

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008943151-02

Generated on 27 May 2024 using BERS Pro v4.4.1.5 (3.21)

Property

Address 34 Alleyne Avenue,
North Narrabeen , NSW , 2101

Lot/DP 25/7593

NCC Class* 1A

Type New Dwelling

Plans

Main plan 2186

Prepared by JC

Construction and environment

Assessed floor area (m²)*	Exposure type
Conditioned* 218.0	Suburban
Unconditioned* 63.0	NatHERS climate zone
Total 281.0	56
Garage 42.0	



Accredited assessor

Name Ian Fry

Business name Frys Energywise

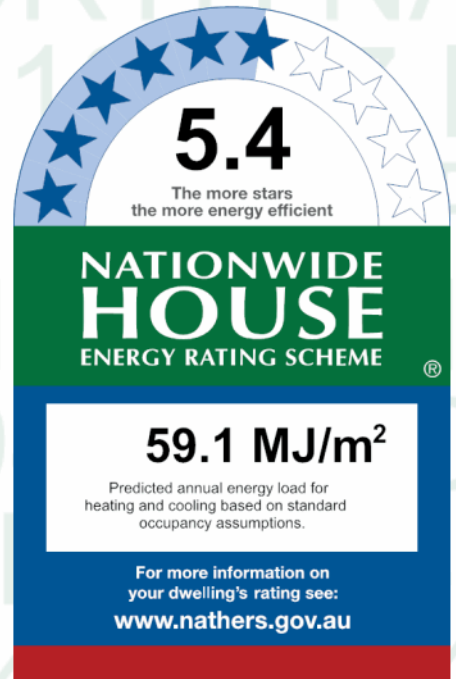
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Phone 02 9899 2825

Accreditation No. DMN/12/1441

Assessor Accrediting Organisation Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
39.0	20.1
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=sfowqmFSt. 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
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
WID-012-11 A	WID-012-11 A				
	Aluminium Awning	4.8	0.54	0.51	0.57
	Window SG 6mmCS				

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
WID-012-05 A	WID-012-05 A Aluminium Awning Window SG 6mmCS	6.2	0.57	0.54	0.60
WID-005-13 A	WID-005-13 A AI Residential Internal Sliding Door SG 6CS_Clr	4.7	0.60	0.57	0.63
WID-006-13 A	WID-006-13 A AI Residential Sliding Window SG 6CS_Clr	4.9	0.62	0.59	0.65
WID-013-02 A	WID-013-02 A Aluminium Awning Window DG 4/12/4ET	3.4	0.54	0.51	0.57
WID-006-01 A	WID-006-01 A AI Residential Sliding Window SG 3mm Clear	6.4	0.76	0.72	0.80
WID-012-04 A	WID-012-04 A Aluminium Awning Window SG 4mmClr	6.4	0.64	0.61	0.67

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Dining	WID-012-11 A	n/a	600	2700	n/a	00	W	No
Kitchen/Dining	WID-012-05 A	n/a	2000	900	n/a	34	E	No
Kitchen/Dining	WID-012-05 A	n/a	2000	900	n/a	34	E	No
Kitchen/Dining	WID-005-13 A	n/a	2400	3200	n/a	45	S	No
Kitchen/Dining	WID-005-13 A	n/a	2400	2700	n/a	45	E	No
Kitchen/Dining	WID-006-13 A	n/a	2000	2700	n/a	45	S	No
MEDIA	WID-006-13 A	n/a	900	2700	n/a	45	E	No
OFFICE	WID-013-02 A	n/a	2000	2700	n/a	34	N	No
OFFICE	WID-006-13 A	n/a	2400	1600	n/a	45	E	No
Kitchen/Dining	WID-012-11 A	n/a	300	1600	n/a	00	W	No
GARAGE WORKSHOP	WID-006-01 A	n/a	900	1600	n/a	45	W	No
GARAGE WORKSHOP	WID-012-04 A	n/a	600	4800	n/a	00	N	No
BED 4	WID-006-13 A	n/a	900	2400	n/a	10	W	No
BED 4	WID-006-13 A	n/a	600	2200	n/a	10	S	No

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
BED 3	WID-006-13 A	n/a	600	2200	n/a	10	S	No
ENS 3	WID-006-01 A	n/a	900	600	n/a	45	E	No
ENS 3	WID-012-04 A	n/a	600	1200	n/a	00	S	No
BED 2	WID-006-13 A	n/a	860	2650	n/a	10	E	No
ENSUITE	WID-012-04 A	n/a	600	900	n/a	00	E	No
ENSUITE	WID-012-04 A	n/a	1500	900	n/a	90	E	No
MASTER OFFICE	WID-012-11 A	n/a	1400	2700	n/a	45	N	No
MASTER	WID-012-11 A	n/a	1400	900	n/a	10	N	No
MASTER	WID-012-11 A	n/a	1200	1600	n/a	10	N	No
MASTER WIR	WID-012-11 A	n/a	1400	900	n/a	90	N	No
BED 5	WID-006-13 A	n/a	900	2200	n/a	10	W	No
UF HALL	WID-012-11 A	n/a	1800	1600	n/a	00	W	No
Powder	WID-006-01 A	n/a	400	1600	n/a	45	E	No
Butlers	WID-012-11 A	n/a	600	1200	n/a	00	W	No
Ensuite 4	WID-006-13 A	n/a	600	1200	n/a	10	W	No
Bathroom	WID-006-01 A	n/a	1000	1600	n/a	10	E	No
Bathroom	WID-012-04 A	n/a	600	610	n/a	00	E	No
Void	WID-012-11 A	n/a	2200	2400	n/a	00	E	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight type and performance

Skylight ID	Skylight description
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
Kitchen/Dining	2340	1200	90	N
GARAGE WORKSHOP	2400	4810	90	N
Laundry	2340	820	90	E

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.30	Light	Bulk Insulation R2.5	No
EW-2	Brick Veneer	0.30	Light	No insulation	No
EW-3	Single Skin Brick	0.30	Light	No insulation	No
EW-4	Fibro Cavity Panel Direct Fix	0.30	Light	Bulk Insulation R2.5	No
EW-5	Brick Veneer	0.30	Light	Bulk Insulation R2.5	No
EW-6	Fibro Cavity Panel Direct Fix	0.30	Light	Bulk Insulation R2.5	No
EW-7	Brick Veneer	0.50	Medium	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)
Kitchen/Dining	EW-1	2750	4395	W	100	NO
Kitchen/Dining	EW-1	2750	3696	E	150	NO
Kitchen/Dining	EW-1	2750	4200	S	3500	YES
Kitchen/Dining	EW-1	2750	3500	E	4400	YES
Kitchen/Dining	EW-1	2750	4600	S	0	NO
MEDIA	EW-1	2750	3790	E	100	NO
OFFICE	EW-1	2750	900	W	100	YES
OFFICE	EW-1	2750	3500	N	100	NO
OFFICE	EW-1	2750	2595	E	100	NO
Kitchen/Dining	EW-1	2750	2190	W	100	YES
Kitchen/Dining	EW-1	2750	2190	N	100	YES
GARAGE WORKSHOP	EW-2	4122	2300	S	100	YES
GARAGE WORKSHOP	EW-2	4122	7800	W	100	NO
GARAGE WORKSHOP	EW-3	4122	5495	N	100	NO
BED 4	EW-1	530	4595	W	0	NO
BED 4	EW-4	2220	4595	W	600	NO
BED 4	EW-4	2750	2995	S	500	NO
BED 3	EW-4	2750	4195	S	500	NO
ENS 3	EW-5	530	3295	E	0	NO
ENS 3	EW-6	2220	3295	E	600	NO
ENS 3	EW-5	530	1695	S	0	NO
ENS 3	EW-6	2220	1695	S	500	NO
BED 2	EW-5	2750	3290	E	600	NO
ENSUITE	EW-5	530	2790	E	0	NO
ENSUITE	EW-6	2220	2790	E	600	NO
MASTER OFFICE	EW-5	530	900	W	0	YES
MASTER OFFICE	EW-6	2220	900	W	6000	YES
MASTER OFFICE	EW-5	530	3500	N	0	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
MASTER OFFICE	EW-6	2220	3500	N	600	NO
MASTER OFFICE	EW-5	530	2495	E	0	NO
MASTER OFFICE	EW-6	2220	2495	E	600	NO
MASTER	EW-5	530	3990	N	0	YES
MASTER	EW-6	2220	3990	N	2500	YES
MASTER WIR	EW-4	2750	4395	W	600	NO
MASTER WIR	EW-5	530	1395	N	0	NO
MASTER WIR	EW-6	2220	1395	N	600	NO
BED 5	EW-4	2750	3390	W	600	NO
UF HALL	EW-5	2750	2290	W	600	NO
Powder	EW-7	3276	2290	E	100	NO
Butlers	EW-7	3276	2390	W	100	NO
Laundry	EW-7	3276	1790	E	100	NO
Ensuite 4	EW-1	2750	2190	W	600	NO
Bathroom	EW-1	2750	2890	E	600	NO
Void	EW-1	2750	2990	E	600	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		216.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		105.00	Bulk Insulation, No Air Gap R2.5
IW-3 - Cavity wall, direct fix plasterboard, single gap		5.00	Bulk Insulation, No Air Gap R2

Floor type

Location	Construction	Area Sub-floor (m ²)	Added insulation (R-value)	Covering
Kitchen/Dining	Concrete Slab on Ground 100mm	39.30 None	No Insulation	80/20 Carpet 10mm/Ceramic
MEDIA	Concrete Slab on Ground 100mm	15.00 None	No Insulation	Carpet+Rubber Underlay 18mm

Location	Construction	Area Sub-floor (m ²)	ventilation	Added insulation (R-value)	Covering
OFFICE	Concrete Slab on Ground 100mm	8.90	None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Dining	Concrete Slab on Ground 100mm	26.20	None	No Insulation	Carpet+Rubber Underlay 18mm
GARAGE WORKSHOP	Concrete Slab on Ground 100mm	41.90	None	No Insulation	Bare
BED 4/Kitchen/Dining	Timber Above Plasterboard 100mm	14.30		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
BED 3/Kitchen/Dining	Timber Above Plasterboard 100mm	3.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
BED 3	Suspended Timber Floor 100mm	8.40	Totally Open	No Insulation	Carpet+Rubber Underlay 18mm
ENS 3	Suspended Timber Floor 100mm	5.40	Totally Open	No Insulation	Carpet+Rubber Underlay 18mm
BED 2/MEDIA	Timber Above Plasterboard 100mm	12.10		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
ENSUITE/MEDIA	Timber Above Plasterboard 100mm	1.30		Bulk Insulation R2	Ceramic Tiles 8mm
ENSUITE/Powder	Timber Above Plasterboard 100mm	5.50		Bulk Insulation R2	Ceramic Tiles 8mm
ENSUITE/Powder Hall	Timber Above Plasterboard 100mm	2.20		Bulk Insulation R2	Ceramic Tiles 8mm
MASTER OFFICE/OFFICE	Timber Above Plasterboard 19mm	8.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
MASTER/Kitchen/Dining	Timber Above Plasterboard 19mm	9.10		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
MASTER/GARAGE WORKSHOP	Timber Above Plasterboard 19mm	7.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
MASTER WIR/GARAGE WORKSHOP	Timber Above Plasterboard 19mm	5.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
BED 5/Kitchen/Dining	Timber Above Plasterboard 19mm	3.10		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
BED 5/GARAGE WORKSHOP	Timber Above Plasterboard 19mm	10.00		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
UF HALL/Kitchen/Dining	Timber Above Plasterboard 19mm	6.90		Bulk Insulation R2	80/20 Carpet 10mm/Ceramic
UF HALL/MEDIA	Timber Above Plasterboard 19mm	1.00		Bulk Insulation R2	80/20 Carpet 10mm/Ceramic
UF HALL/Kitchen/Dining	Timber Above Plasterboard 19mm	12.80		Bulk Insulation R2	80/20 Carpet 10mm/Ceramic
UF HALL/Butlers	Timber Above Plasterboard 19mm	1.10		Bulk Insulation R2	80/20 Carpet 10mm/Ceramic
Powder	Concrete Slab on Ground 100mm	5.40	None	No Insulation	Ceramic Tiles 8mm
Powder Hall	Concrete Slab on Ground 100mm	2.00	None	No Insulation	Ceramic Tiles 8mm

Location	Construction	Area Sub-floor (m ²)	ventilation	Added insulation (R-value)	Covering
Butlers	Concrete Slab on Ground 100mm	7.10	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	5.00	None	No Insulation	Ceramic Tiles 8mm
Ensuite 4/Butlers	Timber Above Plasterboard 100mm	5.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom/Kitchen/Dining	Timber Above Plasterboard 19mm	3.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom/Kitchen/Dining	Timber Above Plasterboard 19mm	1.40		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom/Laundry	Timber Above Plasterboard 19mm	5.20		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Void/Kitchen/Dining	Timber Above Plasterboard 19mm	9.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Void	Suspended Timber Floor 19mm	1.20	Totally Open	No Insulation	Carpet+Rubber Underlay 18mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Dining	Timber Above Plasterboard	Bulk Insulation R2	No
MEDIA	Timber Above Plasterboard	Bulk Insulation R2	No
OFFICE	Timber Above Plasterboard	Bulk Insulation R2	No
Kitchen/Dining	Timber Above Plasterboard	Bulk Insulation R2	No
GARAGE WORKSHOP	Plasterboard	No insulation	No
GARAGE WORKSHOP	Timber Above Plasterboard	Bulk Insulation R2	No
BED 4	Plasterboard	Bulk Insulation R6	No
BED 3	Plasterboard	Bulk Insulation R6	No
ENS 3	Plasterboard	Bulk Insulation R6	No
BED 2	Plasterboard	Bulk Insulation R6	No
ENSUITE	Plasterboard	Bulk Insulation R6	No
MASTER OFFICE	Plasterboard	Bulk Insulation R6	No
MASTER	Plasterboard	Bulk Insulation R6	No
MASTER WIR	Plasterboard	Bulk Insulation R6	No
BED 5	Plasterboard	Bulk Insulation R6	No
UF HALL	Plasterboard	Bulk Insulation R6	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Powder	Timber Above Plasterboard	Bulk Insulation R2	No
Powder Hall	Timber Above Plasterboard	Bulk Insulation R2	No
Butlers	Timber Above Plasterboard	Bulk Insulation R2	No
Laundry	Timber Above Plasterboard	Bulk Insulation R2	No
Ensuite 4	Plasterboard	Bulk Insulation R6	No
Bathroom	Plasterboard	Bulk Insulation R6	No
Void	Plasterboard	Bulk Insulation R6	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
ENS 3	1	Exhaust Fans	300	Sealed
ENSUITE	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Dining	2	1200
BED 4	1	1200
BED 3	1	1200
BED 2	1	1200
MASTER	1	1200
BED 5	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
Roof Tiles	Foil, Gap Above, Reflective Side Down, Anti-glare Up	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) licenced 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 operability 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).