

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0006650758-03

Generated on 19 Apr 2022 using BERS Pro v4.4.1.5 (3.21)

Property

Address 24 Garnet Road , Pearl Beach , NSW , 2256
Lot/DP 61/14817
NCC Class* 1A
Type New Dwelling

Plans

Main Plan 1430
Prepared by Delve Design

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 260.0	Suburban
Unconditioned* 14.0	NatHERS climate zone
Total 274.0	15
Garage 0.0	



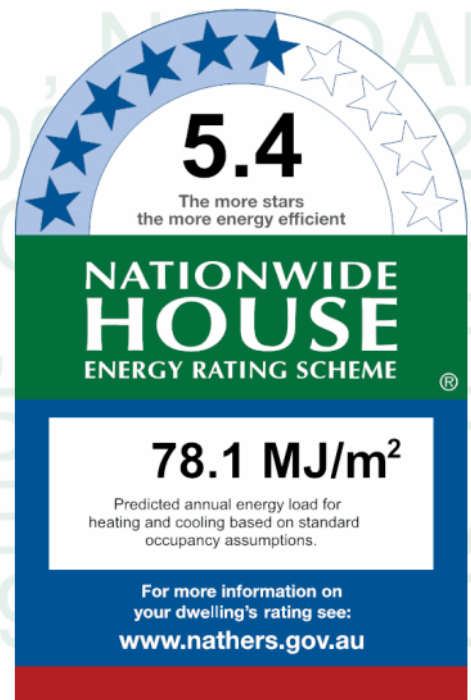
Accredited assessor

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



Thermal performance

Heating	Cooling
46.3	31.8
MJ/m²	MJ/m²

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=vEEaGFluV.

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

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.

I have modeled the shading in accordance with NatHERS principles

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
TIM-002-01 W	TIM-002-01 W Timber B SG Clear	5.4	0.63	0.60	0.66
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 Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
TND-001-23 A	TND-001-23 A Trend AI Sliding Window DG LightBridge_ClrSI_638-8-4	3.5	0.43	0.41	0.45
BRZ-003-15 A	BRZ-003-15 A 52mm Altair Louvre Window System SG 6mm Planibel G	4.4	0.57	0.54	0.60

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
TND-053-73 W	TND-053-73 W Trend Thermal Sliding Door DG LightBridge_ClrPrvSI_638-12-5	2.3	0.38	0.36	0.40
TND-031-07 A	TND-031-07 A Trend AI Internal offset glazed window DG LightBridge_ClrSI_638-8-4	2.5	0.48	0.46	0.50

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
BED 4	TND-001-23 A	n/a	1200	3700	n/a	45	NE	Yes
BED 4	TND-001-23 A	n/a	1200	1200	n/a	45	NW	Yes
BATH 1	BRZ-003-15 A	n/a	1800	610	n/a	90	N	No
BED 3	TND-001-23 A	n/a	1200	1200	n/a	45	NW	Yes
BED 3	TND-001-23 A	n/a	1200	1800	n/a	45	NE	Yes
BED 3	TND-053-73 W	n/a	2400	3200	n/a	90	SE	No
ENTRY CORRIDOR	TND-053-73 W	n/a	2400	1500	n/a	90	NE	No
ENTRY CORRIDOR	TND-031-07 A	n/a	2940	2090	n/a	00	SE	No
ENTRY CORRIDOR	TIM-002-01 W	n/a	2400	400	n/a	00	NW	No
ENTRY CORRIDOR	TIM-002-01 W	n/a	2400	400	n/a	00	NW	No
BED 1	BRZ-003-15 A	n/a	2400	610	n/a	90	SE	No
BED 1	TND-001-23 A	n/a	1500	1810	n/a	45	SW	No
BATH 2	BRZ-003-15 A	n/a	1500	1810	n/a	45	SW	No
BED 2	TND-001-23 A	n/a	1500	1810	n/a	45	SW	No
BED 2	BRZ-003-15 A	n/a	2400	610	n/a	90	NW	No
BUTLERS PANTRY	TIM-001-01 W	n/a	2400	980	n/a	90	SW	No
BUTLERS PANTRY	TIM-002-01 W	n/a	540	980	n/a	00	SW	No
KITCHEN DINING	TND-053-73 W	n/a	2400	6368	n/a	80	NE	No
KITCHEN DINING	TND-053-73 W	n/a	2400	3890	n/a	80	NE	No
KITCHEN DINING	TND-031-07 A	n/a	540	6368	n/a	00	NE	No
KITCHEN DINING	TND-031-07 A	n/a	540	3890	n/a	00	NE	No
KITCHEN DINING	TND-001-23 A	n/a	600	2410	n/a	45	SW	No
KITCHEN DINING	TND-001-23 A	n/a	600	2410	n/a	45	SW	No
KITCHEN DINING	BRZ-003-15 A	n/a	2940	1000	n/a	90	SW	No
MASTER BED	TND-001-23 A	n/a	1200	5000	n/a	45	NE	No
MASTER WIR 2	BRZ-003-15 A	n/a	600	2400	n/a	90	SW	No
ENSUITE	TND-001-23 A	n/a	600	1210	n/a	45	SW	No
ENSUITE	BRZ-003-15 A	n/a	2400	2100	n/a	66	SW	No
MASTER BED	BRZ-003-15 A	n/a	2400	610	n/a	90	SW	No
FAMILY	TND-031-07 A	n/a	2155	5000	n/a	00	NE	No
FAMILY	BRZ-003-15 A	n/a	3500	1200	n/a	30	SE	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitch Din Void	TND-031-07 A	n/a	1200	4675	n/a	00	NE	No
Kitch Din Void	TND-031-07 A	n/a	1200	3685	n/a	00	SE	No
Kitch Din Void	TND-031-07 A	n/a	1200	3200	n/a	00	SW	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
VEL-011-01 W	Glass	2.6	0.24	0.23	0.25

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
BATH 1	VEL-011-01 W	n/a	0	870	870	SE	No	No
ENSUITE	VEL-011-01 W	n/a	0	665	970	SW	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 (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
ENTRY CORRIDOR	2340	920	90	NW

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
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Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.85	Dark	Bulk Insulation 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)
BED 4	EW-1	2940	3995	NE	300	NO
BED 4	EW-1	2940	1600	SW	4200	YES
BED 4	EW-1	2940	2500	NW	6200	NO
BED 4 WIR	EW-1	2940	1290	NE	100	NO
BATH 1	EW-1	2940	395	NE	100	YES
BATH 1	EW-1	2940	2404	N	71	YES
BATH 1	EW-1	2940	595	NE	100	YES
BED 3	EW-1	2940	2400	NW	100	YES
BED 3	EW-1	2940	4400	NE	100	NO
BED 3	EW-1	2940	3495	SE	2800	NO
BED 3 WIR	EW-1	2940	1390	SE	2800	YES
ENTRY CORRIDOR	EW-1	2940	1600	NE	5000	YES
ENTRY CORRIDOR	EW-1	2940	2200	SE	11700	YES
ENTRY CORRIDOR	EW-1	2400	1890	NW	9000	YES
BED 1 WIR	EW-1	2940	1190	NW	9000	NO
BED 1	EW-1	2940	1000	SE	0	YES
BED 1	EW-1	2940	3500	SW	100	NO
BED 1	EW-1	2940	2500	NW	100	NO
BED 1	EW-1	2940	1095	NW	9000	NO
BATH 2	EW-1	2940	2190	SW	1100	YES
BED 2	EW-1	2940	3595	SW	100	NO
BED 2	EW-1	2940	1000	NW	5800	YES
BUTLERS PANTRY	EW-1	2940	3090	SW	100	NO
KITCHEN DINING	EW-1	2940	11595	NE	1200	YES
KITCHEN DINING	EW-1	2940	600	SE	100	NO
KITCHEN DINING	EW-1	3390	5600	SE	100	NO
KITCHEN DINING	EW-1	3390	5000	SW	100	NO
KITCHEN DINING	EW-1	2940	6595	SW	100	NO
MASTER BED	EW-1	2700	6395	NE	300	NO
MASTER BED	EW-1	2700	4395	NW	100	NO
MASTER WIR 2	EW-1	2700	2995	SW	100	YES
MASTER WIR 2	EW-1	2700	1495	NW	100	NO
ENSUITE	EW-1	2700	3795	SW	100	NO
ENSUITE	EW-1	2700	1500	NW	100	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
MASTER BED	EW-1	2700	1690	SW	100	NO
FAMILY	EW-1	2960	5995	NE	400	NO
FAMILY	EW-1	4225	2200	SE	400	YES
FAMILY	EW-1	2700	3890	SW	100	NO
Kitch Din Void	EW-1	2700	6495	NE	300	YES
Kitch Din Void	EW-1	2700	5200	SE	300	NO
Kitch Din Void	EW-1	2700	6495	SW	100	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		203.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		50.00	Bulk Insulation, No Air Gap R2.5

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 4	Concrete Slab on Ground 100mm	9.80	None	No Insulation	Carpet+Rubber Underlay 18mm
BED 4 WIR	Concrete Slab on Ground 100mm	1.60	None	No Insulation	Carpet+Rubber Underlay 18mm
BATH 1	Concrete Slab on Ground 100mm	5.90	None	No Insulation	Ceramic Tiles 8mm
BED 3	Suspended Concrete Slab 150mm	16.60	Enclosed	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
BED 3 WIR	Suspended Concrete Slab 150mm	4.30	Enclosed	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
ENTRY CORRIDOR	Concrete Slab on Ground 100mm	16.00	None	No Insulation	Ceramic Tiles 8mm
ENTRY CORRIDOR	Suspended Concrete Slab 150mm	22.40	Totally Open	No Insulation	Bare
BED 1 WIR	Concrete Slab on Ground 100mm	2.60	None	No Insulation	Carpet+Rubber Underlay 18mm
BED 1	Concrete Slab on Ground 100mm	13.50	None	No Insulation	Carpet+Rubber Underlay 18mm
BATH 2	Concrete Slab on Ground 100mm	7.90	None	No Insulation	Ceramic Tiles 8mm
BED 2	Suspended Concrete Slab 150mm	15.20	Enclosed	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
POWDER	Suspended Concrete Slab 150mm	2.40	Enclosed	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
BUTLERS PANTRY	Suspended Concrete Slab 150mm	9.30	Enclosed	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
KITCHEN DINING	Suspended Concrete Slab 150mm	73.90	Enclosed	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
MASTER BED/BED 4	Timber Above Plasterboard 19mm	4.00		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BED 4 WIR	Timber Above Plasterboard 19mm	0.80		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BATH 1	Timber Above Plasterboard 19mm	1.60		No Insulation	Carpet+Rubber Underlay 18mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
MASTER BED/ENTRY CORRIDOR	Timber Above Plasterboard 19mm	17.30		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BED 1 WIR	Timber Above Plasterboard 19mm	1.90		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BED 1	Timber Above Plasterboard 19mm	0.90		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BATH 2	Timber Above Plasterboard 19mm	1.70		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BED 2	Timber Above Plasterboard 19mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
MASTER WIR 2/BED 1 WIR	Timber Above Plasterboard 19mm	0.90		No Insulation	Carpet+Rubber Underlay 18mm
MASTER WIR 2/BED 1	Timber Above Plasterboard 19mm	3.40		No Insulation	Carpet+Rubber Underlay 18mm
ENSUITE/BED 1	Timber Above Plasterboard 19mm	1.40		No Insulation	Ceramic Tiles 8mm
ENSUITE/BATH 2	Timber Above Plasterboard 19mm	6.40		No Insulation	Ceramic Tiles 8mm
ENSUITE/BED 2	Timber Above Plasterboard 19mm	3.20		No Insulation	Ceramic Tiles 8mm
MASTER BED/ENTRY CORRIDOR	Timber Above Plasterboard 19mm	1.30		No Insulation	Carpet+Rubber Underlay 18mm
MASTER BED/BED 2	Timber Above Plasterboard 19mm	5.30		No Insulation	Carpet+Rubber Underlay 18mm
FAMILY/ENTRY CORRIDOR	Timber Above Plasterboard 19mm	20.20		No Insulation	Carpet+Rubber Underlay 18mm
FAMILY/BED 2	Timber Above Plasterboard 19mm	2.50		No Insulation	Carpet+Rubber Underlay 18mm
FAMILY/POWDER	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
FAMILY/BUTLERS PANTRY	Timber Above Plasterboard 19mm	6.60		No Insulation	Carpet+Rubber Underlay 18mm
FAMILY/KITCHEN DINING	Timber Above Plasterboard 19mm	2.20		No Insulation	Carpet+Rubber Underlay 18mm
Kitch Din Void/KITCHEN DINING	Timber Above Plasterboard 19mm	33.60		No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
BED 4	Plasterboard	Bulk Insulation R6	No
BED 4	Timber Above Plasterboard	No Insulation	No
BED 4 WIR	Plasterboard	Bulk Insulation R6	No
BED 4 WIR	Timber Above Plasterboard	No Insulation	No
BATH 1	Plasterboard	Bulk Insulation R6	No
BATH 1	Timber Above Plasterboard	No Insulation	No
BED 3	Plasterboard	Bulk Insulation R6	No
BED 3 WIR	Plasterboard	Bulk Insulation R6	No
ENTRY CORRIDOR	Timber Above Plasterboard	No Insulation	No
BED 1 WIR	Timber Above Plasterboard	No Insulation	No
BED 1	Plasterboard	Bulk Insulation R6	No
BED 1	Timber Above Plasterboard	No Insulation	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
BATH 2	Timber Above Plasterboard	No Insulation	No
BED 2	Plasterboard	Bulk Insulation R6	No
BED 2	Timber Above Plasterboard	No Insulation	No
POWDER	Timber Above Plasterboard	No Insulation	No
BUTLERS PANTRY	Plasterboard	Bulk Insulation R6	No
BUTLERS PANTRY	Timber Above Plasterboard	No Insulation	No
KITCHEN DINING	Plasterboard	Bulk Insulation R6	No
KITCHEN DINING	Timber Above Plasterboard	No Insulation	No
MASTER BED	Plasterboard	Bulk Insulation R6	No
MASTER WIR 2	Plasterboard	Bulk Insulation R6	No
ENSUITE	Plasterboard	Bulk Insulation R6	No
MASTER BED	Plasterboard	Bulk Insulation R6	No
FAMILY	Plasterboard	Bulk Insulation R6	No
Kitch Din Void	Plasterboard	Bulk Insulation R6	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
BATH 1	1	Exhaust Fans	300	Sealed
BATH 2	1	Exhaust Fans	300	Sealed
POWDER	1	Exhaust Fans	300	Sealed
ENSUITE	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 4	1	1200
BED 3	1	1200
BED 1	1	1200
BED 2	1	1200
KITCHEN DINING	2	1200
MASTER BED	1	1200
FAMILY	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	0.30	Light

Explanatory notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

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 10m 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).