

# Nationwide House Energy Rating Scheme

## NatHERS Certificate No. 0005451869-04

Generated on 31 May 2021 using AccuRate Sustainability V2.4.3.21

### Property

**Address** 13 Iluka Road , Palm Beach , NSW , 2108  
**Lot/DP** Lot 62 DP 14682  
**NCC Class\*** 1a  
**Type** Renovation

### Plans

**Main Plan** 2019-01, 27.05.2021  
**Prepared by** Alejandra Becerra

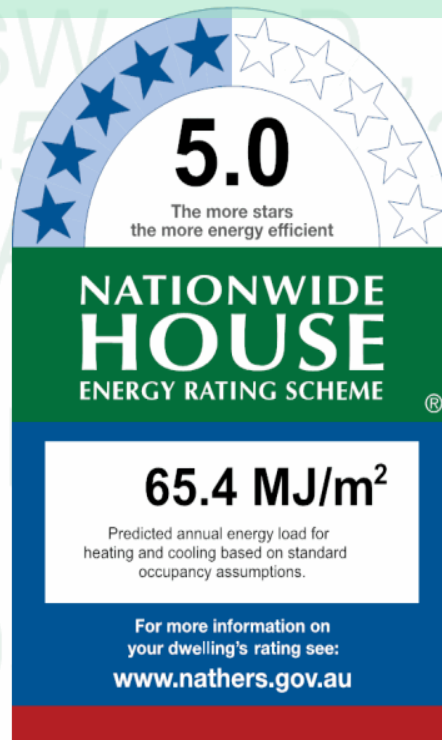
### Construction and environment

<b>Assessed floor area (m<sup>2</sup>)*</b>		<b>Exposure Type</b>
Conditioned*	287.0	Suburban
Unconditioned*	19.9	<b>NatHERS climate zone</b>
Total	306.9	56
<b>Garage</b>		



### Accredited assessor

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**Accreditation No.** DMN/12/1472  
**Assessor Accrediting Organisation**  
Design Matters National  
**Declaration of interest** Declaration completed: no conflicts



### Thermal performance

<b>Heating</b>	<b>Cooling</b>
<b>40.6</b>	<b>24.8</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 [www.hstar.com.au/QR/Generate?p=ZMwGvUSKd](http://www.hstar.com.au/QR/Generate?p=ZMwGvUSKd). When using either link, ensure you are visiting [www.hstar.com.au](http://www.hstar.com.au)



### 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.

## 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?

### 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

## 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
CMP-005-04 I	Composite A DG Argon Fill Low Solar Gain low-E - Clear	2.2	0.32	0.30	0.34
CMP-006-04 I	Composite B DG Argon Fill Low Solar Gain low-E - Clear	2.2	0.39	0.37	0.41

### 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*
STORE	CMP-006-04 I	W01	600	2000	Sliding	30	S	None
STORE	CMP-006-04 I	W02	1600	600	Louvre	90	E	None
STORE	CMP-006-04 I	W03	1600	600	Louvre	90	E	None
BATH 1	CMP-006-04 I	D2.08	2112	2106	Sliding	45	S	None
LDRY	CMP-006-04 I	W09	600	2000	Sliding	30	S	None
LDRY	CMP-006-04 I	W10	1000	1650	Other	00	NW	None
KITCHEN/DINING	CMP-006-04 I	D2.09	2500	3760	Sliding	100	N	None
KITCHEN/DINING	CMP-006-04 I	D2.10	2500	3760	Sliding	100	N	None
KITCHEN/DINING	CMP-006-04 I	D2.11	2500	3760	Sliding	00	N	None
KITCHEN/DINING	CMP-005-04 I	D2.07	2500	1000	Casement	100	W	None
KITCHEN/DINING	CMP-006-04 I	W04	1800	400	Other	00	N	None
KITCHEN/DINING	CMP-006-04 I	D2.01	2500	2700	Sliding	45	E	None
KITCHEN/DINING	CMP-006-04 I	W.08	2444	900	Louvre	90	N	None
GALLERY	CMP-006-04 I	WG.03	1500	800	Louvre	90	E	None
GR BED 1	CMP-006-04 I	W08	600	2000	Sliding	10	S	None
GR BED 1	CMP-006-04 I	WG.04	1600	600	Louvre	90	E	None
GR BED 1	CMP-006-04 I	WG.05	1600	600	Louvre	90	E	None
LIVING	CMP-006-04 I	WG10	2700	3500	Other	00	N	None
LIVING	CMP-006-04 I	W40	1200	3200	Other	00	N	None
LIVING	CMP-006-04 I	WG07	2700	1000	Louvre	90	W	Outdoor Venetians
GR BATH	CMP-006-04 I	WG.02	1500	600	Louvre	90	N	None
GR BATH	CMP-006-04 I	WG.01	400	1200	Other	00	E	None
ENS	CMP-006-04 I	W20	2000	900	Other	00	N	None
ENS	CMP-006-04 I	W38	450	2950	Other	00	N	None
ENS	CMP-006-04 I	W38	450	400	Other	00	W	None
ENS	CMP-006-04 I	W38	450	1000	Other	00	E	None
MASTER	CMP-006-04 I	W12	2000	900	Other	00	N	None
MASTER	CMP-006-04 I	W13	2000	900	Other	00	N	None
MASTER	CMP-006-04 I	W37	450	3900	Other	00	N	None
MASTER	CMP-005-04 I	D4.09	2600	915	Casement	100	W	None
BED 2	CMP-006-04 I	W14	2000	400	Louvre	90	N	Outdoor Venetians
BED 2	CMP-006-04 I	W15	2000	1400	Other	00	N	Outdoor Venetians
BED 2	CMP-006-04 I	W16	2000	1290	Other	00	N	Outdoor Venetians
BED 2	CMP-006-04 I	W39	450	3673	Other	00	N	None
BED 3	CMP-006-04 I	W19	2000	400	Louvre	90	N	Outdoor Venetians
BED 3	CMP-006-04 I	W18	2000	1400	Other	00	N	Outdoor Venetians
BED 3	CMP-006-04 I	W17	2000	1290	Other	00	N	Outdoor Venetians

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
BED 3	CMP-006-04 I	W39	450	3607	Other	00	N	None
GUEST	CMP-006-04 I	W05	2444	900	Louvre	90	S	None
GUEST	CMP-006-04 I	W06	2444	900	Louvre	90	S	None
GUEST	CMP-006-04 I	W07	1464	900	Louvre	90	N	None
FAMILY	CMP-006-04 I	W21	2000	560	Other	00	W	None
FAMILY	CMP-006-04 I	W10	2000	560	Other	00	N	None
FAMILY	CMP-005-04 I	D4.08	2600	3800	Casement	90	N	None

## 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
VEL-010-01 W	VELUX VS - Ventilating Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.5	0.21	0.20	0.22

## Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
ENS	VEL-010-01 W	W35	90	889	889	S	None	None
WIR	VEL-010-01 W	W36	90	889	889	S	None	None
VOID	VEL-010-01 W	W31	90	1300	1300	S	None	None
VOID	VEL-010-01 W	W32	90	1300	1300	S	None	None
VOID	VEL-010-01 W	W33	90	1300	1300	S	None	None
VOID	VEL-010-01 W	W34	90	1300	1300	S	None	None
HALL	VEL-010-01 W	W28	90	889	889	S	None	None
HALL	VEL-010-01 W	W29	90	889	889	S	None	None
HALL	VEL-010-01 W	W30	90	889	889	S	None	None

## Skylight type and performance

Skylight ID	Skylight description
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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
ENTRY	2100	920	100	E
ENTRY	2075	1450	100	N
BATH 1	2375	1450	100	N
GUEST	2400	1120	100	N

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Timber/Plasterboard	50	Medium	Rockwool batt: R2.5	No
EW-002	Sandstone/Concrete block	50	Medium	Polystyrene expanded: R2.5	No
EW-003	Plasterboard	50	Medium	Rockwool batt: 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)
ENTRY	EW-001	2100	2100	E		No
ENTRY	EW-001	2100	1500	W		Yes
ENTRY	EW-001	2100	4350	N	6000	Yes
STORE	EW-001	2100	4317	S		No
STORE	EW-001	2100	2800	E	600	Yes
BATH 1	EW-001	2800	2194	S		Yes
BATH 1	EW-001	2800	2194	N		Yes
LDRY	EW-003	2800	3900	S		No
LDRY	EW-002	2800	2720	NW		No
KITCHEN/DINING	EW-001	2800	11280	N	1800	Yes
KITCHEN/DINING	EW-001	2800	1500	W	1800	Yes
KITCHEN/DINING	EW-001	2800	900	N	3500	Yes
KITCHEN/DINING	EW-002	2800	3120	NW		No
KITCHEN/DINING	EW-001	2800	3800	E		Yes
KITCHEN/DINING	EW-001	2800	3350	N		Yes
KITCHEN/DINING	EW-003	2800	13600	S		No
GALLERY	EW-001	3200	3200	E	600	Yes

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
GR BED 1	EW-001	3200	4810	S		No
GR BED 1	EW-001	3200	400	W		No
GR BED 1	EW-001	3200	3050	E		No
GR BED 1	EW-001	3200	250	N		No
LIVING	EW-001	5050	4010	N	1000	Yes
LIVING	EW-001	4950	2100	W	14500	Yes
LIVING	EW-001	1200	1500	W	600	Yes
GR BATH	EW-001	3200	1300	N	700	Yes
GR BATH	EW-001	3200	1000	E	600	Yes
GR BATH	EW-001	3200	1720	E	600	Yes
ENS	EW-001	3300	2950	N	1950	Yes
ENS	EW-001	3300	400	W	14500	Yes
ENS	EW-001	3200	1000	E	14500	Yes
MASTER	EW-001	3300	3900	N	2400	Yes
MASTER	EW-001	3200	1100	W		No
BED 2	EW-001	3300	3673	N	3000	Yes
BED 3	EW-001	3000	3607	N		No
VOID	EW-003	1800	6500	S		No
HALL	EW-003	1800	13250	S		No
ROOF SPACE	EW-001	1200	2200	W	600	Yes
ROOF SPACE	EW-001	1100	6400	S		No
ROOF SPACE	EW-001	1200	5100	E	1600	Yes
ROOF SPACE	EW-001	1300	900	E	1600	Yes
ROOF SPACE	EW-001	1300	1300	N	1600	Yes
GUEST	EW-003	2800	4051	S		No
GUEST	EW-001	2800	4051	N		Yes
FAMILY	EW-002	3000	3880	NW		No
FAMILY	EW-001	3000	800	N	5000	Yes
FAMILY	EW-001	3000	560	W	350	Yes
FAMILY	EW-001	3000	4500	N	2400	Yes
STORE 2	EW-003	3000	3920	S		No
STORE 2	EW-002	3000	1150	NW		No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> )	Bulk insulation
IW-001	Plasterboard	250.97	



## Floor type

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation	Added insulation (R-value)	Covering
ENTRY/Ground	225mm waffle pod with 100mm concrete cover timber/bare	9.00		R0.6	
STORE/Ground	225mm waffle pod with 100mm concrete cover timber/bare	9.80		R0.6	
STORE/Ground	225mm waffle pod with 100mm concrete cover tiles/bare	2.00		R0.6	Ceramic tile
BATH 1/Ground	225mm waffle pod with 100mm concrete cover tiles/bare	7.20		R0.6	Ceramic tile
LDRY/Ground	225mm waffle pod with 100mm concrete cover tiles/bare	8.80		R0.6	Ceramic tile
KITCHEN/DINING/Ground	225mm waffle pod with 100mm concrete cover timber/bare	94.10		R0.6	
GALLERY/ENTRY	Timber (hardwood): timber/air gap/plasterboard	9.00			
GALLERY/Outdoor Air	S/S - Timber (hardwood): timber/air gap/fc R4.0	1.50		R4.0	
GALLERY/STORE	Timber (hardwood): timber/air gap/plasterboard	1.10			
GR BED 1/STORE	Timber (hardwood): timber/air gap/plasterboard	10.70			
GR BED 1/Outdoor Air	S/S - Timber (hardwood): timber/air gap/fc R4.0	2.50		R4.0	
LIVING/Outdoor Air	S/S - Timber (hardwood): timber/air gap/fc R4.0	15.20		R4.0	
GR BATH/Outdoor Air	S/S - Timber (hardwood): ceramic tiles/air gap/fc R4.0	3.90		R4.0	Ceramic tile
ENS/KITCHEN/DINING	Timber (hardwood): ceramic tiles/air gap/plasterboard	5.10			Ceramic tile
ENS/Outdoor Air	S/S - Timber (hardwood): ceramic tiles/air gap/fc R4.0	1.50		R4.0	Ceramic tile
WIR/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard	6.60			
WIR/Outdoor Air	S/S - Timber (hardwood): timber/air gap/fc R4.0	0.90		R4.0	
MASTER/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard	17.20			
BED 2/BATH 1	Timber (hardwood): timber/air gap/plasterboard	0.50			
BED 2/Outdoor Air	S/S - Timber (hardwood): timber/air gap/fc R4.0	11.90		R4.0	
BED 2/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard	1.80			
BED 3/Outdoor Air	S/S - Timber (hardwood): timber/air gap/fc R4.0	11.90		R4.0	
BED 3/GUEST	Timber (hardwood): timber/air gap/plasterboard	1.30			
BED 3/BATH 1	Timber (hardwood): timber/air gap/plasterboard	0.70			
VOID/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard	8.10			
HALL/GUEST	Timber (hardwood): timber/air gap/plasterboard	11.10			
HALL/BATH 1	Timber (hardwood): timber/air gap/plasterboard	5.90			
HALL/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard	17.00			
HALL/GUEST	Timber (hardwood): ceramic tiles/air gap/plasterboard	1.00			Ceramic tile
HALL/Outdoor Air	S/S - Timber (hardwood): ceramic tiles/air gap/fc R4.0	3.20		R4.0	Ceramic tile
ROOF SPACE/GR BED 1	Plasterboard 13 mm + R4.0 bulk insulation	13.20		R4.0	
ROOF SPACE/HALL	Plasterboard 13 mm + R4.0 bulk insulation	4.10		R4.0	
ROOF SPACE/GALLERY	Plasterboard 13 mm + R4.0 bulk insulation	11.60		R4.0	
ROOF SPACE/GR BATH	Plasterboard 13 mm + R4.0 bulk insulation	3.90		R4.0	

Location	Construction	Area (m <sup>2</sup> )	Sub-floor ventilation (R-value)	Added insulation (R-value)	Covering
GUEST/Ground	225mm waffle pod with 100mm concrete cover timber/bare	13.40		R0.6	
FAMILY/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard	22.70			
FAMILY/LDRY	Timber (hardwood): timber/air gap/plasterboard	3.70			
STORE 2/LDRY	Timber (hardwood): timber/air gap/plasterboard	4.40			

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
GALLERY/ENTRY	Timber (hardwood): timber/air gap/plasterboard		No
GR BED 1/STORE	Timber (hardwood): timber/air gap/plasterboard		No
GALLERY/STORE	Timber (hardwood): timber/air gap/plasterboard		No
BED 2/BATH 1	Timber (hardwood): timber/air gap/plasterboard		No
HALL/BATH 1	Timber (hardwood): timber/air gap/plasterboard		No
BED 3/BATH 1	Timber (hardwood): timber/air gap/plasterboard		No
FAMILY/LDRY	Timber (hardwood): timber/air gap/plasterboard		No
STORE 2/LDRY	Timber (hardwood): timber/air gap/plasterboard		No
ENS/KITCHEN/DINING	Timber (hardwood): ceramic tiles/air gap/plasterboard		No
WIR/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard		No
VOID/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard		No
HALL/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard		No
FAMILY/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard		No
BED 2/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard		No
MASTER/KITCHEN/DINING	Timber (hardwood): timber/air gap/plasterboard		No
ROOF SPACE/GALLERY	Plasterboard 13 mm + R4.0 bulk insulation	R4.0	No
ROOF SPACE/GR BED 1	Plasterboard 13 mm + R4.0 bulk insulation	R4.0	No
ROOF SPACE/GR BATH	Plasterboard 13 mm + R4.0 bulk insulation	R4.0	No
ROOF SPACE/HALL	Plasterboard 13 mm + R4.0 bulk insulation	R4.0	No
HALL/GUEST	Timber (hardwood): timber/air gap/plasterboard		No
BED 3/GUEST	Timber (hardwood): timber/air gap/plasterboard		No
HALL/GUEST	Timber (hardwood): ceramic tiles/air gap/plasterboard		No

## Ceiling penetrations\*

Location	Quantity	Type	Diameter (mm <sup>2</sup> )	Sealed/unsealed
STORE	1	Ceiling exhaust fan	160	Unsealed
KITCHEN/DINING	1	Ceiling exhaust fan	200	Sealed
HALL	1	Ceiling exhaust fan	160	Sealed



## Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
2" METAL ROOF-A021 #E015 © Horiz pitch Colourbond steel roof + Anticon R2.0 insul with R4.0 bulk insul + Plasterb'd ceiling under	R6.0	50	Medium
R/S_ROOF-A031 #3017 © 22.5 deg Colourbond steel roof + Anticon R2.0 insul with no ceiling under	R2.0	50	Medium
BALC_ROOF-B026 #1004 © Framed roof with w/p membrane and tiles-R4.0 bulk ins_pb ceiling under	R4.0	50	Medium
45"METAL ROOF-A011 #E015 © 45 deg Colourbond steel roof + Anticon R2.0 insul with R4.0 bulk insul + Plasterb'd ceiling under	R6.0	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).