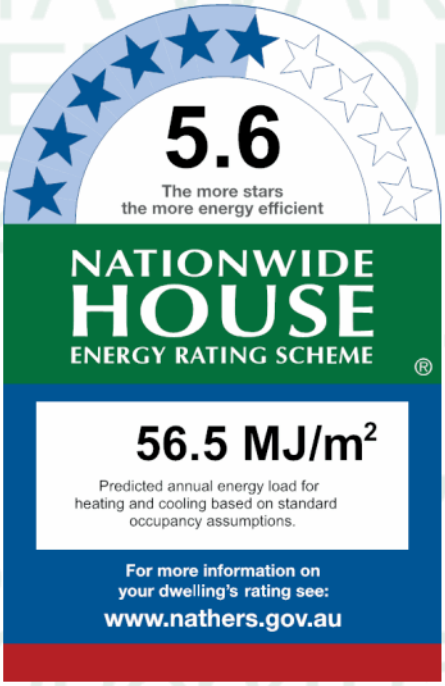
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0008640526-01

Generated on 12 May 2023 using BERS Pro v4.4.1.5 (3.21)



Property

Address	104A Wakehurst Parkway , Elanora Heights , NSW , 2101
Lot/DP	4/1240491
NCC Class*	1A
Type	New Dwelling

Plans

Main plan	Rev M - Issued on 11.04.2023
Prepared by	Thodey Design

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	196.0
Unconditioned*	75.0
Total	272.0
Garage	47.0

Exposure type
Suburban

NatHERS climate zone
56

Thermal performance

Heating	Cooling
35.1 MJ/m^2	21.3 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

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Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	Declaration completed: no conflicts

Verification

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

*The dwelling has been assessed without recessed light fittings as no lighting or electrical plan has been provided.

*Obscure glazing has been modelled as clear glass as it has similar thermal properties.

I have not modeled the shading, no shading is applicable

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
PVC-005-03 W	PVC-005-03 W uPVC A DG Argon Fill High Solar Gain low-E -Clear	2.0	0.25	0.24	0.26
PVC-006-03 W	PVC-006-03 W uPVC B DG Argon Fill High Solar Gain low-E -Clear	2.0	0.31	0.29	0.33

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit

* Refer to glossary.

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*
Garage	PVC-005-03 W	n/a	600	3000	n/a	10	W	No
Guest Bed	PVC-005-03 W	n/a	2400	2013	n/a	45	E	No
Guest Bed	PVC-006-03 W	n/a	2400	3054	n/a	45	S	No
Entry	PVC-006-03 W	n/a	2400	420	n/a	00	S	No
Entry	PVC-006-03 W	n/a	2400	420	n/a	00	S	No
Stairs GF	PVC-006-03 W	n/a	2700	1801	n/a	00	N	No
Stairs GF	PVC-006-03 W	n/a	2700	2510	n/a	00	E	No
Rumpus	PVC-006-03 W	n/a	2400	600	n/a	00	S	No
Rumpus	PVC-006-03 W	n/a	2400	3813	n/a	45	N	No
Bath	PVC-005-03 W	n/a	800	1700	n/a	10	W	No
Bath	PVC-005-03 W	n/a	800	800	n/a	10	W	No
Bedroom 2	PVC-006-03 W	n/a	2400	3000	n/a	45	S	Yes
Bedroom 3	PVC-006-03 W	n/a	2400	444	n/a	00	E	Yes
Bedroom 3	PVC-006-03 W	n/a	2400	762	n/a	00	SE	Yes
Bedroom 3	PVC-006-03 W	n/a	2400	894	n/a	00	S	Yes
Bedroom 3	PVC-006-03 W	n/a	2400	1845	n/a	45	S	Yes
Master Bed	PVC-006-03 W	n/a	2400	3074	n/a	45	N	No
Master Bed	PVC-006-03 W	n/a	2400	711	n/a	100	S	Yes
Master ENS	PVC-006-03 W	n/a	2400	2729	n/a	40	S	Yes
Stairs FF	PVC-006-03 W	n/a	2400	600	n/a	00	N	No
Stairs FF	PVC-006-03 W	n/a	2700	2510	n/a	00	E	No
Kitchen Raked	PVC-006-03 W	n/a	642	4413	n/a	00	N	No Shading
Hall	PVC-006-03 W	n/a	2400	1732	n/a	00	S	No
Spare Bed/Study	PVC-005-03 W	n/a	2400	2300	n/a	20	E	No
Spare Bed/Study	PVC-006-03 W	n/a	2400	3704	n/a	60	S	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
ENS FF	PVC-006-03 W	n/a	2400	2354	n/a	00	N	No
Lounge Raked	PVC-006-03 W	n/a	642	4413	n/a	00	N	No Shading
ENS FF	PVC-006-03 W	n/a	634	2350	n/a	00	N	No Shading
Passage	PVC-006-03 W	n/a	634	894	n/a	00	N	No Shading
Lounge Raked	PVC-006-03 W	n/a	2400	4700	n/a	60	S	No
Lounge Raked	PVC-005-03 W	n/a	2100	700	n/a	10	W	No
Dining	PVC-006-03 W	n/a	2400	5246	n/a	60	N	No
Dining	PVC-005-03 W	n/a	2400	2900	n/a	10	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
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame

Skylight *schedule*

* Refer to glossary.

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-008a	n/a	50	2.80	W	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2700	5394	90	S
Entry	2400	900	90	S
External Store	2400	1600	90	N
External Store	2400	1500	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Concrete block, lined	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.7	No
EW-3	Metal Clad Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.7	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	1350	6500	W	0	NO
Garage	EW-1	1350	6500	W	0	NO
Garage	EW-1	2700	1995	W	0	NO
Garage	EW-1	2700	1700	E	6500	YES
Garage	EW-1	2700	5600	S	4850	NO
Guest Bed	EW-1	2000	6795	E	0	NO
Guest Bed	EW-1	700	6795	E	0	NO
Guest Bed	EW-1	2700	3095	S	5250	NO
Plant Rm	EW-1	2700	1995	W	0	NO
Plant Rm	EW-1	2700	3395	N	0	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Wine	EW-1	2700	3190	N	0	NO
WC	EW-1	2700	1590	N	0	NO
Guest ENS	EW-1	2700	3895	N	0	NO
Guest ENS	EW-1	2700	1995	E	0	NO
Lift LGF	EW-1	2700	1490	S	4800	NO
Entry	EW-1	2700	1890	S	4675	YES
Stairs GF	EW-1	2700	1000	W	4700	YES
Stairs GF	EW-1	2700	1900	N	4000	NO
Stairs GF	EW-1	2700	2600	E	3725	YES
Rumpus	EW-1	2700	1390	S	0	YES
Rumpus	EW-1	2700	3990	N	6350	YES
Bath	EW-1	2700	3990	W	0	NO
Bedroom 2	EW-1	2700	3153	S	588	YES
Bedroom 2	EW-1	2700	4795	W	0	NO
Bedroom 3	EW-1	2700	2100	E	600	YES
Bedroom 3	EW-1	2700	762	SE	548	NO
Bedroom 3	EW-1	2700	894	S	526	NO
Bedroom 3	EW-1	2700	1919	S	584	YES
Master Bed	EW-1	2700	3095	N	1225	NO
Master Bed	EW-1	2700	3195	E	0	NO
Master Bed	EW-1	2700	801	S	629	YES
Master Bed	EW-1	2700	224	SW	615	NO
Master Bed	EW-1	2700	224	W	671	NO
Master Bed	EW-1	2700	1700	W	800	YES
Master Bed	EW-1	2700	795	S	2275	YES
Master WIR	EW-1	2700	1990	E	0	NO
Master ENS	EW-1	2700	1695	E	0	NO
Master ENS	EW-1	2700	2724	S	608	NO
External Store	EW-1	2700	1295	W	0	NO
External Store	EW-1	2700	1595	N	0	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Stairs FF	EW-2	3045	700	N	100	YES
Stairs FF	EW-2	3045	2600	E	0	YES
Kitchen Raked	EW-3	3045	2390	W	0	NO
Hall	EW-2	3045	1890	S	100	YES
Spare Bed/Study	EW-2	3045	2295	E	0	NO
Spare Bed/Study	EW-2	3045	3900	S	200	NO
Spare Bed/Study	EW-2	3045	1700	W	1900	YES
ENS FF	EW-2	3045	2395	N	0	NO
ENS FF	EW-2	3045	1995	E	0	NO
External Store	EW-1	2700	1490	N	775	YES
Stack	EW-2	3045	1490	N	0	YES
Lounge Raked	EW-2	3045	3790	W	0	NO
ENS FF	EW-2	3045	1090	E	0	NO
Lounge Raked	EW-2	3045	995	E	1900	YES
Lounge Raked	EW-2	3045	4700	S	100	NO
Lounge Raked	EW-2	3045	995	W	0	NO
Kitchen Raked	EW-2	3045	1490	W	0	NO
Dining	EW-2	3045	1595	W	0	NO
Dining	EW-2	3045	5900	N	2350	NO
Dining	EW-2	3045	2995	E	0	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		340.00	Bulk Insulation, No Air Gap R2

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 200mm	47.00	None	No Insulation	Bare

* Refer to glossary.

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Guest Bed	Concrete Slab on Ground 200mm	24.90	None	No Insulation	Bare
Plant Rm	Concrete Slab on Ground 200mm	6.60	None	No Insulation	Bare
Wine	Concrete Slab on Ground 200mm	6.10	None	No Insulation	Bare
WC	Concrete Slab on Ground 200mm	2.90	None	No Insulation	Ceramic Tiles 8mm
Guest ENS	Concrete Slab on Ground 200mm	7.50	None	No Insulation	Ceramic Tiles 8mm
Lift LGF	Concrete Slab on Ground 200mm	1.90	None	No Insulation	Bare
Entry	Concrete Slab on Ground 200mm	15.90	None	No Insulation	Bare
Stairs GF/Entry	Concrete Above Plasterboard 19mm	5.30		No Insulation	Cork Tiles or Parquetry 8mm
Rumpus/Garage	Concrete Above Plasterboard 200mm	20.60		No Insulation	Cork Tiles or Parquetry 8mm
Rumpus/Entry	Concrete Above Plasterboard 200mm	3.10		No Insulation	Cork Tiles or Parquetry 8mm
Rumpus	Suspended Concrete Slab 200mm	4.10	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Lift GF/Lift LGF	Concrete Above Plasterboard 19mm	1.80		No Insulation	Bare
Bath/Garage	Concrete Above Plasterboard 19mm	6.10		No Insulation	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	13.60	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Bedroom 3	Suspended Concrete Slab 200mm	11.20	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Master Bed/Guest Bed	Concrete Above Plasterboard 200mm	6.00		No Insulation	Cork Tiles or Parquetry 8mm
Master Bed	Suspended Concrete Slab 200mm	9.70	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Master WIR	Suspended Concrete Slab 200mm	5.10	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Master ENS	Suspended Concrete Slab 200mm	3.90	Totally Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
External Store/Garage	Concrete Above Plasterboard 19mm	1.90		No Insulation	Cork Tiles or Parquetry 8mm
Stairs FF/Stairs GF	Concrete Above Plasterboard 19mm	5.20		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen Raked	Suspended Concrete Slab 200mm	10.70	Totally Open	Bulk Insulation in Contact with Floor R2	Bare
Hall/Rumpus	Concrete Above Plasterboard 19mm	6.10		No Insulation	Cork Tiles or Parquetry 8mm

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Lift FF/Lift GF	Concrete Above Plasterboard 19mm	1.80		No Insulation	Bare
Spare Bed/Study/Master Bed	Concrete Above Plasterboard 200mm	3.70		No Insulation	Cork Tiles or Parquetry 8mm
Spare Bed/Study/Master WIR	Concrete Above Plasterboard 200mm	3.90		No Insulation	Cork Tiles or Parquetry 8mm
Spare Bed/Study	Suspended Concrete Slab 200mm	0.80	Totally Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
ENS FF/Master Bed	Concrete Above Plasterboard 19mm	4.60		No Insulation	Ceramic Tiles 8mm
Stack/External Store	Concrete Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
Lounge Raked/Rumpus	Concrete Above Plasterboard 19mm	14.70		No Insulation	Bare
Lounge Raked/Bath	Concrete Above Plasterboard 19mm	2.60		No Insulation	Bare
ENS FF/Master Bed	Concrete Above Plasterboard 19mm	2.40		No Insulation	Ceramic Tiles 8mm
Passage/Master Bed	Concrete Above Plasterboard 19mm	1.40		No Insulation	Cork Tiles or Parquetry 8mm
Lounge Raked/Bedroom 2	Concrete Above Plasterboard 19mm	2.10		No Insulation	Bare
Lounge Raked/Bedroom 3	Concrete Above Plasterboard 19mm	2.40		No Insulation	Bare
Kitchen Raked/Rumpus	Concrete Above Plasterboard 19mm	5.60		No Insulation	Bare
Kitchen Raked/External Store	Concrete Above Plasterboard 19mm	0.80		No Insulation	Bare
Dining	Suspended Concrete Slab 200mm	10.80	Totally Open	Bulk Insulation in Contact with Floor R2	Bare

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R4	No
Garage	Concrete Above Plasterboard	No Insulation	No
Guest Bed	Plasterboard	Bulk Insulation R4	No
Guest Bed	Concrete Above Plasterboard	No Insulation	No
Plant Rm	Plasterboard	Bulk Insulation R4	No
Wine	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
WC	Plasterboard	Bulk Insulation R4	No
Guest ENS	Plasterboard	Bulk Insulation R4	No
Lift LGF	Concrete Above Plasterboard	No Insulation	No
Entry	Plasterboard	Bulk Insulation R4	No
Entry	Concrete Above Plasterboard	No Insulation	No
Stairs GF	Plasterboard	Bulk Insulation R4	No
Stairs GF	Concrete Above Plasterboard	No Insulation	No
Rumpus	Plasterboard	Bulk Insulation R4	No
Rumpus	Concrete Above Plasterboard	No Insulation	No
Lift GF	Plasterboard	Bulk Insulation R4	No
Lift GF	Concrete Above Plasterboard	No Insulation	No
Bath	Plasterboard	Bulk Insulation R4	No
Bath	Concrete Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Concrete Above Plasterboard	No Insulation	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Concrete Above Plasterboard	No Insulation	No
Master Bed	Plasterboard	Bulk Insulation R4	No
Master Bed	Concrete Above Plasterboard	No Insulation	No
Master WIR	Plasterboard	Bulk Insulation R4	No
Master WIR	Concrete Above Plasterboard	No Insulation	No
Master ENS	Plasterboard	Bulk Insulation R4	No
External Store	Plasterboard	Bulk Insulation R4	No
External Store	Concrete Above Plasterboard	No Insulation	No
Stairs FF	Plasterboard	Bulk Insulation R4	No
Kitchen Raked	Plasterboard	Bulk Insulation R4	No
Hall	Plasterboard	Bulk Insulation R4	No
Lift FF	Plasterboard	Bulk Insulation R4	No
Spare Bed/Study	Plasterboard	Bulk Insulation R4	No
ENS FF	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
External Store	Plasterboard	Bulk Insulation R4	No
External Store	Concrete Above Plasterboard	No Insulation	No
Stack	Plasterboard	Bulk Insulation R4	No
Lounge Raked	Plasterboard	Bulk Insulation R4	No
ENS FF	Plasterboard	Bulk Insulation R4	No
Passage	Plasterboard	Bulk Insulation R4	No
Lounge Raked	Plasterboard	Bulk Insulation R4	No
Kitchen Raked	Plasterboard	Bulk Insulation R4	No
Dining	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
WC	1	Exhaust Fans	300	Sealed
Guest ENS	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed
Master ENS	1	Exhaust Fans	300	Sealed
Kitchen Raked	1	Exhaust Fans	300	Sealed
ENS FF	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
Waterproofing Membrane	No Insulation, Only an Air Gap	0.30	Light
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.30	Light

* Refer to glossary.
Generated on 12 May 2023 using BERS Pro v4.4.1.5 (3.21) for 104A Wakehurst Parkway , Elanora Heights , NSW , 2101

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).