

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0005830500

Generated on 31 Mar 2021 using AccuRate Sustainability V2.4.3.21

Property

Address 17 Maretimo Street , Balgowlah , NSW , 2093
Lot/DP Lot 6 DP 18433
NCC Class* 1a
Type New Home

Plans

Main Plan Job 17-14 23-03-21
Prepared by ST

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 164.6	Suburban
Unconditioned* 64.1	NatHERS climate zone
Total 228.7	56
Garage 49.1	



Accredited assessor

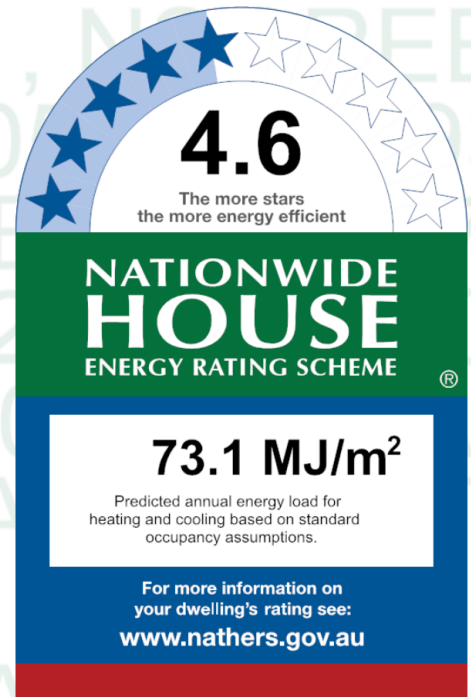
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ABSA
Declaration of interest No potential conflicts of interest to declare

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.



Thermal performance

Heating	Cooling
46.7	26.4
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=EutcopNQc. When using either link, ensure you are visiting hstar.com.au



Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E - Clear	4.3	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E - Clear	4.3	0.53	0.50	0.56

Custom* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Stairs	ALM-003-03 A	AAW1707	1700	765	Awning	90	W	None
Garage	ALM-002-01 A	ASW0612	600	1200	Sliding	45	W	None
Laundry	ALM-001-01 A	AAW1707	1700	765	Awning	90	W	None
Kitchen Living	ALM-004-01 A	ALW2711	2700	1100	Louvre	60	W	None
Kitchen Living	ALM-004-03 A	AFW2723	2700	2359	Other	00	W	None
Kitchen Living	ALM-004-03 A	AFW2726	2700	2640	Other	00	N	None
Kitchen Living	ALM-004-03 A	AFW2726	2700	2640	Other	00	N	None
Kitchen Living	ALM-004-01 A	ALW2709	2700	900	Louvre	90	N	None
Kitchen Living	ALM-004-03 A	AFW2717	2700	1740	Other	00	N	None
Kitchen Living	ALM-004-03 A	AFW2717	2700	1740	Other	00	N	None
Kitchen Living	ALM-004-01 A	ALW2709	2700	900	Louvre	90	N	None
Kitchen Living	ALM-004-03 A	ASD2734	2700	3459	Sliding	40	E	None
Kitchen Living	ALM-004-03 A	ASW1523	1500	2320	Sliding	45	E	None
WC	ALM-002-01 A	ADW1406	1400	600	Double Hung	40	S	None
B3	ALM-004-03 A	ASD2733	2699	3334	Sliding	40	N	None
B2	ALM-004-03 A	ASD2733	2699	3334	Sliding	40	N	None
Family (Bed 4)	ALM-004-03 A	ASD2732	2699	3279	Sliding	40	N	None
B1	ALM-004-03 A	AFW2726	2699	2670	Other	00	N	None
B1	ALM-004-01 A	ALW2713	2699	1300	Louvre	90	N	None
B1	ALM-004-03 A	ASD2734	2699	3460	Sliding	40	E	None
B1	ALM-004-03 A	ASW0526	500	2660	Sliding	30	N	None
B1	ALM-004-01 A	ALW0513	500	1395	Louvre	90	N	None
Ensuite	ALM-004-01 A	ALW0513	500	1299	Louvre	90	N	None
Ensuite	ALM-003-03 A	AAW2707	2700	780	Awning	60	E	None
Ensuite	ALM-003-03 A	AAW0618	600	1800	Awning	60	S	None
Study Stairs	ALM-004-01 A	ALW0513	500	1395	Louvre	90	N	None
Study Stairs	ALM-004-03 A	ASW0526	500	2665	Sliding	30	N	None
Study Stairs	ALM-004-01 A	ALW0519	500	1990	Louvre	60	N	None
Study Stairs	ALM-004-03 A	ASW0525	500	2590	Sliding	30	N	None
Bath	ALM-002-01 A	ALW0517	500	1750	Louvre	90	N	None
Bath	ALM-001-01 A	AAW1511	1560	1100	Awning	60	W	None
Bath	ALM-001-01 A	AAW0609	600	900	Awning	90	S	None

Roof window type and performance

Default* roof windows

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

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
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
Garage	2399	5400	100	N
Kitchen Living	2700	1200	100	S

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Brick wall	30	Light		No
EW-002	Retaining Brick wall	50	Medium		No
EW-003	Fibre-cement sheet/Plasterboard	85	Dark	Rockwool batt: R2.5	No
EW-004	Brick wall	30	Light	Polyurethane rigid foamed aged: R1.5	No
EW-005	Brick wall/Plasterboard	30	Light	Glass fibre batt: R2.0	No
EW-006	Aluminium	50	Medium		No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
S1 Storage	EW-001	1650	600	N		No
Stairs	EW-004	2050	1000	W		No
S2 Storage	EW-002	1650	2300	S		No
Garage	EW-002	2400	400	E		No
Garage	EW-002	2400	7000	S		No
Garage	EW-001	2400	5700	W		No
Garage	EW-001	2400	7000	N	500	Yes
Laundry	EW-004	2800	300	E		No
Laundry	EW-004	2800	2300	S		No
Laundry	EW-004	2050	1400	W		No
Kitchen Living	EW-004	2800	3460	W	1800	Yes
Kitchen Living	EW-004	2800	10900	N	1000	Yes
Kitchen Living	EW-004	2800	3460	E	3200	Yes
Kitchen Living	EW-004	2800	300	N	4460	Yes
Kitchen Living	EW-004	2800	2900	E	2500	Yes
Kitchen Living	EW-004	2800	1000	S		No
Kitchen Living	EW-004	2800	3000	S	300	Yes
Kitchen Living	EW-004	2800	1500	S	600	Yes
Kitchen Living	EW-004	2800	300	E	5100	Yes
Kitchen Living	EW-004	2800	300	S		No
Void to Stairs	EW-004	2800	1200	S		No
Void to Stairs	EW-005	2280	8600	S		No
WC	EW-004	2800	300	W		No
WC	EW-004	2800	3000	S		No
B3	EW-003	2700	3500	W		No
B3	EW-003	2700	3335	N	800	Yes
B2	EW-003	2700	3335	N	800	Yes
Family (Bed 4)	EW-003	2700	3280	N	800	Yes
B1	EW-003	2700	4000	N	800	Yes
B1	EW-003	2700	3500	E	1300	Yes
B1	EW-003	900	4000	N		No
Ensuite	EW-005	3600	1300	N	4600	Yes
Ensuite	EW-005	3400	800	E	500	Yes
Ensuite	EW-005	3400	200	N	800	Yes
Ensuite	EW-005	2700	1700	E		No
Ensuite	EW-005	2280	2600	S		No
Robe	EW-005	2280	3000	S		No

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Study Stairs	EW-003	900	8600	N		No
Study Stairs	EW-005	2280	7300	S		No
Bath	EW-003	900	1780	N		No
Bath	EW-005	3600	700	N		No
Bath	EW-005	2940	2920	W		No
Bath	EW-005	2280	2480	S		No
Linen	EW-004	2800	2300	N	4460	Yes
Linen	EW-004	2050	900	W		No
Subfloor	EW-002	1650	14000	S		No
Subfloor	EW-002	1650	7500	E		No
Subfloor	EW-001	1650	15500	N	800	Yes
Subfloor	EW-001	1650	2300	W		No

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-001	Brick wall	14.36	
IW-003	Plasterboard	152.42	
IW-004	Plasterboard	37.00	Glass fibre batt: R2.0
IW-005	Brick wall	1.73	Polyurethane rigid foamed aged: R1.5
IW-006	Brick wall/Plasterboard	12.56	Polyurethane rigid foamed aged: R1.0

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
S1 Storage/Ground	as_FLOR-B0A1 #1006 © 100mm Concrete Floor slab (no insul)	5.70			
Stairs/Ground	as_FLOR-B0A1 #1006 © 100mm Concrete Floor slab (no insul)	2.50			
S2 Storage/Ground	as_FLOR-B0A1 #1006 © 100mm Concrete Floor slab (no insul)	3.50			
Garage/Ground	as_FLOR-B0A1 #1006 © 100mm Concrete Floor slab (no insul)	39.90			
Laundry/S2 Storage	170mm Concrete Floor slab with tile (no insul) No ceiling under	3.50			Ceramic tile
Kitchen Living/Subfloor	170mm Concrete Floor slab with Floating Timber + R1.5 insul - No ceiling	66.40		R1.5	
Void to Stairs/Subfloor	170mm Concrete Floor slab with Floating Timber + R1.5 insul - No ceiling	5.60		R1.5	
WC/Subfloor	170mm Concrete Floor slab with tile (R1.5 insul) No ceiling under	4.30		R1.5	Ceramic tile
B3/Outdoor Air	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Villaboard ceiling under - R2.5 bulk insul	6.10		R2.5	Carpet 10 + rubber underlay 8
B3/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul	6.30			Carpet 10 + rubber underlay 8

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
B2/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul	12.40			Carpet 10 + rubber underlay 8
Family (Bed 4)/Kitchen Living	as_FLOR-B014 #2034 © Framed flr with timber floating floor - Plasterboard ceiling under - R0.0 insul	12.10			
B1/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul	12.00			Carpet 10 + rubber underlay 8
B1/Outdoor Air	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Villaboard ceiling under - R2.5 bulk insul	7.30		R2.5	Carpet 10 + rubber underlay 8
Ensuite/Outdoor Air	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Villaboard ceiling under - R2.5 bulk insul	6.40		R2.5	Ceramic tile
Robe/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul	5.70			Carpet 10 + rubber underlay 8
Study Stairs/Kitchen Living	as_FLOR-B014 #2034 © Framed flr with timber floating floor - Plasterboard ceiling under - R0.0 insul	17.00			
Study Stairs/WC	as_FLOR-B014 #2034 © Framed flr with timber floating floor - Plasterboard ceiling under - R0.0 insul	2.50			
Bath/Laundry	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Plasterboard ceiling under - R0.0 bulk insul	2.40			Ceramic tile
Bath/Stairs	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Plasterboard ceiling under - R0.0 bulk insul	2.50			Ceramic tile
Bath/Linen	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Plasterboard ceiling under - R0.0 bulk insul	2.30			Ceramic tile
Linen/S1 Storage	170mm Concrete Floor slab with Floating Timber + R0.0 insul - No ceiling	2.30			
Subfloor/Ground	Bare ground	101.10	Enclosed		

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Linen/S1 Storage	170mm Concrete Floor slab with Floating Timber + R0.0 insul - No ceiling		No
Bath/Stairs	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Plasterboard ceiling under - R0.0 bulk insul		No
Laundry/S2 Storage	170mm Concrete Floor slab with tile (no insul) No ceiling under		No
Bath/Laundry	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Plasterboard ceiling under - R0.0 bulk insul		No
B3/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul		No
B2/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul		No
Family (Bed 4)/Kitchen Living	as_FLOR-B014 #2034 © Framed flr with timber floating floor - Plasterboard ceiling under - R0.0 insul		No
B1/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul		No
Robe/Kitchen Living	as_FLOR-B014 #2016 © Framed flr with carpet-underfelt - Plasterboard ceiling under - R0.0 bulk insul		No
Study Stairs/Kitchen Living	as_FLOR-B014 #2034 © Framed flr with timber floating floor - Plasterboard ceiling under - R0.0 insul		No
Study Stairs/WC	as_FLOR-B014 #2034 © Framed flr with timber floating floor - Plasterboard ceiling under - R0.0 insul		No
Bath/Linen	as_FLOR-B014 #2016 © Framed flr with Ceramic Tile - Plasterboard ceiling under - R0.0 bulk insul		No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen Living/Subfloor	170mm Concrete Floor slab with Floating Timber + R1.5 insul - No ceiling	R1.5	No
Void to Stairs/Subfloor	170mm Concrete Floor slab with Floating Timber + R1.5 insul - No ceiling	R1.5	No
WC/Subfloor	170mm Concrete Floor slab with tile (R1.5 insul) No ceiling under	R1.5	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
No Data Available				

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
as_ROOF-B013.rof #1001 © Concrete slab 200mm - Drained Tile walking surface - no insulation - no Ceiling under		50	Medium
as_ROOF-A021 #E016 © Horiz pitch Colourbond steel roof + Anticon R1.0 insul with R5.0 bulk insul + Plasterb'd ceiling under	R6.0	30	Light
as_ROOF-A011 #E016 © 45 deg Colourbond steel roof + Anticon R1.0 insul with R5.0 bulk insul + Plasterb'd ceiling under	R6.0	30	Light
5-10 deg Colourbond steel roof + Anticon R1.0 insul +R5.0 with plasterboard ceiling under	R6.0	30	Light
as_ROOF-B013.rof #1001 © Concrete slab 170mm - Drained Tile walking surface - no insulation - no Ceiling under		50	Medium

Explanatory notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

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

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

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

Glossary

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).