BASIX® Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1231691S_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Thursday, 18 November 2021
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT | Planning, Industry & Environment

Project summary	
Project name	WARWICK ST_02
Street address	62A WARWICK Street PENRITH 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 21745
Lot no.	7
Section no.	-
Project type	separate dwelling house
No. of bedrooms	3

Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 50	Target 50

Certificate Prepared by
Name / Company Name: Building & Energy Consultants Australia
ABN (if applicable): 92122407783

Description of project

Project address	
Project name	WARWICK ST_02
Street address	62A WARWICK Street PENRITH 2750
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan 21745
Lot no.	7
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	3
Site details	
Site area (m²)	346
Roof area (m²)	188
Conditioned floor area (m2)	122.0
Unconditioned floor area (m2)	19.0
Total area of garden and lawn (m2)	162

Assessor details and thermal loads		
Assessor number	DMN/20/1999	
Certificate number	0006350268	
Climate zone	28	
Area adjusted cooling load (MJ/m².year)	52	
Area adjusted heating load (MJ/m².year)	60	
Ceiling fan in at least one bedroom	No	
Ceiling fan in at least one living room or other conditioned area	No	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 6 but <= 7.5 L/min plus spray force and/or coverage tests) in all showers in the development.		✔	✔
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✔	✔
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✔	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✔	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✔	✔	✔
The applicant must configure the rainwater tank to collect rain runoff from at least 150 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✔	✔
The applicant must connect the rainwater tank to: • all toilets in the development		✔	✔
• the cold water tap that supplies each clothes washer in the development		✔	✔
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)		✔	✔

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✔	✔	✔
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✔	✔
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✔	✔	✔

Floor and wall construction	Area
floor - suspended floor/enclosed subfloor	All or part of floor area square metres

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✔	✔	✔
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✔	✔
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✔	✔
The cooling system must provide for day/night zoning between living areas and bedrooms.		✔	✔
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✔	✔
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✔	✔
The heating system must provide for day/night zoning between living areas and bedrooms.		✔	✔
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✔	✔
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✔	✔
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✔	✔
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps: • at least 3 of the bedrooms / study; dedicated		✔	✔

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
• at least 1 of the living / dining rooms; dedicated		✔	✔
• the kitchen; dedicated		✔	✔
• all bathrooms/toilets; dedicated		✔	✔
• the laundry; dedicated		✔	✔
• all hallways; dedicated		✔	✔
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.	✔	✔	✔
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✔	✔	✔
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✔	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✔	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✔	
The applicant must install a fixed indoor or sheltered clothes drying line as part of the development.		✔	

Legend
In these commitments, "applicant" means the person carrying out the development.
Commitments identified with a ✔ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
Commitments identified with a ✔ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
Commitments identified with a ✔ in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate(either interim or final) for the development may be issued.

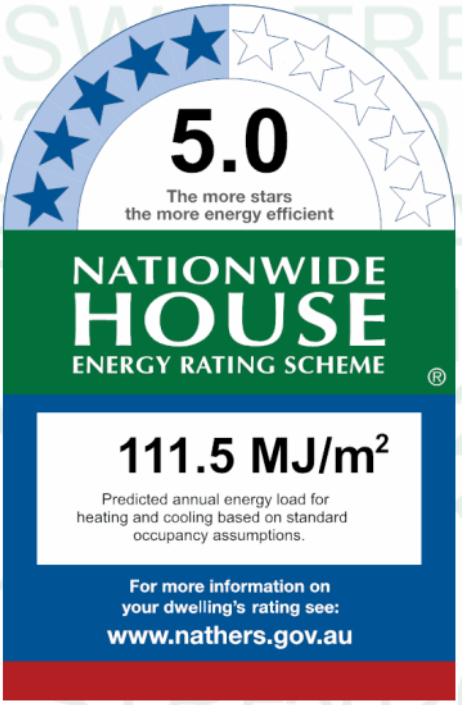
NatHERS - THERMAL COMFORT SUMMARY

Address: *62A Warwick St, Penrith NSW 2750*		Date: *17/08/2021*
Software: *BERS Pro v4.3.0.6 (3.21)*	Certificate No.: *0006350268*	Star rating: *5.0*

Building Elements	Material	Detail
External walls	Light Weight Cladding on top hats	R2.0 bulk insulation
Internal walls	Plasterboard on studs	R2.0 bulk insulation to walls adjacent to roofspace, bathrooms & Laundry
Ceiling	Plasterboard	R3.5 bulk insulation to ceilings with roof above
Floors	Timber	R1.0 bulk insulation to ground floor above subfloor
Roof	Metal Roof – Light Colour Solar Absorptance < 0.475	Builders Blanket (R1.3) to underside of roof
Skylights	Double glazed clear (OPERABLE IN BATHROOM)	U value 4.2 or less and SHGC 0.72 +/- 10%
Doors/Windows	***Sliding windows/doors & Double Hung:*** Aluminium frame, single glazed clear	U value 6.70 or less and SHGC 0.70 +/- 10%
Lighting: This dwelling have been rated with non-ventilated LED downlights as per NatHERS Certificate.		
Note: Insulation specified must be installed in accordance with Part 3.12.1.1 of the BCA.		
Note: In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.		
Note: Self-closing damper to all exhaust fans.		

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006350268

Generated on 16 Aug 2021 using BERS Pro v4.4.0.6 (3.21)



Property

Address	62A Warwick Street , PENRITH , NSW , 2750
Lot/DP	21745
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	DA
Prepared by	Graphio AM

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	122.0	Suburban
Unconditioned*	19.0	**NatHERS climate zone**
Total	141.0	28
Garage	0.0	

Thermal performance

Heating	Cooling
59.8 MJ/m^2	51.7 MJ/m^2

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.

Accredited assessor

Name	Thomas Ruck
Business name	Building Energy Consultants Australia
Email	thomas@beca.net.au
Phone	9533 2388
Accreditation No.	DMN/20/1999

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=SSZgPPckx.
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.

* Refer to glossary.

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

Walls on first floor adjacnet to roof space are to have R2.0 in them. They have been modelled with R3.9 to

account for the reflective air gap and the insulation under the roof sheeting.

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-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73

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*
Kitchen/Living	ALM-002-01 A	n/a	2100	2400	n/a	66	N	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	1200	2400	n/a	45	N	No
Kitchen/Living	ALM-002-01 A	n/a	1200	1800	n/a	45	E	No
Bedroom 1	ALM-002-01 A	n/a	1800	2100	n/a	45	S	No
Bath	ALM-002-01 A	n/a	1800	1400	n/a	45	S	No
Lobby	ALM-002-01 A	n/a	1800	600	n/a	45	S	No
Bedroom 2	ALM-002-01 A	n/a	1200	1200	n/a	10	N	No
Bedroom 3	ALM-002-01 A	n/a	1200	1200	n/a	10	N	No
Laundry	ALM-002-01 A	n/a	1200	1200	n/a	45	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
DG-Generic-02 A	Glass	4.2	0.72	0.68	0.76

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
Bath	DG-Generic-02 A	n/a	30	600	900	E	No	No
Stair/Hall	DG-Generic-02 A	n/a	0	600	1200	W	No	No
Stair/Hall	DG-Generic-02 A	n/a	0	600	1200	W	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								

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Lobby	2700	920	90	S
Lobby	2340	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel on Battens	0.30	Light	Bulk Insulation R2	No
EW-2	Single Skin Panel	0.30	Light	Bulk Insulation R3.9	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	3000	9300	N	1550	YES
Kitchen/Living	EW-1	3000	3790	E	550	NO
Kitchen/Living	EW-1	3000	1300	S	2350	YES
Kitchen/Living	EW-1	3001	3600	W	3700	NO
Kitchen/Living	EW-1	3000	1500	W	550	NO
Bedroom 1	EW-1	3000	3395	E	550	NO
Bedroom 1	EW-1	3000	3795	S	2050	NO
Bath	EW-1	3000	2490	S	2050	NO
Lobby	EW-1	3000	3895	S	2050	NO
Lobby	EW-1	3000	2200	W	550	YES
Lobby	EW-1	3000	900	S	4250	YES
Lobby	EW-1	3000	1795	W	5000	YES
Bedroom 2	EW-1	2700	3795	N	450	NO
Bedroom 2	EW-2	1600	700	S	2750	YES
Bedroom 2	EW-2	1400	3000	W	3000	NO
Bedroom 3	EW-1	2700	3895	N	450	NO
Bedroom 3	EW-2	2700	3000	E	3000	NO
Bedroom 3	EW-2	1600	600	S	2750	YES
Bath	EW-2	1800	2295	E	3600	YES
Bath	EW-1	2700	3395	S	450	NO
Stair/Hall	EW-1	2700	2995	S	450	NO
Stair/Hall	EW-2	1800	2295	W	3700	YES
Laundry	EW-1	3000	995	W	9850	YES
Laundry	EW-1	3000	3100	N	550	NO
Laundry	EW-1	3000	2895	E	550	NO

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		53.00	Bulk Insulation, No Air Gap R2
IW-2 - Cavity wall, direct fix plasterboard, single gap		67.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Suspended Timber Floor 19mm	62.60	Enclosed	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Timber Floor 19mm	11.90	Enclosed	Bulk Insulation in Contact with Floor R1	Carpet+Rubber Underlay 18mm
Hall	Suspended Timber Floor 19mm	3.30	Enclosed	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bath	Suspended Timber Floor 19mm	5.20	Enclosed	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Lobby	Suspended Timber Floor 19mm	15.70	Enclosed	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bedroom 2/Kitchen/Living	Timber Above Plasterboard 100mm	11.10		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 100mm	11.40		No Insulation	Carpet+Rubber Underlay 18mm
Bath/Kitchen/Living	Timber Above Plasterboard 100mm	2.20		No Insulation	Ceramic Tiles 8mm
Bath/Hall	Timber Above Plasterboard 100mm	3.60		No Insulation	Ceramic Tiles 8mm
Stair/Hall/Kitchen/Living	Timber Above Plasterboard 100mm	3.80		No Insulation	Cork Tiles or Parquetry 8mm
Stair/Hall/Lobby	Timber Above Plasterboard 100mm	4.10		No Insulation	Cork Tiles or Parquetry 8mm
Laundry	Suspended Timber Floor 19mm	7.60	Enclosed	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R3	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3	No
Hall	Timber Above Plasterboard	No Insulation	No
Bath	Plasterboard	Bulk Insulation R3	No
Lobby	Plasterboard	Bulk Insulation R3	No
Lobby	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3	No
Bedroom 3	Plasterboard	Bulk Insulation R3	No
Bath	Plasterboard	Bulk Insulation R3	No
Stair/Hall	Plasterboard	Bulk Insulation R3	No
Laundry	Plasterboard	Bulk Insulation R3	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	24	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bedroom 1	4	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Lobby	4	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bedroom 3	4	Downlights - LED	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Stair/Hall	3	Downlights - LED	150	Sealed
Laundry	3	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

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

* Refer to glossary.

Explanatory notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

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

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

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

* Refer to glossary.