



## NatHERS Assessment

45 Oxford Falls Road, Beacon Hill NSW 2100

<b>Client</b>	Michal Korecky		
<b>Contact</b>	Michal Korecky	koreckym@gmail.com	0438 148 944
<b>Address</b>	21 Nalya Road, Narraweena NSW 2099		

Report Contact		Stefanie Simpson	stefanie@efficientliving.com.au		
Project History					
Issue	File Ref	Description	Author	Checked	Date
A	#2501831	NatHERS Thermal Comfort Assessment	SC	SS	01/07/2025



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## Introduction

This report, prepared by Efficient Living on behalf of our client Michal Korecky accompanies the Development Application for a proposed Class 1 residential dwelling at 45 Oxford Falls Road, Beacon Hill NSW 2100. NatHERS ratings for the development have been completed using HERO home energy rating software V4.1. NatHERS Thermal Modelling protocol have been applied to ensure the project meets sustainability and energy efficiency standards.

If design or building specifications change contact Efficient Living for advice. Changes that do not align with the NatHERS stamped plans are required to be updated before construction.

## Disclaimer:

Provisional modelling assumptions have been included where information and inclusions have not yet been determined. All assumptions are disclosed on the NatHERS certificate.

The NatHERS certificate take precedence over this document.

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## NatHERS Inclusions Summary

### Insulation Notes

- All insulations listed are product-only values
- All insulation and vapour membranes must be installed in accordance with Part 10.8 Condensation Management and NSW H6P1 (Part 13.2) Building Fabric, NSW H6P2 (Part 13.4) Building Sealing, NSW H6P3 (Part 13.7) Services.
- Class 3 vapour permeable membrane to external walls in NCC climate zones 4 & 5.

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### External Walls

Face brick cavity wall, rendered inside for a total R value 1.59

### External Colour

Dark (SA > 0.7)

### Internal walls

Single-skin brick rendered

Plasterboard walls to Skylight cavity, R2.0 insulation

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### External Floor

Concrete slab on ground

Suspended concrete floor

### Internal Floor

Suspended concrete floor between levels, no insulation required

### Floor coverings

Tiles to wet areas, timber elsewhere

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### Roof and Ceilings

Tile roof with sarking

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Plasterboard ceiling with R3.0 insulation (insulation only value)

Plasterboard ceiling with R3.0 insulation (insulation only value), where balcony above

**External Colour**

Dark (SA > 0.7)

**Ceiling Penetrations**

Sealed IC rated LED downlights, one every 5.0m<sup>2</sup>

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**Glazing Doors and Windows**

Tilt & turn + hinged

U-value: 3.0 (equal to or lower than) SHGC: 0.48 (±5%)

Sliding + fixed

U-value: 3.0 (equal to or lower than) SHGC: 0.56 (±5%)

Given values are AFRC total window system values (glass and frame)

**Frame colour:**

Dark (SA > 0.7)

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**Skylights**

Operable, U-value: 2.61 (equal to or lower than) SHGC: 0.21 (±5%)

# Nationwide House Energy Rating Scheme®

## NatHERS® Certificate No. #HR-UHXD8Y-01

Generated on 01 Jul 2025 using Hero 4.1 (Chenath v3.23)

### Property

**Address** 45 Oxford Falls Road, Beacon Hill ,  
NSW, 2100

**Lot/DP** 1/-/DP206629

**NCC Class\*** 1a

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

**Type** New

### Plans

**Main Plan** Issued for DA

**Prepared by** Michael Korecky

### Construction and environment

<b>Assessed floor area (m²)*</b>		<b>Exposure Type</b>
<b>Conditioned*</b>	302.2	Suburban
<b>Unconditioned*</b>	31.7	<b>NatHERS climate zone</b>
<b>Total</b>	333.9	56 - Mascot AMO
<b>Garage</b>	0.0	



### Accredited assessor

**Name** Stefanie Simpson

**Business name** Efficient Living

**Email** stefanie@efficientliving.com.au

**Phone** +61 299706181

**Accreditation No.** 10035

**Assessor Accrediting Organisation** HERA

**Declaration of interest** No Conflict of Interest

### NCC Requirements

**BCA provisions** Volume 2

**State/Territory variation** Yes

#### National Construction Code (NCC) requirements

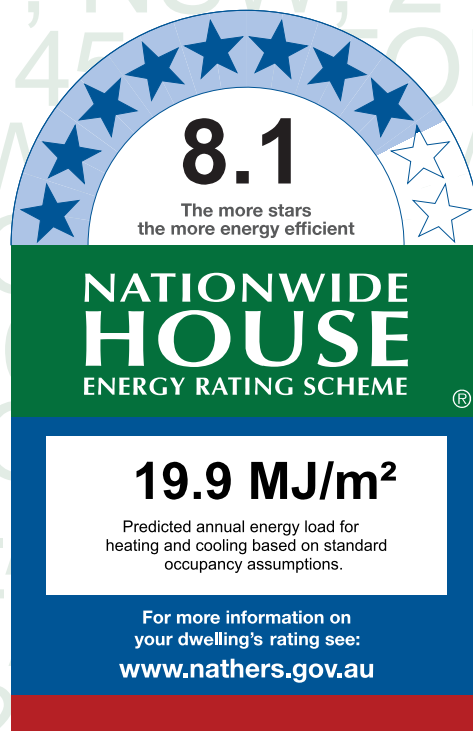
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) 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>	11.4	8.5
<b>Load limits</b>	25	18

#### Features determining load limits

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

### 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

<http://www.hero-software.com.au/pdf/HR-UHXD8Y-01>.

When using either link,  
ensure you are visiting  
<http://www.hero-software.com.au>



\* Refer to glossary.





## About the ratings

### Thermal performance rating

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

### Whole of Home performance rating

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

## Heating and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

### Energy use:

No Whole of Home performance assessment conducted for this certificate.

### Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

### Cost:

No Whole of Home performance assessment conducted for this certificate.

## Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

### Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

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### Thermal performance check

#### Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

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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?

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#### External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

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Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

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#### Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

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#### Ceiling penetrations\*

Does the 'quantity' and 'type' of ceiling penetrations\* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

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#### Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

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#### Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

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#### Apartment entrance doors (NCC Class 2 assessments only)

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

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#### Exposure\*

Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

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#### Heating and cooling load limits\*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

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\* Refer to glossary.

## Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

#### Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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#### Insulation installation method

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

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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### Whole of Home performance check (not applicable if a Whole of Home 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 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"/>			
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#### 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

### Additional Notes / Provisional inclusions

Page 2 - Whole of home and Appliance checklist on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

- Concrete slab on ground
- Default colour modeled to roof, external walls, windows frames and floor finishes
- Downlights ceiling penetration diameter 150mm where IC downlights are not nominated
- Exhaust fans ceiling penetration 250mm diameter
- Ceiling insulation performance has been modelled at a reduced level of R3.0 to the roof perimeter to account for insulation compression. No change in product required.
- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- Where the nominated window manufactures product is not in NatHERS, proxy windows maybe selected to closely match the manufacturer's U-value and SHGC

\*Provisional values represent average practice or worst-case scenario, and the rating may be adversely affected.

## Room schedule

Room	Zone Type	Area (m <sup>2</sup> )
STORAGE	Unconditioned	18.29
ENS	Night Time	5.47
BEDROOM	Bedroom	13.24
RUMPUS	Living	34.49
CORRIDOR	Day Time	27.76
MUSIC ROOM	Day Time	26.40
BEDROOM	Bedroom	9.53
MEDIA ROOM	Living	19.63
ENS	Night Time	4.28
ENS	Day Time	5.24
BEDROOM	Bedroom	20.71
ENS	Night Time	5.47
BEDROOM	Bedroom	18.87
KITCHEN/LIVING/DINING	Kitchen/Living	66.04
BEDROOM	Bedroom	14.17





## Room schedule

Room	Zone Type	Area (m <sup>2</sup> )
BATH	Unconditioned	8.42
BEDROOM	Bedroom	16.82
LDRY	Unconditioned	4.98
CORRIDOR	Day Time	20.60

## Window and glazed door type and performance

### Default\* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
PVC-003-01 W	uPVC A DG Air Fill Clear-Clear	3.0	0.48	0.46	0.50
PVC-004-01 W	uPVC B DG Air Fill Clear-Clear	3.0	0.56	0.53	0.59

### Custom\* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

## Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BATH	PVC-003-01 W	W1-10	1400	1450	Tilt & Turn	5	E	None
BEDROOM	PVC-003-01 W	WG-3	1200	1690	Tilt & Turn	45	W	None
BEDROOM	PVC-003-01 W	WG-11	1400	1690	Tilt & Turn	45	E	None
BEDROOM	PVC-003-01 W	D1-5	2400	900	Hinged Door	90	S	None
BEDROOM	PVC-003-01 W	W1-13	1400	2950	Tilt & Turn	33	S	None
BEDROOM	PVC-003-01 W	W1-1	1200	1810	Tilt & Turn	5	W	None
BEDROOM	PVC-003-01 W	W1-3	1400	2050	Tilt & Turn	5	W	None
BEDROOM	PVC-003-01 W	W1-9	1400	1810	Tilt & Turn	5	E	None
BEDROOM	PVC-003-01 W	W1-11	1400	1810	Tilt & Turn	5	E	None
BEDROOM	PVC-003-01 W	W1-12	1400	2110	Tilt & Turn	39	S	None

## Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BEDROOM	PVC-003-01 W	D1-3	2400	900	Hinged Door	90	S	None
CORRIDOR	PVC-003-01 W	DG-2	2400	1200	Hinged Door	90	N	None
ENS	PVC-003-01 W	WG-2	800	1090	Tilt & Turn	45	W	None
ENS	PVC-003-01 W	W1-2	1400	850	Tilt & Turn	10	W	None
KITCHEN/LIVING/DINING	PVC-003-01 W	W1-6	1400	3310	Tilt & Turn	45	N	None
KITCHEN/LIVING/DINING	PVC-003-01 W	D1-1	2400	900	Hinged Door	90	N	None
KITCHEN/LIVING/DINING	PVC-003-01 W	W1-7	1400	1330	Tilt & Turn	45	E	None
KITCHEN/LIVING/DINING	PVC-003-01 W	W1-4	1400	1330	Tilt & Turn	5	W	None
KITCHEN/LIVING/DINING	PVC-003-01 W	W1-5	1400	1330	Tilt & Turn	5	W	None
KITCHEN/LIVING/DINING	PVC-003-01 W	W1-8	1400	970	Tilt & Turn	10	E	None
KITCHEN/LIVING/DINING	PVC-004-01 W	D1-2	2400	4690	Sliding	75	N	None
LDRY	PVC-003-01 W	D1-4	2400	900	Hinged Door	90	S	None
MEDIA ROOM	PVC-003-01 W	DG-4	2040	900	Hinged Door	90	E	None
MEDIA ROOM	PVC-003-01 W	WG-12	1400	1450	Tilt & Turn	45	E	None
MUSIC ROOM	PVC-003-01 W	DG-03	2400	900	Hinged Door	90	N	None
MUSIC ROOM	PVC-003-01 W	WG-7	1400	2010	Tilt & Turn	45	N	None
MUSIC ROOM	PVC-003-01 W	WG-8	1400	1050	Tilt & Turn	90	E	None
MUSIC ROOM	PVC-003-01 W	WG-9	1400	1090	Tilt & Turn	90	E	None
MUSIC ROOM	PVC-003-01 W	WG-10	1400	1090	Tilt & Turn	90	E	None
RUMPUS	PVC-003-01 W	WG-6	1400	3300	Tilt & Turn	45	N	None
RUMPUS	PVC-003-01 W	DG-1	2400	900	Hinged Door	90	N	None
RUMPUS	PVC-003-01 W	WG-4	1400	1090	Tilt & Turn	90	W	None
RUMPUS	PVC-003-01 W	WG-5	1400	1090	Tilt & Turn	90	W	None
STORAGE	PVC-003-01 W	WG-1	800	1690	Tilt & Turn	45	W	None

\* Refer to glossary.



## Roof window type and performance value

### Default\* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

### Custom\* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
VEL-010-02 W	VS - Ventilating Skylight DG 3mm LoE 366 / 10.5mm Argon Gap / 3mm Clear	2.6	0.21	0.20	0.22

## Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
CORRIDOR	VEL-010-02 W	SKYRW 01	90	1093	570	N	None	None

## Skylight type and performance

Skylight ID	Skylight description
None	

## Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m <sup>2</sup> )	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
None				

## External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CAV-BRICK-110-110-REN	Cavity Brick Wall - 110mm/110mm Rendered Internally	0.85	Dark	0.71	Yes

## External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	CAV-BRICK-110-110-REN	2700	1900	E	595	No

## External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BEDROOM	CAV-BRICK-110-110-REN	1950	2643	W		Yes
BEDROOM	CAV-BRICK-110-110-REN	2350	817	W		Yes
BEDROOM	CAV-BRICK-110-110-REN	400	817	W		No
BEDROOM	CAV-BRICK-110-110-REN	800	2643	W		No
BEDROOM	CAV-BRICK-110-110-REN	2750	3200	E		Yes
BEDROOM	CAV-BRICK-110-110-REN	2700	24	W	598	No
BEDROOM	CAV-BRICK-110-110-REN	2700	5453	S	603	Yes
BEDROOM	CAV-BRICK-110-110-REN	2700	3774	W	598	No
BEDROOM	CAV-BRICK-110-110-REN	2700	2749	W	598	No
BEDROOM	CAV-BRICK-110-110-REN	2700	711	W	598	No
BEDROOM	CAV-BRICK-110-110-REN	2700	3200	E	595	No
BEDROOM	CAV-BRICK-110-110-REN	2700	3798	E	595	No
BEDROOM	CAV-BRICK-110-110-REN	2700	4429	S	603	Yes
CORRIDOR	CAV-BRICK-110-110-REN	2750	2000	N	4127	Yes
ENS	CAV-BRICK-110-110-REN	1950	2400	W		Yes
ENS	CAV-BRICK-110-110-REN	800	2400	W		No
ENS	CAV-BRICK-110-110-REN	2700	2400	W	598	No
KITCHEN/LIVING /DINING	CAV-BRICK-110-110-REN	2700	1464	W	598	No
KITCHEN/LIVING /DINING	CAV-BRICK-110-110-REN	2700	5453	N	586	Yes
KITCHEN/LIVING /DINING	CAV-BRICK-110-110-REN	2700	2318	E		Yes
KITCHEN/LIVING /DINING	CAV-BRICK-110-110-REN	2700	4861	W	598	No
KITCHEN/LIVING /DINING	CAV-BRICK-110-110-REN	2700	4767	E	595	No
KITCHEN/LIVING /DINING	CAV-BRICK-110-110-REN	2700	6634	N	613	Yes
LDRY	CAV-BRICK-110-110-REN	2700	2000	S	603	Yes
MEDIA ROOM	CAV-BRICK-110-110-REN	2750	4433	E		Yes

\* Refer to glossary.

## External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
MUSIC ROOM	CAV-BRICK-110-110-REN	2750	1405	N	2944	Yes
MUSIC ROOM	CAV-BRICK-110-110-REN	2750	1747	W	3045	Yes
MUSIC ROOM	CAV-BRICK-110-110-REN	2750	3024	N	1197	Yes
MUSIC ROOM	CAV-BRICK-110-110-REN	2750	6514	E		Yes
RUMPUS	CAV-BRICK-110-110-REN	2350	1140	W		Yes
RUMPUS	CAV-BRICK-110-110-REN	2750	5453	N	1809	Yes
RUMPUS	CAV-BRICK-110-110-REN	2750	2318	E	2985	Yes
RUMPUS	CAV-BRICK-110-110-REN	2750	5185	W		Yes
RUMPUS	CAV-BRICK-110-110-REN	400	1140	W		No
STORAGE	CAV-BRICK-110-110-REN	1950	2423	W		Yes
STORAGE	CAV-BRICK-110-110-REN	800	2423	W		No

## Internal wall *type*

Wall ID	Wall Type	Area (m <sup>2</sup> )	Bulk insulation
CAV-BRICK-110-110-REN	Cavity Brick Wall - 110mm/110mm Rendered Internally	20.8	0.00
CAV-BRICK-110-110-REN	Cavity Brick Wall - 110mm/110mm Rendered Internally	12.2	0.71
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	4.2	2.00
SGL-BRICK-110-REND	Single 110mm Brick Wall - Rendered Both Sides	250.3	0.00
SGL-BRICK-110-REND	Single 110mm Brick Wall - Rendered Both Sides	8.3	2.00

## Floor *type*

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.4	N/A	0.00	Tile (8mm)
BEDROOM	CSOG-200: Concrete Slab on Ground (200mm)	22.7	N/A	0.00	Timber (12mm)
BEDROOM	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	46.2	N/A	0.00	Timber (12mm)
BEDROOM	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	7.5	Enclosed (Disc.)	0.00	Timber (12mm)



## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
BEDROOM	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	10.7	N/A	0.00	Timber (12mm)
BEDROOM	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	6.1	Enclosed (Disc.)	0.00	Timber (12mm)
CORRIDOR	CSOG-200: Concrete Slab on Ground (200mm)	27.8	N/A	0.00	Timber (12mm)
CORRIDOR	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	20.6	N/A	0.00	Timber (12mm)
ENS	CSOG-200: Concrete Slab on Ground (200mm)	15.0	N/A	0.00	Tile (8mm)
ENS	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.5	N/A	0.00	Tile (8mm)
KITCHEN/LIVING/DINING	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	66.0	N/A	0.00	Timber (12mm)
LDRY	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	2.2	N/A	0.00	Tile (8mm)
LDRY	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	2.8	Enclosed (Disc.)	0.00	Tile (8mm)
MEDIA ROOM	CSOG-200: Concrete Slab on Ground (200mm)	19.6	N/A	0.00	Timber (12mm)
MUSIC ROOM	CSOG-200: Concrete Slab on Ground (200mm)	21.1	N/A	0.00	Timber (12mm)
MUSIC ROOM	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	5.3	Enclosed (Disc.)	0.00	Timber (12mm)
RUMPUS	CSOG-200: Concrete Slab on Ground (200mm)	34.5	N/A	0.00	Timber (12mm)
STORAGE	CSOG-200: Concrete Slab on Ground (200mm)	18.3	N/A	0.00	Timber (12mm)

## Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No
BEDROOM	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No
BEDROOM	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No
CORRIDOR	FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	0.00	No
CORRIDOR	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No
ENS	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No
KITCHEN/LIVING/DINING	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No

## Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
LDRY	ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	3.00	No
MUSIC ROOM	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	3.00	No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	2	Downlight	100	Sealed
BATH	1	Exhaust Fan	250	Sealed
BEDROOM	16	Downlight	100	Sealed
BEDROOM	3	Downlight	100	Sealed
CORRIDOR	10	Downlight	100	Sealed
ENS	4	Downlight	100	Sealed
ENS	4	Exhaust Fan	250	Sealed
KITCHEN/LIVING/DINING	13	Downlight	100	Sealed
KITCHEN/LIVING/DINING	1	Exhaust Fan	250	Sealed
LDRY	1	Downlight	100	Sealed
LDRY	1	Exhaust Fan	250	Sealed
MEDIA ROOM	2	Downlight	100	Sealed
MUSIC ROOM	5	Downlight	100	Sealed
RUMPUS	7	Downlight	100	Sealed
STORAGE	2	Downlight	100	Sealed

## Ceiling fans

Location	Quantity	Diameter (mm)
None		

## Roof type

Construction	Added insulation (R-value)	Solar absorbptance	Roof Colour
ATTIC-CONCTILE-01: Pitched / Attic Conc Tiled Roof (Roofspace) & Flat PB Ceiling	0.00	0.85	Dark



## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
FLAT-02: Flat Framed / Skillion Metal Roof & Cathedral PB Ceiling (11°-33°)	0.00	0.85	Dark
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	0.00	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)
None				

## Appliance *schedule*

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

### Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

### Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

### Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

### Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

## Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

## Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

## 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>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<b>AFRC</b>	Australian Fenestration Rating Council
<b>Assessed floor area</b>	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
<b>Ceiling penetrations</b>	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
<b>Conditioned</b>	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
<b>COP</b>	Coefficient of performance
<b>Custom windows</b>	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
<b>Default windows</b>	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
<b>EER</b>	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
<b>Energy use</b>	This is your 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 - suburban</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category - protected</b>	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
<b>Horizontal shading feature</b>	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
<b>National Construction Code (NCC) Class</b>	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> .
<b>Net zero home</b>	a home that achieves a net zero energy value*.
<b>Opening percentage</b>	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
<b>Provisional value</b>	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at <a href="http://www.nathers.gov.au">www.nathers.gov.au</a>
<b>Recommended capacity</b>	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
<b>Reflective wrap (also known as foil)</b>	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>Solar heat gain coefficient (SHGC)</b>	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
<b>Skylight (also known as roof lights)</b>	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
<b>STCs</b>	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
<b>Thermal breaks</b>	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b>	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
<b>Vertical shading features</b>	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
<b>Window shading device</b>	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

\* Refer to glossary.