Nationwide House Energy Rating Scheme NatHERS Certificate No. 0005563812-01

Generated on 01 Jul 2021 using BERS Pro v4.4.0.3 (3.21)

Property

Address 246 Whale Beach road, Whale Beach

NSW, 2107

Lot/DP 15376

NCC Class'

Type **New Dwelling**

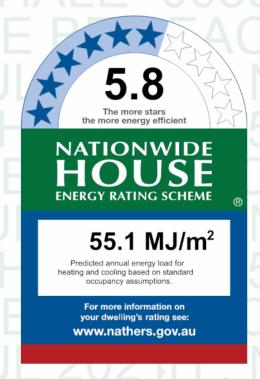
Plans

Main Plan 1232 dated 11/12/20

Prepared by Grant Seghers design

Construction and environmen

Assessed floor ar	ea (m²)*	Exposure Type
Conditioned*	400.0	Suburban
Unconditioned*	103.0	NatHERS climate zone
Total	503.0	56
Garage	62.0	



Thermal performance

Heating Cooling 32.6 MJ/m^2



Name Cameron McFadzean

Business name Deneb Design

Email info@denebdesign.com.au

Phone 02 99977480

Accreditation No. 20758

Assessor Accrediting Organisation

ABSA

Declaration of interest

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=rxlpCGyLT.

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?

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

Run 8 onwards June revisions

Window and glazed door type and performance

Default* windows

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
Williaow ID	Description	U-value*	31130	SHGC lower limit SHGC upper lim		
ALM-004-03 A	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		Maximum	SHGC*	Substitution tolerance ranges		
vvindow iD	Description	U-value*	энвс	SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	n/a	2800	3000	n/a	50	SE	No



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	n/a	2800	5760	n/a	50	SE	No
Kitchen/Living	ALM-004-03 A	n/a	2800	4150	n/a	50	SE	No
Kitchen/Living	ALM-004-03 A	n/a	2800	5200	n/a	50	SW	No
Bedroom 2	ALM-004-03 A	n/a	2600	4560	n/a	50	SE	No
Bedroom 1	ALM-004-03 A	n/a	2700	4400	n/a	50	SE	No
Bedroom 1	ALM-004-03 A	n/a	2700	3930	n/a	50	SE	No
entry/stair	ALM-004-03 A	n/a	2900	1050	n/a	50	SE	No
entry/stair	ALM-004-03 A	n/a	2800	3400	n/a	50	NE	No
Bedroom 3	ALM-004-03 A	n/a	2600	4800	n/a	50	SE	No
Bedroom 4	ALM-004-03 A	n/a	2600	4560	n/a	50	SE	No
media	ALM-004-03 A	n/a	500	1800	n/a	00	NW	No
media	ALM-004-03 A	n/a	500	1800	n/a	00	NW	No
Bedroom 5	ALM-004-03 A	n/a	2600	2200	n/a	50	SE	No
bath 5	ALM-004-03 A	n/a	500	1800	n/a	00	NW	No
hall/stair L3	ALM-004-03 A	n/a	2500	1100	n/a	00	SW	Yes
hall/stair L3	ALM-004-03 A	n/a	2500	1100	n/a	00	NE	Yes
ens 1	ALM-004-03 A	n/a	2700	3930	n/a	50	SE	No
stair 4	ALM-004-03 A	n/a	2200	1600	n/a	00	NW	Yes
stair 4	ALM-004-03 A	n/a	2200	1800	n/a	00	NE	Yes

Roof window type and performance

Default* roof windows

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

Custom* roof windows

Window ID	Vindow ID Window Maximum		SHGC*	Substitution tolerance ranges		
WITIGOW ID	Description	U-value*	SHGC	SHGC lower limit	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 Ava	nilahle							

Skylight type and performance

Skylight ID Skylight description



Skylight ID

Skylight description

No Data Available

Skylight schedule

(mm) (mr) snade renectance	Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
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No Data Available

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
Garage 1	2040	6000	90	SE	
bath 5	2040	820	90	NW	

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Concrete Block	0.50	Medium	No insulation	No
EW-2	AAC Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R1.7	No
EW-3	Concrete Block	0.50	Medium	Bulk Insulation R1.7	No
EW-4	Concrete Block	0.50	Medium	Bulk Insulation R1.7	No
EW-5	AAC Cavity Panel Direct Fix	0.50	Medium	Bulk Insulation R1.7	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage 1	EW-1	2400	8000	SE	600	NO
Garage 1	EW-1	2400	2600	SW	214	NO
Garage 1	EW-1	2400	4195	SW	200	NO
Garage 1	EW-1	2400	5600	NW	2400	YES
Garage 1	EW-1	2400	2200	NE	200	NO
Garage 1	EW-1	2400	1800	SE	200	YES
Garage 1	EW-1	2400	4400	NE	600	YES
Kitchen/Living	EW-2	2900	13195	SE	800	NO
Kitchen/Living	EW-2	2900	6000	SW	200	NO
Kitchen/Living	EW-3	2900	3600	SW	200	NO
Kitchen/Living	EW-3	2900	5595	NW	200	NO
Bedroom 2	EW-2	2700	3795	SW	200	NO
Bedroom 2	EW-2	2700	4995	SE	1200	NO
Bedroom 1	EW-2	2700	9600	SW	200	NO



Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-2	2700	8600	NW	200	NO
Bedroom 1	EW-2	2700	600	NE	5200	YES
Bedroom 1	EW-2	2700	8595	SE	1200	NO
WC	EW-4	2900	1790	NW	200	YES
entry/stair	EW-5	2900	1395	SE	800	NO
entry/stair	EW-4	2900	1195	SW	200	YES
entry/stair	EW-4	2900	1800	NW	1800	YES
entry/stair	EW-4	2900	2800	NE	200	NO
entry/stair	EW-4	2900	8000	NE	200	NO
pool store	EW-1	2400	2195	SW	200	NO
pool store	EW-1	2400	5000	NW	200	NO
pool store	EW-1	2400	2204	NE	5647	YES
bath 2	EW-2	2700	1790	SW	200	NO
Bedroom 3	EW-2	2700	4790	SE	1200	NO
Bedroom 4	EW-2	2700	3595	NE	200	NO
Bedroom 4	EW-2	2700	4995	SE	1200	NO
oath 4	EW-2	2700	1995	NE	200	NO
oath 4	EW-2	2700	400	NW	200	YES
media	EW-2	2700	8190	NW	200	YES
Bedroom 5	EW-5	2700	4200	SW	200	NO
Bedroom 5	EW-5	2700	3795	NW	200	NO
Bedroom 5	EW-5	2700	2600	SE	400	YES
bath 5	EW-5	2700	1790	NW	200	NO
hall/stair L3	EW-5	2700	1400	SW	200	YES
hall/stair L3	EW-5	2700	1600	NW	200	YES
hall/stair L3	EW-5	2700	4195	NE	200	YES
ens 1	EW-5	2700	5195	NE	200	YES
ens 1	EW-5	2700	4195	SE	1200	NO
stair 4	EW-5	2700	1595	NW	800	YES
stair 4	EW-5	2700	1600	NW	400	YES
stair 4	EW-5	2700	3800	NE	200	NO
stair 4	EW-5	2700	600	SE	200	YES
oantry	EW-4	2900	3590	NW	200	NO
ift	EW-4	2900	1595	SW	200	NO
ift	EW-4	2900	1800	NW	200	NO
ift	EW-4	2900	1595	NE	2000	YES
lift 3	EW-5	2700	400	SW	14000	YES
ift 3	EW-5	2700	1600	NW	200	NO
lift 3	EW-5	2700	1795	NE	400	YES



Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
lift 4	EW-5	2700	1795	SW	200	YES
lift 4	EW-5	2700	1600	NW	200	NO
lift 4	EW-5	2700	1795	NE	200	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		12.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		296.00	Bulk Insulation, Air Gap R1

Floor type

Location	Construction		Sub-floor ventilation	Added insulation (R-value)	Covering
Garage 1	Concrete Slab on Ground 100mm	61.90	None	No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	106.30) None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bedroom 2/Kitchen/Living	Concrete Above Plasterboard 150mm	21.70		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/Bedroom 2	Timber Above Plasterboard 19mm	15.20		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/bath 2	Timber Above Plasterboard 19mm	3.90		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/Bedroom 3	Timber Above Plasterboard 19mm	16.20		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/bath 3	Timber Above Plasterboard 19mm	5.70		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/media	Timber Above Plasterboard 19mm	22.30		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/Bedroom 5	Timber Above Plasterboard 19mm	0.70		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/bath 5	Timber Above Plasterboard 19mm	2.90		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/store	Timber Above Plasterboard 19mm	3.20		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1/hall/stair L3	Timber Above Plasterboard 19mm	12.00		No Insulation	Cork Tiles or Parquetry 8mm
WC	Concrete Slab on Ground 100mm	3.70	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
entry/stair	Concrete Slab on Ground 100mm	22.00	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
pool store	Concrete Slab on Ground 100mm	11.00	None	No Insulation	Bare
bath 2/Kitchen/Living	Concrete Above Plasterboard 150mm	5.40		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/Kitchen/Living	Concrete Above Plasterboard 150mm	20.40		No Insulation	Cork Tiles or Parquetry 8mm
bath 3/Kitchen/Living	Concrete Above Plasterboard 150mm	5.30		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 4/Kitchen/Living	Concrete Above Plasterboard 150mm	15.40		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 4/entry/stair	Concrete Above Plasterboard 150mm	4.90		No Insulation	Cork Tiles or Parquetry 8mm



Location	Construction	Area (m)		Added insulation (R-value)	Covering
Bedroom 4	Suspended Concrete Slab 150mm	0.70	Totally Open	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
bath 4/Kitchen/Living	Concrete Above Plasterboard 150mm	3.00		No Insulation	Cork Tiles or Parquetry 8mm
bath 4/entry/stair	Concrete Above Plasterboard 150mm	2.60		No Insulation	Cork Tiles or Parquetry 8mm
media/Kitchen/Living	Concrete Above Plasterboard 150mm	4.60		No Insulation	Cork Tiles or Parquetry 8mm
media/WC	Concrete Above Plasterboard 150mm	3.20		No Insulation	Cork Tiles or Parquetry 8mm
media/entry/stair	Concrete Above Plasterboard 150mm	0.60		No Insulation	Cork Tiles or Parquetry 8mm
media/pantry	Concrete Above Plasterboard 150mm	6.30		No Insulation	Cork Tiles or Parquetry 8mm
media	Suspended Concrete Slab 150mm	18.80	Totally Open	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bedroom 5/Kitchen/Living	Concrete Above Plasterboard 150mm	2.10		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 5	Suspended Concrete Slab 150mm	13.60	Totally Open	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
bath 5	Suspended Concrete Slab 150mm	4.00	Totally Open	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
store/Kitchen/Living	Concrete Above Plasterboard 150mm	2.90	-	No Insulation	Cork Tiles or Parquetry 8mm
hall/stair L3/Kitchen/Living	Concrete Above Plasterboard 150mm	12.00		No Insulation	Cork Tiles or Parquetry 8mm
hall/stair L3/WC	Concrete Above Plasterboard 150mm	0.70		No Insulation	Cork Tiles or Parquetry 8mm
hall/stair L3/entry/stair	Concrete Above Plasterboard 150mm	11.00		No Insulation	Cork Tiles or Parquetry 8mm
hall/stair L3/pantry	Concrete Above Plasterboard 150mm	4.10		No Insulation	Cork Tiles or Parquetry 8mm
ens 1/Bedroom 3	Timber Above Plasterboard 19mm	0.90		No Insulation	Cork Tiles or Parquetry 8mm
ens 1/Bedroom 4	Timber Above Plasterboard 19mm	14.50		No Insulation	Cork Tiles or Parquetry 8mm
ens 1/bath 4	Timber Above Plasterboard 19mm	4.30		No Insulation	Cork Tiles or Parquetry 8mm
ens 1/hall/stair L3	Timber Above Plasterboard 19mm	1.60		No Insulation	Cork Tiles or Parquetry 8mm
stair 4/media	Timber Above Plasterboard 19mm	4.40		No Insulation	Cork Tiles or Parquetry 8mm
stair 4/hall/stair L3	Timber Above Plasterboard 19mm	13.40		No Insulation	Cork Tiles or Parquetry 8mm
pantry	Concrete Slab on Ground 100mm	10.40	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
lift	Concrete Slab on Ground 100mm	2.80	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
lift 3/lift	Concrete Above Plasterboard 150mm	2.40		No Insulation	Cork Tiles or Parquetry 8mm
lift 4/lift 3	Timber Above Plasterboard 19mm	2.80		No Insulation	Cork Tiles or Parquetry 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage 1	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No

5.8 Star Rating as of 01 Jul 2021



Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
WC	Concrete Above Plasterboard	No Insulation	No
entry/stair	Plasterboard	Bulk Insulation R4	No
entry/stair	Concrete Above Plasterboard	No Insulation	No
pool store	Plasterboard	No insulation	No
bath 2	Plasterboard	Bulk Insulation R4	No
bath 2	Timber Above Plasterboard	No Insulation	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Timber Above Plasterboard	No Insulation	No
bath 3	Timber Above Plasterboard	No Insulation	No
Bedroom 4	Plasterboard	Bulk Insulation R4	No
Bedroom 4	Timber Above Plasterboard	No Insulation	No
bath 4	Plasterboard	Bulk Insulation R4	No
bath 4	Timber Above Plasterboard	No Insulation	No
media	Plasterboard	Bulk Insulation R4	No
media	Timber Above Plasterboard	No Insulation	No
Bedroom 5	Plasterboard	Bulk Insulation R4	No
Bedroom 5	Timber Above Plasterboard	No Insulation	No
bath 5	Plasterboard	Bulk Insulation R4	No
bath 5	Timber Above Plasterboard	No Insulation	No
store	Timber Above Plasterboard	No Insulation	No
hall/stair L3	Plasterboard	Bulk Insulation R4	No
hall/stair L3	Timber Above Plasterboard	No Insulation	No
ens 1	Plasterboard	Bulk Insulation R4	No
stair 4	Plasterboard	Bulk Insulation R4	No
pantry	Concrete Above Plasterboard	No Insulation	No
lift	Concrete Above Plasterboard	No Insulation	No
lift 3	Timber Above Plasterboard	No Insulation	No
lift 4	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	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
Concrete	Bulk, Reflective Side Down, No Air Gap Above R0.7	0.50	Medium
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R0.7	0.50	Medium
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R0.7	0.50	Medium



Explanatory notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

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

Information presented in this report relies on a range of standard assumptions (both embedded in NatHES 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 Nath—RS 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, chirmeys and flues. Excludes
Cenning perietrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Eveneum esterior com	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category – open	sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10me.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 me.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code	the NCC groups buildings by their function and use, and assigns a classification code. NatHEPS software models NCC Class 1, 2 or 4
(NOC) Class	buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at
	www.nathers.gov.au
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
NOOI WIIIGOW	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.
Salar hast gain apoliticiant (SLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for Nathers this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical 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).
	Colora, Caro, Walle in the Sellining (Willig Walley), Fortices, Other Sellinings, Vogetation (protected or linear hallenge trees).