Plasterboard 19mm	5.42		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Upper Bath / Kitchen/Living1	Timber Framed Timber Above Plasterboard 19mm	8.11		Bulk Insulation R2	Ceramic Tiles 8mm
Bedroom 2 / Kitchen/Living1	Timber Framed Timber Above Plasterboard 19mm	20.71		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Bedroom 2 / Laundry	Timber Framed Timber Above Plasterboard 19mm	7.06		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Bedroom 3 / Billiards	Timber Framed Timber Above Plasterboard 19mm	5.56		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Bedroom 3 / Bathroom	Timber Framed Timber Above Plasterboard 19mm	2.05		Bulk Insulation R2	Cork Tiles or Parquetry 8mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 3	Suspended Floor Timber Frame 19mm	20.33	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bedroom 4 / Kitchen/Living1	Timber Framed Timber Above Plasterboard 19mm	20.43		Bulk Insulation R2	Cork Tiles or Parquetry 8mm
Linen / Kitchen/Living1	Timber Framed Timber Above Plasterboard 19mm	5.05		Bulk Insulation R2	Cork Tiles or Parquetry 8mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Garage 1	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Entertainment	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Hall	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Billiards	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Bathroom	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Kitchen/Living1	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Laundry	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Guest Bed	Plasterboard on Timber	Bulk Insulation R6	
Guest Bed	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Ensuite	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Bathroom 2	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Entry/Hall/Stai	Timber Framed Timber Above Plasterboard	Bulk Insulation R2	
Living	Plasterboard on Timber	Bulk Insulation R6	
Guest - Office	Plasterboard on Timber	Bulk Insulation R6	
WIR	Plasterboard on Timber	Bulk Insulation R6	
Master Bed	Plasterboard on Timber	Bulk Insulation R6	
Ensuite	Plasterboard on Timber	Bulk Insulation R6	
Stair / Hall	Plasterboard on Timber	Bulk Insulation R6	
Upper Bath	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 3	Plasterboard on Timber	Bulk Insulation R6	



Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bedroom 4	Plasterboard on Timber	Bulk Insulation R6	
Linen	Plasterboard on Timber	Bulk Insulation R6	

### Ceiling penetrations\*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bathroom	1	Exhaust Fans	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom 2	1	Exhaust Fans	300	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Upper Bath	1	Exhaust Fans	300	Sealed

### Ceiling fans

Location	Quantity	Diameter [mm]
No Data Available		

### Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Roof Tiles Timber Frame	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.85	Dark
Waterproofing Membrane	No Added Insulation, No air Gap	0.85	Dark

### 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	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
		CER Zone			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.