

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. 0006779979-01

Generated on 09 Mar 2022 using BERS Pro v4.4.0.6 (3.21)

### Property

**Address** 46 Martin Street , Freshwater , NSW , 2096

**Lot/DP** 5/4947

**NCC Class\*** 1A

**Type** New Dwelling

### Plans

**Main Plan** Hill H0485

**Prepared by** CR

### Construction and environment

<b>Assessed floor area (m<sup>2</sup>)*</b>	<b>Exposure Type</b>
Conditioned* 249.0	Suburban
Unconditioned* 53.0	<b>NatHERS climate zone</b>
Total 301.0	56
Garage 33.0	



### Accredited assessor

**Name** Ian Fry

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**Accreditation No.** DMN/12/1441

### Assessor Accrediting Organisation

Design Matters National

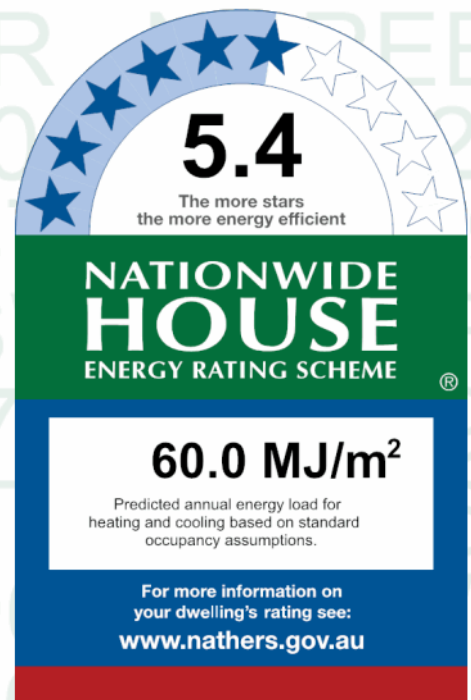
**Declaration of interest** Declaration completed: no conflicts

### 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>34.1</b>	<b>25.9</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=WCILTXSIL](http://hstar.com.au/QR/Generate?p=WCILTXSIL).

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

Where not noted on plans, default selections to floor coverings and external colours have

been used in this assessment, as noted in the NatHERS Technical Notes. Alternative

selections past this point can be made to floor coverings and external colours, without

requiring an amended certificate

## 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
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
WID-012-04 A	WID-012-04 A Aluminium Awning Window SG 4mmClr	6.4	0.64	0.61	0.67

## Custom\* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
WID-005-04 A	WID-005-04 A AI Residential Internal Sliding Door SG 638mm Comfort Plus	4.4	0.44	0.42	0.46
WID-001-04 A	WID-001-04 A AI Residential Awning Window SG 638mm Comfort Plus	5.0	0.40	0.38	0.42
WID-006-01 A	WID-006-01 A AI Residential Sliding Window SG 3mm Clear	6.4	0.76	0.72	0.80
WID-005-01 A	WID-005-01 A AI Residential Internal Sliding Door SG 4mm Clear	6.3	0.72	0.68	0.76
WID-006-04 A	WID-006-04 A AI Residential Sliding Window SG 638mm Comfort Plus	4.5	0.46	0.44	0.48

## Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
WIP	WID-012-04 A	n/a	600	1800	n/a	00	W	No
LDRY	ALM-002-01 A	n/a	1200	1200	n/a	90	W	No
Kitchen/Family	WID-005-04 A	n/a	2400	2200	n/a	45	N	No
Kitchen/Family	WID-005-04 A	n/a	2400	3200	n/a	60	W	No
Kitchen/Family	WID-001-04 A	n/a	2100	2400	n/a	60	N	No
Kitchen/Family	WID-001-04 A	n/a	300	2400	n/a	00	E	No
Lounge	WID-006-01 A	n/a	2100	2400	n/a	30	W	No
Guest	WID-012-04 A	n/a	2100	600	n/a	60	S	No
Guest	WID-012-04 A	n/a	2100	600	n/a	60	S	No
Guest	WID-012-04 A	n/a	2100	600	n/a	60	S	No
PDR	ALM-002-01 A	n/a	600	1600	n/a	45	E	No
Kitchen/Family	WID-012-04 A	n/a	2340	300	n/a	00	E	No
Garage	WID-006-01 A	n/a	600	2400	n/a	45	W	No
Bedroom 2	ALM-002-01 A	n/a	600	600	n/a	10	W	No
Bedroom 2	ALM-002-01 A	n/a	600	600	n/a	10	W	No
Bedroom 2	WID-012-04 A	n/a	600	1600	n/a	00	W	No
Bath	ALM-002-01 A	n/a	1200	1600	n/a	45	E	No
PDR	ALM-002-01 A	n/a	600	600	n/a	90	E	No
Bedroom 3	ALM-002-01 A	n/a	1400	600	n/a	10	N	No
Bedroom 3	WID-012-04 A	n/a	1400	1600	n/a	00	N	No
Bedroom 4	ALM-002-01 A	n/a	1400	600	n/a	10	N	No
Bedroom 4	WID-012-04 A	n/a	1400	1600	n/a	00	N	No
Ensuite 1	WID-012-04 A	n/a	300	2800	n/a	00	W	No
Ensuite 1	ALM-002-01 A	n/a	1500	600	n/a	90	W	No

\* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1.1	WID-005-01 A	n/a	2100	2700	n/a	60	S	No
Atrium/Hallway	WID-001-04 A	n/a	1800	400	n/a	00	E	No
Atrium/Hallway	WID-001-04 A	n/a	1800	400	n/a	00	E	No
Atrium/Hallway	WID-001-04 A	n/a	1800	400	n/a	00	E	No
Atrium/Hallway	WID-001-04 A	n/a	1800	400	n/a	00	E	No
Atrium/Hallway	WID-001-04 A	n/a	1800	400	n/a	00	E	No
Atrium/Hallway	WID-001-04 A	n/a	1800	400	n/a	00	E	No
Study	WID-006-04 A	n/a	600	1900	n/a	45	W	No
Bedroom 1.2	ALM-002-01 A	n/a	1800	600	n/a	90	S	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
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

## Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m <sup>2</sup> )	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Ensuite 1	GEN-04-008a	n/a	50	0.60	W	None	No	0.50
WIR 1	GEN-04-008a	n/a	50	0.60	W	None	No	0.50
Atrium/Hallway	GEN-04-008a	n/a	50	0.80	E	None	No	0.50
Study	GEN-04-006a	n/a	50	0.40	W	None	No	0.50

## External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
LDRY	2400	820	90	N
Kitchen/Family	2400	920	90	E
Garage	2400	4810	90	S

## External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Reflective foil with bulk no gap R2.5	Yes
EW-2	Single Skin Brick	0.50	Medium	No insulation	No
EW-3	Brick Veneer	0.50	Medium	No insulation	No
EW-4	Fibro Cavity Panel Direct Fix	0.50	Medium	Reflective foil with bulk no gap R2.5	Yes

## External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
WIP	EW-1	2750	2995	W	600	NO
WIP	EW-1	2750	600	S	9900	YES
LDRY	EW-1	2750	3495	W	600	NO
LDRY	EW-1	2750	1795	N	4200	NO
Kitchen/Family	EW-1	2750	2995	N	4200	YES
Kitchen/Family	EW-1	2750	3600	W	5400	YES
Kitchen/Family	EW-1	2750	4600	N	600	NO
Kitchen/Family	EW-1	2750	8300	E	100	NO
Kitchen/Family	EW-1	2750	500	S	100	YES
Lounge	EW-1	3093	4090	W	1200	YES
Guest	EW-1	3093	3800	S	1400	NO
Guest	EW-1	3093	1200	W	1500	YES
Guest	EW-1	3093	3495	E	100	NO
PDR	EW-1	3093	1300	N	15500	YES
PDR	EW-1	3093	2695	E	100	NO
Kitchen/Family	EW-1	3093	4595	E	100	YES
Kitchen/Family	EW-1	3093	800	S	9600	YES
Kitchen/Family	EW-1	3093	1995	E	1800	YES
Garage	EW-2	3950	5595	S	500	YES
Garage	EW-3	3950	5700	W	600	NO
Garage	EW-3	3950	600	N	14800	YES
Bedroom 2	EW-4	2600	3190	W	600	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bath	EW-1	2600	500	S	13100	YES
Bath	EW-1	2600	2295	E	600	NO
PDR	EW-1	2600	1190	E	600	NO
Bedroom 3	EW-4	2600	3695	W	600	NO
Bedroom 3	EW-4	2600	3995	N	300	NO
Bedroom 4	EW-4	2600	3995	N	300	NO
Bedroom 4	EW-1	2600	3695	E	600	NO
Ensuite 1	EW-4	2600	3990	W	600	NO
WIR 1	EW-4	2600	2095	S	100	NO
WIR 1	EW-4	2600	5695	W	600	NO
Bedroom 1.1	EW-1	2600	1300	N	14100	YES
Bedroom 1.1	EW-1	2600	6200	E	600	NO
Bedroom 1.1	EW-1	2600	3800	S	1800	NO
Bedroom 1.1	EW-1	2600	700	W	1700	YES
Bedroom 1.1	EW-4	2600	495	S	2500	YES
Atrium/Hallway	EW-1	2600	4595	E	1100	YES
Atrium/Hallway	EW-1	2600	800	S	10000	YES
Atrium/Hallway	EW-1	2600	1995	E	1900	YES
Study	EW-4	2600	2690	W	600	NO
Bedroom 1.2	EW-4	2600	1590	S	2500	NO

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		245.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		39.00	Bulk Insulation, No Air Gap R2.5

## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
WIP	Waffle pod slab 225 mm 100mm	5.10	None	Waffle Pod 225mm	Ceramic Tiles 8mm
LDRY	Waffle pod slab 225 mm 100mm	6.10	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Kitchen/Family	Waffle pod slab 225 mm 100mm	60.10	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Lounge	Waffle pod slab 225 mm 100mm	19.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Guest	Waffle pod slab 225 mm 100mm	13.00	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
PDR	Waffle pod slab 225 mm 100mm	4.40	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Kitchen/Family	Waffle pod slab 225 mm 100mm	21.80	None	Waffle Pod 225mm	20/80 Carpet 10mm/Ceramic



Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Waffle pod slab 175 mm 100mm	32.90	None	Waffle Pod 175mm	Bare
Bedroom 2/WIP	Timber Above Plasterboard 19mm	1.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Family	Timber Above Plasterboard 19mm	8.20		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Lounge	Timber Above Plasterboard 19mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
Bath/Kitchen/Family	Timber Above Plasterboard 19mm	7.00		No Insulation	Ceramic Tiles 8mm
PDR/Kitchen/Family	Timber Above Plasterboard 19mm	2.30		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Kitchen/Family	Timber Above Plasterboard 19mm	5.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3	Suspended Timber Floor 19mm	8.30	Very Open	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 4/Kitchen/Family	Timber Above Plasterboard 19mm	14.50		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite 1/Lounge	Timber Above Plasterboard 19mm	8.90		No Insulation	Ceramic Tiles 8mm
Ensuite 1/Garage	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
WC Ensuite 1/Lounge	Timber Above Plasterboard 19mm	0.60		No Insulation	Ceramic Tiles 8mm
WC Ensuite 1/Garage	Timber Above Plasterboard 19mm	1.10		No Insulation	Ceramic Tiles 8mm
WIR 2/Lounge	Timber Above Plasterboard 19mm	2.40		No Insulation	Carpet+Rubber Underlay 18mm
WIR 1/Garage	Timber Above Plasterboard 19mm	10.50		No Insulation	Carpet+Rubber Underlay 18mm
WIR 1	Suspended Timber Floor 19mm	1.00	Very Open	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1.1/Guest	Timber Above Plasterboard 19mm	13.10		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1.1/PDR	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1.1/Kitchen/Family	Timber Above Plasterboard 19mm	4.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1.1/Garage	Timber Above Plasterboard 19mm	4.00		No Insulation	Carpet+Rubber Underlay 18mm
Atrium/Hallway/Kitchen/Family	Timber Above Plasterboard 19mm	7.50		No Insulation	Carpet+Rubber Underlay 18mm
Atrium/Hallway/Lounge	Timber Above Plasterboard 19mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
Atrium/Hallway/Kitchen/Family	Timber Above Plasterboard 19mm	17.80		No Insulation	Carpet+Rubber Underlay 18mm
Atrium/Hallway/Garage	Timber Above Plasterboard 19mm	0.50		No Insulation	Carpet+Rubber Underlay 18mm
Study/LDRY	Timber Above Plasterboard 19mm	0.90		No Insulation	Carpet+Rubber Underlay 18mm
Study/Kitchen/Family	Timber Above Plasterboard 19mm	8.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1.2/Garage	Timber Above Plasterboard 19mm	7.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1.2	Suspended Timber Floor 19mm	0.80	Very Open	No Insulation	Carpet+Rubber Underlay 18mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
WIP	Plasterboard	Bulk Insulation R4.1	No
WIP	Timber Above Plasterboard	No Insulation	No
LDRY	Plasterboard	Bulk Insulation R4.1	No
LDRY	Timber Above Plasterboard	No Insulation	No
Kitchen/Family	Plasterboard	Bulk Insulation R4.1	No
Kitchen/Family	Timber Above Plasterboard	No Insulation	No
Lounge	Plasterboard	Bulk Insulation R4.1	No
Lounge	Timber Above Plasterboard	No Insulation	No
Guest	Timber Above Plasterboard	No Insulation	No
PDR	Timber Above Plasterboard	No Insulation	No
Kitchen/Family	Timber Above Plasterboard	No Insulation	No
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R4.1	No
Bath	Plasterboard	Bulk Insulation R4.1	No
PDR	Plasterboard	Bulk Insulation R4.1	No
Bedroom 3	Plasterboard	Bulk Insulation R4.1	No
Bedroom 4	Plasterboard	Bulk Insulation R4.1	No
Ensuite 1	Plasterboard	Bulk Insulation R4.1	No
WC Ensuite 1	Plasterboard	Bulk Insulation R4.1	No
WIR 2	Plasterboard	Bulk Insulation R4.1	No
WIR 1	Plasterboard	Bulk Insulation R4.1	No
Bedroom 1.1	Plasterboard	Bulk Insulation R4.1	No
Atrium/Hallway	Plasterboard	Bulk Insulation R4.1	No
Study	Plasterboard	Bulk Insulation R4.1	No
Bedroom 1.2	Plasterboard	Bulk Insulation R4.1	No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm <sup>2</sup> )	Sealed/unsealed
PDR	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed
PDR	1	Exhaust Fans	300	Sealed
Ensuite 1	1	Exhaust Fans	300	Sealed
WC Ensuite 1	1	Exhaust Fans	300	Sealed



## Ceiling *fans*

Location	Quantity	Diameter (mm)
Study	1	1200

## Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium

## 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).