# Nationwide House Energy Rating Scheme NatHERS Certificate No. 0005833074-01

Generated on 11 Feb 2022 using BERS Pro v4.4.1.5 (3.21)

### Property

Address

32 Grandview Parade, Mona Vale, NSW ,2103

Lot/DP

Type

NCC Class\*

1A New Dwelling

A000-A903

2/1106194

### Plans

Main Plan Prepared by

John Bohane Architect

### Construction and environmen

# Assessed floor area (m<sup>2</sup>)\*

Conditioned*	304.0
Unconditioned*	19.0
Total	323.0
Garage	0.0

Exposure Type Suburban NatHERS climate zone

# Accredited assessor

Name **Business name** Email Phone Accreditation No. Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

### Assessor Accrediting Organisation

**Design Matters National** 

Declaration of interest

DMN/13/1645

Declaration completed: no conflicts



ENERGY RATING SCHEME

# 68.4 MJ/m<sup>2</sup>

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

> For more information on your dwelling's rating see: www.nathers.gov.au

### Thermal performance

Heating	Cooling
42.5	25.9
MJ/m <sup>2</sup>	MJ/m <sup>2</sup>

### 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=BlbqzcGkD. When using either link, ensure you are visiting 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.

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? 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	SHGC*	Substitution tolerance ranges		
		U-value*	SHGC	SHGC lower limit	SHGC upper limit	
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62	
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	

#### Custom\* windows

Window ID	Window Description	Maximum	SHGC*	Substitution tolerance ranges		
		U-value*		SHGC lower limit	SHGC upper limit	
No Data Availat	ble					



# Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	ALM-002-03 A	n/a	1300	2430	n/a	45	NW	No
Bedroom 1	ALM-002-03 A	n/a	1300	1200	n/a	45	NW	No
Bedroom 1	ALM-002-03 A	n/a	2400	1400	n/a	90	SW	No
Bathroom	ALM-002-03 A	n/a	1100	1800	n/a	45	NE	No
Rumpus	ALM-002-03 A	n/a	2400	4800	n/a	90	SW	No
Entry LG	ALM-002-03 A	n/a	2400	520	n/a	00	SW	No
Kitchen/Living	ALM-002-03 A	n/a	1500	1510	n/a	90	NW	No
Kitchen/Living	ALM-002-03 A	n/a	1500	1320	n/a	90	NW	No
Kitchen/Living	ALM-002-03 A	n/a	2600	4000	n/a	90	NE	No
Kitchen/Living	ALM-002-03 A	n/a	1700	1810	n/a	45	NE	No
Kitchen/Living	ALM-002-03 A	n/a	1850	3600	n/a	00	SW	No
Kitchen/Living	ALM-002-03 A	n/a	1850	1200	n/a	45	SW	No
Kitchen/Living	ALM-002-03 A	n/a	1850	1200	n/a	45	SW	No
Kitchen/Living	ALM-002-03 A	n/a	1650	1160	n/a	45	SW	No
Study/Guest	ALM-002-03 A	n/a	1450	1310	n/a	90	SE	No
Study/Guest	ALM-002-03 A	n/a	1650	915	n/a	00	SW	No
Study/Guest	ALM-002-03 A	n/a	1850	1200	n/a	45	SW	No
Study/Guest	ALM-002-03 A	n/a	1850	1200	n/a	00	SW	No
Family Room	ALM-004-01 A	n/a	2600	2150	n/a	90	NE	No
Family Room	ALM-004-01 A	n/a	2500	4200	n/a	90	NW	Yes
Family Room	ALM-004-01 A	n/a	2500	2320	n/a	90	NW	No
LDRY	ALM-002-03 A	n/a	1450	970	n/a	45	SE	No
WC	ALM-002-03 A	n/a	1450	970	n/a	45	SE	No
Main Bedroom	ALM-001-03 A	n/a	1200	780	n/a	90	NW	No
Main Bedroom	ALM-002-03 A	n/a	1150	3600	n/a	45	SW	No
Main Bedroom	ALM-002-03 A	n/a	1150	1430	n/a	00	SW	No
WIR	ALM-002-03 A	n/a	2040	1300	n/a	45	NE	No
WIR	ALM-002-03 A	n/a	2040	1900	n/a	00	NE	No
Stairs L1	ALM-001-03 A	n/a	1180	780	n/a	90	SE	No
Stairs L1	ALM-002-03 A	n/a	1150	1430	n/a	00	SW	No
ENS	ALM-001-03 A	n/a	1200	780	n/a	90	NW	No
ENS	ALM-002-03 A	n/a	3100	1400	n/a	45	NE	No
ENS	ALM-002-03 A	n/a	2040	2000	n/a	00	NE	No
Entry G	ALM-002-03 A	n/a	1450	1500	n/a	90	SE	No
Bedroom 3	ALM-002-03 A	n/a	800	2400	n/a	45	SE	No
			-					

2.7



0.25

### **Roof window** *type and performance*

Default\* roof windows

VEL-011-02 W

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges					
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit				
No Data Available									
Custom* roof windows									
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges				
	Description	U-value*		SHGC lower limit	SHGC upper limit				

0.24

0.23

### Roof window schedule

Glass

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	VEL-011-02 W	n/a	0	3540	1140	NW	No	No
Entry G	VEL-011-02 W	n/a	0	1140	2360	NW	No	No

### Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Ava	ailable							

### External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry LG	2400	1000	90	SW
Kitchen/Living	1900	600	90	NW
Study/Guest	1900	600	90	SE

# External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.30	Light	Bulk Insulation R1.5	No
EW-2	Fibro Cavity Panel Direct Fix	0.30	Light	Bulk Insulation R2.7	No
EW-3	Brick Veneer	0.30	Light	Bulk Insulation R2.7	No

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Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-4	Fibro Cavity Panel Direct Fix	0.30	Light	Bulk Insulation R2.7	No
EW-5	Cavity Brick	0.30	Light	Bulk Insulation R1.5	No
EW-6	Brick Veneer	0.30	Light	Bulk Insulation R2.7	No

# External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 2	EW-1	2610	3690	NW	100	NO
Bedroom 1	EW-1	2610	3845	NW	100	NO
Bedroom 1	EW-1	2610	3945	SW	2200	YES
Bathroom	EW-1	2610	1745	NW	100	NO
Bathroom	EW-1	2610	3945	NE	0	NO
Rumpus	EW-1	2610	1200	NW	2200	YES
Rumpus	EW-1	2610	1200	SE	1300	YES
Rumpus	EW-1	2610	5200	SW	1000	NO
Entry LG	EW-1	2610	6745	SE	25	NO
Entry LG	EW-2	2610	2345	SW	2200	YES
Kitchen/Living	EW-3	2650	9400	NW	900	NO
Kitchen/Living	EW-3	2650	7995	NE	900	YES
Kitchen/Living	EW-4	2650	5795	SW	1300	NO
Kitchen/Living	EW-4	2650	2000	NW	3000	YES
Kitchen/Living	EW-3	2650	2100	SW	3300	YES
Study/Guest	EW-3	2650	2695	SE	800	NO
Study/Guest	EW-3	2650	1200	SW	3300	YES
Study/Guest	EW-2	2650	2000	SE	2000	YES
Study/Guest	EW-3	2650	2500	SW	1300	NO
Family Room	EW-3	2650	4200	NE	1400	NO
Family Room	EW-6	2650	4845	SE	200	NO
Family Room	EW-3	2650	4195	NW	900	NO
Family Room	EW-5	2650	5095	NW	900	YES
LDRY	EW-3	2650	2345	SE	200	NO
LDRY	EW-3	2650	600	SW	12900	YES
LDRY	EW-5	2700	245	SE	800	YES
WC	EW-5	2650	1745	SE	200	NO
Main Bedroom	EW-4	2300	4495	NW	200	NO
Main Bedroom	EW-4	2300	5095	SW	1000	NO
WIR	EW-4	3100	3195	NE	1300	NO
WIR	EW-4	2300	4195	SE	200	NO
Stairs L1	EW-4	2300	4495	SE	200	NO

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Stairs L1	EW-4	2300	1495	SW	1000	NO
ENS	EW-2	2300	4195	NW	200	NO
ENS	EW-4	3100	3395	NE	1300	NO
Entry G	EW-1	2650	6540	SE	800	NO
Bedroom 3	EW-1	2610	2645	SE	75	NO

# Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		103.00	No insulation
IW-2 - Cavity brick		20.00	No Insulation
IW-3 - Cavity wall, direct fix plasterboard, single gap		104.00	No insulation
IW-4 - Single Skin Brick		33.00	Bulk Insulation, No Air Gap R2

# Floor type

Location	Construction	Area Sub-floor (m²) ventilatior	Added insulation (R-value)	Covering
Bedroom 2	Concrete Slab on Ground 200mm	14.60 None	No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1	Concrete Slab on Ground 200mm	15.20 None	No Insulation	Cork Tiles or Parquetry 8mm
Bathroom	Concrete Slab on Ground 200mm	6.90 None	No Insulation	Ceramic Tiles 8mm
Store	Concrete Slab on Ground 200mm	5.20 None	No Insulation	Cork Tiles or Parquetry 8mm
Rumpus	Concrete Slab on Ground 200mm	42.60 None	No Insulation	Cork Tiles or Parquetry 8mm
Entry LG	Concrete Slab on Ground 200mm	11.10 None	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bedroom 2	Timber Above Plasterboard 19mm	15.10	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bedroom	Timber Above Plasterboard 19mm	15.50	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bathroom	Timber Above Plasterboard 19mm	6.80	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Store	Timber Above Plasterboard 19mm	5.40	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Rumpus	Timber Above Plasterboard 19mm	26.40	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bedroom 3	Timber Above Plasterboard 19mm	2.70	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Rumpus	Timber Above Plasterboard 19mm	3.60	No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living	Suspended Timber Floor 19mm	6.90 Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Study/Guest/Rumpus	Timber Above Plasterboard 19mm	5.70	No Insulation	Cork Tiles or Parquetry 8mm
Study/Guest/Entry LG	Timber Above Plasterboard 19mm	6.30	No Insulation	Cork Tiles or Parquetry 8mm
Study/Guest	Suspended Timber Floor 19mm	3.30 Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm



Location	Construction	Area Sub-floor (m) ventilatio	Added insulation n (R-value)	Covering
Family Room	Suspended Timber Floor 19mm	19.40 Enclosed	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Family Room/Rumpus	Timber Above Plasterboard 19mm	6.90	No Insulation	Cork Tiles or Parquetry 8mm
Family Room/Bedroom	<sup>3</sup> Timber Above Plasterboard 19mm	4.10	No Insulation	Cork Tiles or Parquetry 8mm
Family Room	Suspended Timber Floor 19mm	6.10 Enclosed	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
LDRY	Suspended Timber Floor 19mm	6.80 Enclosed	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
WC	Suspended Timber Floor 19mm	4.80 Enclosed	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Main Bedroom/Kitchen/Living	Timber Above Plasterboard 200mm	21.20	No Insulation	Cork Tiles or Parquetry 8mm
Main Bedroom/Family Room	Timber Above Plasterboard 200mm	1.00	No Insulation	Cork Tiles or Parquetry 8mm
WIR/Kitchen/Living	Timber Above Plasterboard 19mm	5.70	No Insulation	Cork Tiles or Parquetry 8mm
WIR/Family Room	Timber Above Plasterboard 19mm	5.00	No Insulation	Cork Tiles or Parquetry 8mm
WIR	Suspended Timber Floor 19mm	1.80 Totally Open	No Insulation	Cork Tiles or Parquetry 8mm
Stairs L1/Study/Guest	Timber Above Plasterboard 200mm	1.60	No Insulation	Cork Tiles or Parquetry 8mm
Stairs L1/Family Room	Timber Above Plasterboard 200mm	4.90	No Insulation	Cork Tiles or Parquetry 8mm
ENS/Kitchen/Living	Timber Above Plasterboard 19mm	11.50	No Insulation	Ceramic Tiles 8mm
ENS	Suspended Timber Floor 19mm	3.00 Totally Open	No Insulation	Ceramic Tiles 8mm
Entry G/Rumpus	Timber Above Plasterboard 200mm	3.70	No Insulation	Cork Tiles or Parquetry 8mm
Entry G/Entry LG	Timber Above Plasterboard 200mm	5.00	No Insulation	Cork Tiles or Parquetry 8mm
Entry G/Bedroom 3	Timber Above Plasterboard 200mm	6.00	No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3	Concrete Slab on Ground 200mm	13.30 None	No Insulation	Cork Tiles or Parquetry 8mm
Rumpus	Concrete Slab on Ground 200mm	3.30 None	No Insulation	Cork Tiles or Parquetry 8mm

# Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 2	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Bathroom	Timber Above Plasterboard	No Insulation	No
Store	Timber Above Plasterboard	No Insulation	No
Rumpus	Timber Above Plasterboard	No Insulation	No
Entry LG	Plasterboard	Bulk Insulation R3	No
Entry LG	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Study/Guest	Plasterboard	Bulk Insulation R3	No
Study/Guest	Timber Above Plasterboard	No Insulation	No
Family Room	Plasterboard	Bulk Insulation R3	No
Family Room	Plasterboard	Bulk Insulation R3	No
Family Room	Timber Above Plasterboard	No Insulation	No
LDRY	Plasterboard	Bulk Insulation R3	No
WC	Plasterboard	Bulk Insulation R3	No
Main Bedroom	Plasterboard	Bulk Insulation R3	No
WIR	Plasterboard	Bulk Insulation R3	No
Stairs L1	Plasterboard	Bulk Insulation R3	No
ENS	Plasterboard	Bulk Insulation R3	No
Entry G	Plasterboard	Bulk Insulation R3	No
Bedroom 3	Timber Above Plasterboard	No Insulation	No
Rumpus	Timber Above Plasterboard	No Insulation	No

# **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter (mm <sup>2</sup> )	Sealed/unsealed	
Bathroom	1	Exhaust Fans	300	Sealed	
Kitchen/Living	1	Exhaust Fans	300	Sealed	
LDRY	1	Exhaust Fans	300	Sealed	
WC	1	Exhaust Fans	300	Sealed	
ENS	1	Exhaust Fans	300	Sealed	

# **Ceiling** fans

Location	Quantity	Diameter (mm)
Bedroom 2	1	1200
Bedroom 1	1	1200
Rumpus	1	1200
Kitchen/Living	1	1200
Study/Guest	1	1200
Family Room	1	1200
Main Bedroom	1	1200

# Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.8	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 softw are 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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Account floor area	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
Assessed floor area	design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including dow nlights, 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.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	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.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category – open	sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m.e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at
	www.nathers.gov.au
<b>Reflective wrap</b> (also know n as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	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
Rooi Willdow	generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar hast goin coofficiant (SLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (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.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical cheding factures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
Vertical shading features	screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).