## **Nationwide House Energy Rating Scheme** NatHERS Certificate No. 0009745464

Generated on 09 Sep 2024 using BERS Pro v4.4.1.5 (3.21)

## **Property**

Unit Main Dw, 26 Bishop Street, Address

Revesby, NSW, 2212

Lot/DP 59/29072

NCC Class\* 1A

Type New Dwelling

#### **Plans**

Main plan n/a Prepared by n/a

#### Construction and environment

Assessed floor area (m2)\* Exposure type

Conditioned\* 220.0 Suburban

Unconditioned\* 52.0 NatHERS climate zone

Total 272.0 56

35.0 Garage

# Thermal performance

Heating Cooling 32.6 24.9

NATIONWIDE

57.4 MJ/m<sup>2</sup>

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

 $MJ/m^2$  $MJ/m^2$ 



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**Assessor Accrediting Organisation** 

**Design Matters National** 

**Declaration of interest** Declaration not completed

## 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=ltACTmecO.

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?

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**

Rated with provisional values for downlig	hts. All downlights:	IC-F /IC-4/ (insulation covered/
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including the control gears/) rated as per AS/NZS standard 60598 and IP (sealed) rated as per BS EN

60529:1992, European IEC 60509:1989.

Rated with colours as per the material schedule/external finishes schedule (solar absorptance is calculated in the

BERS software custom colours tool).

Rated with waffle pod slab.

Rated with tiled ground floor (except the Bed 1).

Rated with ceiling fans 1200mm/as shown on the plans.

Rated with AWS windows.

All windows with obscure glazing are rated with generic products.

All coffer ceiling verticals and walls against the roof-space, to be insulated, with the same insulation as the

ceiling insulation.

Where the roof is extended over an open area such as a deck or carport: A barrier to be installed

within the roof space to separate the space above the zoned part of the house and the space above

the open veranda.

The building fabric, including insulation and air cavity ventilation, must meet the requirements specified in Part H



Energy Efficiency (Volume 2) of the NCC and the ABCB Housing Provisions 10.8 and 13.2. These standards are

essential to ensure proper energy efficiency and compliance in construction practices.

I have modeled the shading in accordance with NatHERS principles

## Window and glazed door type and performance

#### **Default\* windows**

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
willdow ib	Description	U-value*	эндс	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	
TIM-001-01 W	TIM-001-01 W Timber A SG Clear	5.4	0.56	0.53	0.59	

#### **Custom\* windows**

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
	Description	U-value*	0.100	SHGC lower limit	SHGC upper limit	
AWS-001-01 A	AWS-001-01 A 502/504 AI	6.4	0.73	0.69	0.77	
AVV3-001-01 A	Sliding Window SG 3Clr	0.4	0.73	0.09	0.77	
	AWS-001-05 A 502/504 AI					
AWS-001-05 A	Sliding Window SG	4.6	0.45	0.43	0.47	
	6.38CP					
AWS-011-06 A	AWS-011-06 A 541/542 AI	4.4	0.45	0.43	0.47	
AVV3-011-00 A	Sliding Door SG 6.38CP	4.4	0.43	0.43	0.47	
AWS-011-01 A	AWS-011-01 A 541/542 AI	6.2	0.70	0.69	0.76	
AVV5-011-01A	Sliding Door SG 5Clr	6.2	0.72	0.68	0.76	
	AWS-066-02 A RES					
AWS-066-02 A	SERIES 516 FIXED	3.9	0.47	0.45	0.49	
AVVS-000-02 A	WINDOW SG	3.9	0.47			
	638ComPlyNtl					

## Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	AWS-001-01 A	n/a	600	1810	n/a	45	W	No
Pantry-GF	AWS-001-01 A	n/a	600	1210	n/a	45	W	No
Ktch/Din/Fam	AWS-001-01 A	n/a	600	2410	n/a	45	W	No
Ktch/Din/Fam	AWS-001-05 A	n/a	2100	2410	n/a	30	N	No
Ktch/Din/Fam	AWS-001-01 A	n/a	600	2410	n/a	60	N	No
Ktch/Din/Fam	AWS-011-06 A	n/a	2400	2410	n/a	60	N	No
Ktch/Din/Fam	AWS-001-01 A	n/a	2100	850	n/a	30	Е	No



	ID	Window no.	(mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Ktch/Din/Fam	AWS-001-01 A	n/a	2100	850	n/a	30	Е	No
Bed 1-FF	AWS-001-01 A	n/a	1500	1810	n/a	45	Е	No
Bath-GF	ALM-002-01 A	n/a	600	1450	n/a	10	Е	No
Lounge-GF	AWS-001-01 A	n/a	2100	1810	n/a	30	Е	No
Lounge-GF	AWS-001-01 A	n/a	2100	2410	n/a	30	S	No
Entry-GF	TIM-001-01 W	n/a	1440	1144	n/a	90	S	No
M.Bed-FF	AWS-001-01 A	n/a	900	2410	n/a	10	W	No
M.Bed-FF	AWS-011-01 A	n/a	2400	3610	n/a	60	S	No
WIR/M.Bed-FF	ALM-002-01 A	n/a	2100	1210	n/a	00	S	No
ENS/M.Bed-FF	ALM-002-01 A	n/a	900	1210	n/a	10	W	No
Bed 2-FF	AWS-001-01 A	n/a	900	2410	n/a	10	E	No
Bed 2-FF	AWS-001-01 A	n/a	2100	2410	n/a	10	S	No
Bath-FF	ALM-002-01 A	n/a	900	1210	n/a	10	E	No
Bed 3-FF	AWS-001-01 A	n/a	900	2410	n/a	10	E	No
Bed 4-FF	AWS-001-01 A	n/a	900	2410	n/a	10	W	No
Bed 4-FF	AWS-001-01 A	n/a	1500	1810	n/a	10	N	No
Rumpus-FF	AWS-066-02 A	n/a	1500	2410	n/a	00	N	No
Rumpus-FF	AWS-001-05 A	n/a	1500	2410	n/a	10	N	No
Rumpus-FF	AWS-001-05 A	n/a	900	2410	n/a	10	E	No

## Roof window type and performance

#### **Default\* roof windows**

Window ID Window Maximum S  Description U-value*	SHGC*	Substitution tolerance ranges			
willdow iD	Description	U-value*	эпис	SHGC lower limit	SHGC upper limit
No Data Availa	phlo				

#### **Custom\* roof windows**

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
willdow ib	Description	U-value*	value* SHGC lower limit SHGC up		SHGC upper limit	
No Data Availa	ble					



#### 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 (m²) Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Av	ailable						

#### External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
Garage	2400	1034	90	N	
Garage	2400	5410	90	S	
Laundry-GF	2400	850	90	W	
Entry-GF	900	1144	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	0.83	Dark	Anti-glare foil with bulk no gap R2.5	No
EW-2	Single Skin Brick	0.83	Dark	No insulation	No



## External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	3290	5600	W	500	NO
Garage	EW-1	3290	2000	N	500	YES
Garage	EW-2	3290	6495	S	1100	NO
Laundry-GF	EW-1	2940	2090	W	100	YES
Pantry-GF	EW-1	2940	1790	W	100	NO
Ktch/Din/Fam	EW-1	2940	4495	W	100	NO
Ktch/Din/Fam	EW-1	2940	10000	N	3300	NO
Ktch/Din/Fam	EW-1	2940	4495	E	100	NO
Bed 1-FF	EW-1	2940	4290	E	100	NO
Bath-GF	EW-1	2940	2090	E	100	NO
Lounge-GF	EW-1	2940	4095	E	100	NO
Lounge-GF	EW-1	2940	3700	S	500	NO
Lounge-GF	EW-1	2940	1000	W	8800	YES
Entry-GF	EW-1	2940	1790	S	2000	YES
M.Bed-FF	EW-1	2740	5595	W	500	NO
M.Bed-FF	EW-1	2740	4595	S	1500	NO
WIR/M.Bed-FF	EW-1	2740	1690	S	2500	YES
ENS/M.Bed-FF	EW-1	2740	2690	W	500	NO
Bed 2-FF	EW-1	2740	1000	W	6800	YES
Bed 2-FF	EW-1	2740	3895	E	500	NO
Bed 2-FF	EW-1	2740	3700	S	500	NO
Bath-FF	EW-1	2740	2890	E	500	NO
Bed 3-FF	EW-1	2740	3690	E	500	NO
Bed 4-FF	EW-1	2740	4495	W	500	NO
Bed 4-FF	EW-1	2740	3295	N	500	NO
Rumpus-FF	EW-1	2740	6695	N	500	NO
Rumpus-FF	EW-1	2740	4495	Е	500	NO
WIR/Bed 4-FF	EW-1	2740	1190	W	500	NO



## Internal wall type

#### Wall ID

## Wall type Area (m²) Bulk insulation

IW-1 - Cavity wall, direct fix plasterboard, single gap	33.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap	239.00	No insulation

## Floor type

Location	Construction	Area Sub-floor (m <sup>2</sup> ) ventilation	Added insulation (R-value)	Covering
Garage	Waffle pod slab 225 mm 85mm	35.30 None	Waffle Pod 225mm	Bare
Laundry-GF	Waffle pod slab 225 mm 85mm	4.50 None	Waffle Pod 225mm	Ceramic Tiles 8mm
Pantry-GF	Waffle pod slab 225 mm 85mm	3.90 None	Waffle Pod 225mm	Ceramic Tiles 8mm
Ktch/Din/Fam	Waffle pod slab 225 mm 85mm	58.90 None	Waffle Pod 225mm	Ceramic Tiles 8mm
Bed 1-FF	Waffle pod slab 225 mm 85mm	15.40 None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Bath-GF	Waffle pod slab 225 mm 85mm	5.10 None	Waffle Pod 225mm	Ceramic Tiles 8mm
Hall to Bed-GF	Waffle pod slab 225 mm 85mm	3.20 None	Waffle Pod 225mm	Ceramic Tiles 8mm
Lounge-GF	Waffle pod slab 225 mm 85mm	14.90 None	Waffle Pod 225mm	Ceramic Tiles 8mm
Entry-GF	Waffle pod slab 225 mm 85mm	9.80 None	Waffle Pod 225mm	Ceramic Tiles 8mm
M.Bed-FF/Garage	Timber Above Plasterboard 19mm	24.10	Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
M.Bed-FF/Entry-GF	Timber Above Plasterboard 19mm	1.20	No Insulation	Carpet+Rubber Underlay 18mm
WIR/M.Bed-FF/Entry-GF	Timber Above Plasterboard 19mm	5.50	No Insulation	Carpet+Rubber Underlay 18mm
ENS/M.Bed-FF/Laundry- GF	Timber Above Plasterboard 19mm	4.60	No Insulation	Ceramic Tiles 8mm
ENS/M.Bed-FF/Pantry-GF	Timber Above Plasterboard 19mm	1.30	No Insulation	Ceramic Tiles 8mm
Bed 2-FF/Lounge-GF	Timber Above Plasterboard 19mm	13.50	No Insulation	Carpet+Rubber Underlay 18mm
Bath-FF/Bed 1-FF	Timber Above Plasterboard 19mm	1.50	No Insulation	Ceramic Tiles 8mm
Bath-FF/Bath-GF	Timber Above Plasterboard 19mm	5.20	No Insulation	Ceramic Tiles 8mm



Location	Construction	Area Sub-floor (m²) ventilation	Added insulation (R-value)	Covering
Bath-FF/Lounge-GF	Timber Above Plasterboard 19mm	0.50	No Insulation	Ceramic Tiles 8mm
Bed 3-FF/Bed 1-FF	Timber Above Plasterboard 19mm	13.10	No Insulation	Carpet+Rubber Underlay 18mm
Bed 4-FF/Ktch/Din/Fam	Timber Above Plasterboard 19mm	14.50	No Insulation	Carpet+Rubber Underlay 18mm
Rumpus-FF/Ktch/Din/Fam	Timber Above Plasterboard 19mm	29.60	No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs- FF/Ktch/Din/Fam	Timber Above Plasterboard 19mm	13.90	No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs-FF/Bed 1-FF	Timber Above Plasterboard 19mm	0.70	No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs-FF/Hall to Bed- GF	Timber Above Plasterboard 19mm	3.30	No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs-FF/Lounge-GF	Timber Above Plasterboard 19mm	0.80	No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs-FF/Entry-GF	Timber Above Plasterboard 19mm	3.20	No Insulation	Carpet+Rubber Underlay 18mm
WIR/Bed 4-FF/Pantry-GF	Timber Above Plasterboard 19mm	2.50	No Insulation	Carpet+Rubber Underlay 18mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R2.5	No
Garage	Timber Above Plasterboard	Bulk Insulation R2.5	No
Laundry-GF	Timber Above Plasterboard	No Insulation	No
Pantry-GF	Timber Above Plasterboard	No Insulation	No
Ktch/Din/Fam	Timber Above Plasterboard	No Insulation	No
Bed 1-FF	Timber Above Plasterboard	No Insulation	No
Bath-GF	Timber Above Plasterboard	No Insulation	No
Hall to Bed-GF	Timber Above Plasterboard	No Insulation	No
Lounge-GF	Timber Above Plasterboard	No Insulation	No
Entry-GF	Timber Above Plasterboard	No Insulation	No
M.Bed-FF	Plasterboard	Bulk Insulation R5	No
WIR/M.Bed-FF	Plasterboard	Bulk Insulation R5	No
ENS/M.Bed-FF	Plasterboard	Bulk Insulation R5	No



Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bed 2-FF	Plasterboard	Bulk Insulation R5	No
Bath-FF	Plasterboard	Bulk Insulation R5	No
Bed 3-FF	Plasterboard	Bulk Insulation R5	No
Bed 4-FF	Plasterboard	Bulk Insulation R5	No
Rumpus-FF	Plasterboard	Bulk Insulation R5	No
Hall/Stairs-FF	Plasterboard	Bulk Insulation R5	No
WIR/Bed 4-FF	Plasterboard	Bulk Insulation R5	No

## Ceiling penetrations\*

Location	Quantity	Туре	Diameter (mm)	Sealed/unsealed
Laundry-GF	1	Downlights - LED	50	Sealed
Laundry-GF	1	Exhaust Fans	300	Sealed
Pantry-GF	1	Downlights - LED	50	Sealed
Ktch/Din/Fam	19	Downlights - LED	50	Sealed
Ktch/Din/Fam	1	Exhaust Fans	300	Sealed
Bed 1-FF	6	Downlights - LED	50	Sealed
Bath-GF	2	Downlights - LED	50	Sealed
Bath-GF	1	Exhaust Fans	300	Sealed
Hall to Bed-GF	1	Downlights - LED	50	Sealed
Lounge-GF	6	Downlights - LED	50	Sealed
Entry-GF	4	Downlights - LED	50	Sealed
M.Bed-FF	10	Downlights - LED	50	Sealed
WIR/M.Bed-FF	2	Downlights - LED	50	Sealed
ENS/M.Bed-FF	2	Downlights - LED	50	Sealed
ENS/M.Bed-FF	1	Exhaust Fans	300	Sealed
Bed 2-FF	5	Downlights - LED	50	Sealed
Bath-FF	2	Downlights - LED	50	Sealed
Bath-FF	1	Exhaust Fans	300	Sealed
Bed 3-FF	5	Downlights - LED	50	Sealed
			<u> </u>	<u> </u>



Location	Quantity	Туре	Diameter (mm)	Sealed/unsealed
Bed 4-FF	6	Downlights - LED	50	Sealed
Rumpus-FF	12	Downlights - LED	50	Sealed
Hall/Stairs-FF	9	Downlights - LED	50	Sealed
WIR/Bed 4-FF	1	Downlights - LED	50	Sealed

## Ceiling fans

Location	Quantity	Diameter (mm)
Bed 1-FF	1	1200
M.Bed-FF	1	1200
Bed 2-FF	1	1200
Bed 3-FF	1	1200
Bed 4-FF	1	1200
Rumpus-FF	1	1200

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Roof Tiles	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.85	Dark
Roof Tiles	Foil, Gap Above, Reflective Side Down, Anti-glare Up	0.85	Dark



### **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**

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed 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 design documents.
Ceiling penetrations	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.
Conditioned	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.
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).
Exposure category – open	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).
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 (NCC) Class	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 www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	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 www.nathers.gov.au
Reflective wrap (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.
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 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 heat gain coefficient (SHGC)	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.
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 shading features	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).