

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. 0008298192

Generated on 14 Dec 2022 using BERS Pro v4.4.1.5 (3.21)

### Property

**Address** 30 Abernethy St , Seaforth , NSW , 2092  
**Lot/DP** A/358783  
**NCC Class\*** 1A  
**Type** New Dwelling

### Plans

**Main Plan** Issue 1  
**Prepared by** Luxitecture

### Construction and environment

<b>Assessed floor area (m<sup>2</sup>)*</b>	<b>Exposure Type</b>
Conditioned* 301.0	Suburban
Unconditioned* 70.0	<b>NatHERS climate zone</b>
Total 371.0	56
Garage 58.0	



### Accredited assessor

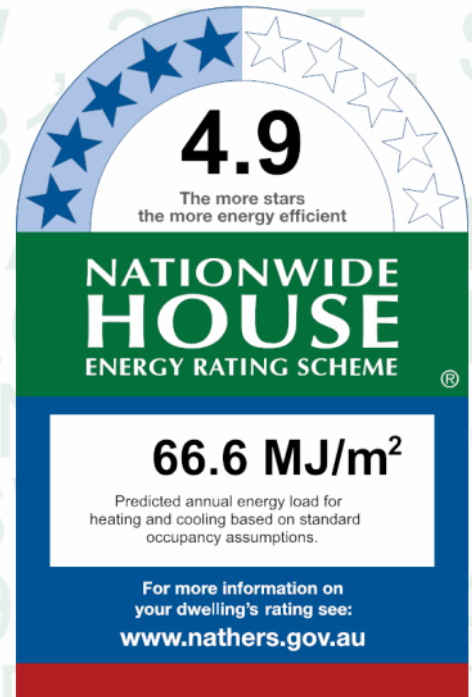
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**Accreditation No.** DMN/16/1763  
**Assessor Accrediting Organisation**  
Design Matters National  
**Declaration of interest** Declaration completed: no conflicts

### National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at [www.abcb.gov.au](http://www.abcb.gov.au).

State and territory variations and additions to the NCC may also apply.



### Thermal performance

<b>Heating</b>	<b>Cooling</b>
<b>40.7</b>	<b>25.8</b>
<b>MJ/m<sup>2</sup></b>	<b>MJ/m<sup>2</sup></b>

### About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

### Verification

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



## Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

### Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

### Ceiling penetrations\*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

### Apartment entrance doors

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.

### Exposure\*

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

### Provisional\* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

## Additional notes

I have modeled the shading in accordance with NatHERS principles

## 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
ATB-004-04 B	ATB-004-04 B AI Thermally Broken B DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27	0.26	0.28
ALM-003-04 A	ALM-003-04 A Aluminium A DG Air Fill Low Solar Gain low-E -Clear	4.9	0.33	0.31	0.35
ATB-003-04 B	ATB-003-04 B AI Thermally Broken A DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27	0.26	0.28
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73

### 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*
Rumpus	ATB-004-04 B	n/a	2700	5160	n/a	60	W	No
Guest Bedroom	ATB-004-04 B	n/a	2700	2800	n/a	45	W	No
Master Bedroom	ATB-004-04 B	n/a	2700	3600	n/a	60	W	No
Master Bedroom	ALM-003-04 A	n/a	2700	710	n/a	40	N	No
Master Ens	ATB-004-04 B	n/a	2100	1920	n/a	90	W	No
Bedroom 3	ATB-004-04 B	n/a	2700	3600	n/a	60	W	No
Bedroom 2	ATB-004-04 B	n/a	2700	4000	n/a	60	W	No
B3 Ens	ATB-003-04 B	n/a	600	1590	n/a	90	S	No
Kitchen/Living	ATB-004-04 B	n/a	2700	540	n/a	90	S	No
Kitchen/Living	ATB-004-04 B	n/a	2700	2760	n/a	45	W	Yes
Kitchen/Living	ATB-004-04 B	n/a	2700	2760	n/a	45	W	Yes
Kitchen/Living	ATB-004-04 B	n/a	2700	7260	n/a	70	W	Yes
Kitchen/Living	ATB-004-04 B	n/a	800	9700	n/a	00	N	No Shading
Kitchen/Living	ATB-004-04 B	n/a	800	6000	n/a	00	S	No Shading
Kitchen/Living	ATB-004-04 B	n/a	800	7300	n/a	00	W	No Shading
Kitchen/Living	ATB-004-04 B	n/a	650	4030	n/a	00	W	No Shading
Laundry	ATB-003-04 B	n/a	600	1600	n/a	90	N	No
Kitchen/Living	ATB-003-04 B	n/a	2700	2600	n/a	30	E	No
Kitchen/Living	ATB-003-04 B	n/a	2700	2600	n/a	30	E	No
Kitchen/Living	ATB-004-04 B	n/a	2700	400	n/a	00	E	No
Kitchen/Living	ATB-004-04 B	n/a	2700	400	n/a	00	E	No
Kitchen/Living	ATB-004-04 B	n/a	400	1100	n/a	00	E	No
Kitchen/Living	ATB-004-04 B	n/a	800	7300	n/a	00	E	No Shading
Kitchen/Living	ATB-004-04 B	n/a	800	1300	n/a	00	S	No Shading
Kitchen/Living	ATB-004-04 B	n/a	650	4030	n/a	00	E	No Shading
Study	ATB-003-04 B	n/a	2700	1420	n/a	40	W	No
Study	ATB-003-04 B	n/a	2700	1800	n/a	90	E	No
Garage	ALM-002-01 A	n/a	1200	2200	n/a	00	W	No

## Roof window *type and performance*

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
No Data Available	

## Skylight schedule

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

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Basement Store	3200	600	90	W
Pool WC	3200	820	90	W
Kitchen/Living	2200	1100	90	E
Garage	2200	4800	90	E

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Tilt up concrete, lined	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-3	Fibro Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap 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)
Rumpus	EW-1	3200	5690	W	5300	NO
Basement Stairs	EW-1	3200	8490	E	0	NO
BM Bath	EW-1	3200	3195	N	0	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
BM Bath	EW-1	3200	2295	E	0	NO
Basement Store	EW-1	3200	3395	E	0	NO
Basement Store	EW-1	3200	3095	S	0	NO
Basement Store	EW-1	3200	2790	W	5300	NO
Pool WC	EW-1	3200	4195	S	0	NO
Pool WC	EW-1	3200	1695	W	5300	NO
Guest Bedroom	EW-1	3200	3995	W	5300	NO
Guest Bedroom	EW-1	3200	900	N	0	NO
Guest Bedroom	EW-1	3200	3195	N	0	NO
GF Hallway	EW-1	2700	8490	E	0	NO
GF Store	EW-1	2700	3395	E	0	NO
GF Store	EW-1	2700	3195	S	0	NO
Master WIR	EW-1	2700	3195	N	0	NO
Master WIR	EW-1	2700	2295	E	0	NO
Master Bedroom	EW-1	2700	3995	W	3600	NO
Master Bedroom	EW-1	2700	5395	N	0	NO
Master Ens	EW-2	2700	1990	W	3600	NO
Bedroom 3	EW-1	2700	3795	S	0	NO
Bedroom 3	EW-1	2700	4095	W	3600	NO
Bedroom 2	EW-1	2700	4090	W	3600	NO
B3 Ens	EW-1	2700	1590	S	0	NO
Kitchen/Living	EW-3	3000	5995	S	0	YES
Kitchen/Living	EW-3	3000	14300	W	200	NO
Kitchen/Living	EW-3	3000	2895	N	0	NO
Laundry	EW-3	3000	3090	N	0	YES
Kitchen/Living	EW-3	3000	10190	E	1100	YES
Study	EW-3	3000	2100	W	0	YES
Study	EW-3	3000	3700	N	0	NO
Study	EW-3	3000	2795	E	0	NO
Garage	EW-3	3000	1900	N	8700	YES
Garage	EW-3	3000	6400	E	0	NO
Garage	EW-3	3000	5600	S	0	NO
Garage	EW-3	3000	3000	W	0	YES

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
IW-1	Cavity wall, direct fix plasterboard, single gap	274.00	No insulation
IW-2	Cavity wall, direct fix plasterboard, single gap	48.00	Bulk Insulation, No Air Gap R2.5

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Rumpus	Concrete Slab on Ground 100mm	22.70	None	No Insulation	40/60 Carpet 10mm/Ceramic
Basement Stairs	Concrete Slab on Ground 100mm	25.30	None	No Insulation	Ceramic Tiles 8mm
BM Bath	Concrete Slab on Ground 100mm	7.10	None	No Insulation	Ceramic Tiles 8mm
Basement Store	Concrete Slab on Ground 100mm	22.80	None	No Insulation	Ceramic Tiles 8mm
Pool WC	Concrete Slab on Ground 100mm	6.90	None	No Insulation	Ceramic Tiles 8mm
Guest Bedroom	Concrete Slab on Ground 100mm	16.00	None	No Insulation	Ceramic Tiles 8mm
GF Hallway/Basement Stairs	Rendered Concrete 150mm	25.30		No Insulation	Cork Tiles or Parquetry 8mm
GF Hallway/Basement Store	Rendered Concrete 150mm	1.80		No Insulation	Cork Tiles or Parquetry 8mm
GF Store/Basement Store	Rendered Concrete 150mm	9.80		No Insulation	Cork Tiles or Parquetry 8mm
Master WIR/BM Bath	Rendered Concrete 150mm	7.10		No Insulation	Cork Tiles or Parquetry 8mm
Master Bedroom/Guest Bedroom	Rendered Concrete 150mm	16.10		No Insulation	Cork Tiles or Parquetry 8mm
Master Bedroom	Suspended Concrete Slab 150mm	5.10	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Master Ens/Rumpus	Rendered Concrete 150mm	7.80		No Insulation	Cork Tiles or Parquetry 8mm
Master Ens	Suspended Concrete Slab 150mm	2.50	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bedroom 3/Basement Store	Rendered Concrete 150mm	7.70		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/Pool WC	Rendered Concrete 150mm	4.10		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3	Suspended Concrete Slab 150mm	5.20	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bedroom 2/Rumpus	Rendered Concrete 150mm	10.00		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2/Basement Store	Rendered Concrete 150mm	1.60		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2	Suspended Concrete Slab 150mm	5.10	Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
B2 Ens/Rumpus	Rendered Concrete 150mm	4.40		No Insulation	Ceramic Tiles 8mm
B3 Ens/Basement Store	Rendered Concrete 150mm	1.80		No Insulation	Ceramic Tiles 8mm
B3 Ens/Pool WC	Rendered Concrete 150mm	2.50		No Insulation	Ceramic Tiles 8mm
Kitchen/Living/GF Hallway	Timber Above Plasterboard 100mm	7.10		No Insulation	80/20 Cork/Carpet 10mm
Kitchen/Living/GF Store	Timber Above Plasterboard 100mm	1.70		No Insulation	80/20 Cork/Carpet 10mm
Kitchen/Living/Master Bedroom	Timber Above Plasterboard 100mm	17.20		No Insulation	80/20 Cork/Carpet 10mm
Kitchen/Living/Master Ens	Timber Above Plasterboard 100mm	10.70		No Insulation	80/20 Cork/Carpet 10mm
Kitchen/Living/Bedroom 3	Timber Above Plasterboard 100mm	17.30		No Insulation	80/20 Cork/Carpet 10mm
Kitchen/Living/Bedroom 2	Timber Above Plasterboard 100mm	17.20		No Insulation	80/20 Cork/Carpet 10mm
Kitchen/Living/B2 Ens	Timber Above Plasterboard 100mm	4.70		No Insulation	80/20 Cork/Carpet 10mm



Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living/B3 Ens	Timber Above Plasterboard 100mm	4.60		No Insulation	80/20 Cork/Carpet 10mm
Laundry/Master WIR	Timber Above Plasterboard 100mm	1.00		No Insulation	Cork Tiles or Parquetry 8mm
Laundry/Master Bedroom	Timber Above Plasterboard 100mm	4.00		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/GF Hallway	Timber Above Plasterboard 100mm	19.80		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	10.90	None	No Insulation	Cork Tiles or Parquetry 8mm
FF Bath/Master WIR	Timber Above Plasterboard 100mm	4.00		No Insulation	Ceramic Tiles 8mm
Study/Master WIR	Timber Above Plasterboard 100mm	1.50		No Insulation	Cork Tiles or Parquetry 8mm
Study	Concrete Slab on Ground 100mm	8.60	None	No Insulation	Cork Tiles or Parquetry 8mm
Garage/GF Store	Timber Above Plasterboard 100mm	8.50		No Insulation	Cork Tiles or Parquetry 8mm
Garage	Concrete Slab on Ground 100mm	26.80	None	No Insulation	Bare

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Rumpus	Concrete, Plasterboard	Bulk Insulation R2.5	No
Rumpus	Rendered Concrete	No Insulation	No
Basement Stairs	Concrete, Plasterboard	Bulk Insulation R2.5	No
Basement Stairs	Rendered Concrete	No Insulation	No
BM Bath	Concrete, Plasterboard	Bulk Insulation R2.5	No
BM Bath	Rendered Concrete	No Insulation	No
Basement Store	Concrete, Plasterboard	Bulk Insulation R2.5	No
Basement Store	Rendered Concrete	No Insulation	No
Pool WC	Concrete, Plasterboard	Bulk Insulation R2.5	No
Pool WC	Rendered Concrete	No Insulation	No
Guest Bedroom	Concrete, Plasterboard	Bulk Insulation R2.5	No
Guest Bedroom	Rendered Concrete	No Insulation	No
GF Hallway	Concrete, Plasterboard	Bulk Insulation R2.5	No
GF Hallway	Timber Above Plasterboard	No Insulation	No
GF Store	Concrete, Plasterboard	Bulk Insulation R2.5	No
GF Store	Timber Above Plasterboard	No Insulation	No
Master WIR	Concrete, Plasterboard	Bulk Insulation R2.5	No
Master WIR	Timber Above Plasterboard	No Insulation	No
Master Bedroom	Concrete, Plasterboard	Bulk Insulation R2.5	No
Master Bedroom	Timber Above Plasterboard	No Insulation	No
Master Ens	Concrete, Plasterboard	Bulk Insulation R2.5	No
Master Ens	Timber Above Plasterboard	No Insulation	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Concrete, Plasterboard	Bulk Insulation R2.5	No
Bedroom 3	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Timber Above Plasterboard	No Insulation	No
B2 Ens	Concrete, Plasterboard	Bulk Insulation R2.5	No
B2 Ens	Timber Above Plasterboard	No Insulation	No
B3 Ens	Concrete, Plasterboard	Bulk Insulation R2.5	No
B3 Ens	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
FF Bath	Plasterboard	Bulk Insulation R3.5	No
Study	Plasterboard	Bulk Insulation R3.5	No
Garage	Plasterboard	Bulk Insulation R3.5	No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm <sup>2</sup> )	Sealed/unsealed
Rumpus	8	Downlights - LED	150	Sealed
Basement Stairs	8	Downlights - LED	150	Sealed
BM Bath	4	Downlights - LED	150	Sealed
BM Bath	1	Exhaust Fans	300	Sealed
Basement Store	8	Downlights - LED	150	Sealed
Pool WC	4	Downlights - LED	150	Sealed
Pool WC	1	Exhaust Fans	300	Sealed
Guest Bedroom	4	Downlights - LED	150	Sealed
GF Hallway	8	Downlights - LED	150	Sealed
GF Store	4	Downlights - LED	150	Sealed
Master WIR	2	Downlights - LED	150	Sealed
Master Bedroom	6	Downlights - LED	150	Sealed
Master Ens	4	Downlights - LED	150	Sealed
Master Ens	1	Exhaust Fans	300	Sealed
Bedroom 3	6	Downlights - LED	150	Sealed
Bedroom 2	6	Downlights - LED	150	Sealed
B2 Ens	2	Downlights - LED	150	Sealed
B2 Ens	1	Exhaust Fans	300	Sealed
B3 Ens	2	Downlights - LED	150	Sealed
B3 Ens	1	Exhaust Fans	300	Sealed
Kitchen/Living	20	Downlights - LED	150	Sealed

\* Refer to glossary.



Location	Quantity	Type	Diameter (mm )	Sealed/unsealed
Kitchen/Living	2	Exhaust Fans	300	Sealed
Laundry	2	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Kitchen/Living	12	Downlights - LED	150	Sealed
FF Bath	2	Downlights - LED	150	Sealed
FF Bath	1	Exhaust Fans	300	Sealed
Study	4	Downlights - LED	150	Sealed
Garage	8	Downlights - LED	150	Sealed

## Ceiling fans

Location	Quantity	Diameter (mm)
Rumpus	1	1400
Kitchen/Living	5	1400
Kitchen/Living	2	1400
Study	1	1400

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Roof Tiles	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.30	Light

## Explanatory notes

### About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

### Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

### Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available 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>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, rangehoods, 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>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>Entrance door</b>	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
<b>Exposure category – exposed</b>	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
<b>Exposure category – open</b>	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
<b>Exposure category – suburban</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category – protected</b>	terrain with numerous, closely spaced obstructions over 10m 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>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>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 device</b>	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
<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</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>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).