

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0005518410-02

Generated on 31 Oct 2021 using AccuRate Sustainability V2.4.3.21

Property

Address 40 Sunrise Road , Palm Beach , NSW ,
2108

Lot/DP Lot 151 DP 6937

NCC Class* 1a

Type New Home

Plans

Main Plan DA100 to DA110 dated 29/10/21

Prepared by Susan Rothwell Architects

Construction and environment

Assessed floor area (m ²)*	Exposure Type	
Conditioned*	450.0	Suburban
Unconditioned*	33.1	NatHERS climate zone
Total	483.0	56
Garage	33.1	



Accredited assessor

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Accreditation No. 20068

Assessor Accrediting Organisation
ABSA

Declaration of interest Declaration completed: no conflicts

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.

5.2
The more stars
the more energy efficient

**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

63.1 MJ/m²
Predicted annual energy load for
heating and cooling based on standard
occupancy assumptions.

For more information on
your dwelling's rating see:
www.nathers.gov.au

Thermal performance

Heating	Cooling
39.9 MJ/m ²	23.2 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.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=cXhYrcSmT. 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
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
LOT-010-01 A	Frameless Al Bi Fold Door-100mm SG 12Clr	5.9	0.60	0.57	0.63
CAN-007-03 W	Timber Double Hung Window SG 4SB	5.0	0.52	0.49	0.55
CAN-014-01 W	Timber Bifold Door SG 3Clr	4.1	0.52	0.49	0.55
CAN-007-06 W	Timber Double Hung Window SG 6.38CP	3.4	0.38	0.36	0.40

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Rumpus	LOT-010-01 A	W107	2400	6010	Other	90	N	None
Cinema	LOT-010-01 A	W101	2400	2150	Other	90	W	None
Bed 3	CAN-007-03 W	W106	2230	3700	Double Hung	30	N	None
Bed 4	CAN-007-03 W	W104	2230	800	Double Hung	45	E	None
Bed 4	CAN-007-03 W	W105	2230	800	Double Hung	45	E	None
Bed 7	CAN-007-03 W	W102	2230	800	Double Hung	45	E	None
Bed 7	CAN-007-03 W	W103	2230	800	Double Hung	45	E	None
Bed 5	CAN-007-03 W	W108	2230	3390	Double Hung	30	N	None
Bed 6	CAN-014-01 W	w111	2400	2150	Other	90	S	None
Bed 6	CAN-007-03 W	W112	2230	760	Double Hung	45	S	None
Ensuite 3	CAN-007-03 W	W106	2230	1300	Double Hung	22	N	None
Ensuite 5	CAN-007-03 W	w109	2230	800	Double Hung	45	W	None
Ensuite 6	CAN-007-03 W	W110	2230	800	Double Hung	45	W	None
Garage	CAN-007-03 W	W202	1930	700	Double Hung	45	E	None
Garage	CAN-007-03 W	W203	1930	700	Double Hung	45	E	None
Entry	CAN-014-01 W	W201	2400	1200	Other	90	S	None
Kitchen	LOT-010-01 A	W212	2400	3735	Other	90	S	None
Kitchen	CAN-007-06 W	W211	2230	4140	Double Hung	16	W	None
Living Dining	CAN-014-01 W	W210	2400	2150	Other	90	S	None
Living Dining	CAN-007-06 W	W208	2230	2280	Double Hung	22	W	None
Living Dining	CAN-007-06 W	W209	2230	2280	Double Hung	22	W	None
Living Dining	CAN-007-06 W	W207	2230	2150	Double Hung	22	N	None
Living Dining	LOT-010-01 A	W206	2400	5900	Other	90	N	None
Living Dining	LOT-010-01 A	W205	2400	4145	Other	90	W	None
Living Dining	LOT-010-01 A	W204	2400	5260	Other	60	N	None
Living Dining	CAN-007-03 W	W203a	1780	900	Double Hung	45	N	None
Living Dining	CAN-007-03 W	W203b	1780	1200	Double Hung	22	E	None
Living Dining	CAN-007-03 W	W203c	1780	1200	Double Hung	22	E	None
Lobby	CAN-007-03 W	W301	1700	900	Double Hung	22	S	None
Bed 1	CAN-007-03 W	W305	2030	1200	Double Hung	22	W	None
Bed 1	LOT-010-01 A	W304	2200	4895	Other	90	N	None
Ensuite 1 dress	CAN-007-03 W	W303	2030	2660	Double Hung	45	N	None
Ensuite 1 dress	CAN-007-03 W	W302	1200	700	Double Hung	45	E	None
Bed 2	CAN-007-03 W	W307	2030	900	Double Hung	45	W	None
Bed 2	LOT-010-01 A	W306	2200	3735	Other	90	N	None
Ensuite 2	CAN-007-03 W	W308	2030	800	Double Hung	22	W	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	2150	5000	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	50	Medium	Polyethylene foam (k = 0.04): R0.1	Yes
EW-002	Sandstone/Concrete block	50	Medium		No
EW-003	Sandstone/Concrete block	50	Medium		No
EW-004	Brick wall/Concrete wall	50	Medium	Polyethylene foam (k = 0.04): R0.1	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Rumpus	EW-001	2500	6400	N	3800	Yes
Cinema	EW-002	2500	5900	S		No
Cinema	EW-001	2500	3580	W	1200	Yes
Laundry	EW-001	2500	1850	E		No
Laundry	EW-002	2500	5600	S		No
LG lift	EW-003	2900	3300	S		No
Bed 3	EW-001	2500	3990	N		No
Bed 3	EW-001	2500	800	W	10700	Yes
Bed 3	EW-001	2500	4200	E		No
Bed 4	EW-001	2500	4010	E		No
Bed 7	EW-001	2500	4010	E		No
Bed 5	EW-001	2500	1750	E	6400	Yes
Bed 5	EW-001	2500	3730	N	1700	Yes
Bed 5	EW-001	2500	4110	W		No
Bed 6	EW-001	2500	4110	W		No
Bed 6	EW-001	2500	3600	S	4400	Yes
Ensuite 3	EW-001	2500	1500	N		No
Ensuite 3	EW-001	2500	2470	W	10700	Yes
Ensuite 5	EW-001	2500	1500	W		No
Ensuite 6	EW-001	2500	1500	W		No
Garage	EW-001	2150	6000	E		No
Garage	EW-001	2600	5600	S		No
GF Lift	EW-004	3200	1650	S		No
Entry	EW-001	2700	1710	S	1800	Yes
Kitchen	EW-001	2700	450	E	1800	Yes
Kitchen	EW-001	2700	4160	S	1050	Yes
Kitchen	EW-001	2700	6500	W		No
Living Dining	EW-001	2700	2300	S		No
Living Dining	EW-001	2700	6200	W		No
Living Dining	EW-001	2700	10400	N		No
Living Dining	EW-001	2700	5400	W		No
Living Dining	EW-001	2700	5600	N		No
Living Dining	EW-001	2700	4000	E		No
Living Dining	EW-001	2700	1200	N		No
Living Dining	EW-001	2700	4400	E		No
1stFl Lift	EW-004	2500	1690	S		No
1stFl Lift	EW-004	2500	1600	E		No

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Lobby	EW-001	2500	1200	E		No
Lobby	EW-001	2500	1710	S		No
Bed 1	EW-001	2300	2950	W		No
Bed 1	EW-001	2300	5300	N		No
Ensuite 1 dress	EW-001	2300	3000	N		No
Ensuite 1 dress	EW-001	2300	5710	E		No
Ensuite 1 dress	EW-001	2300	4600	S		No
Bed 2	EW-001	2700	4920	W		No
Bed 2	EW-001	2300	4160	N		No
Ensuite 2	EW-001	2300	1530	W		No
Ensuite 2	EW-001	2300	4160	S		No
Ensuite 2	EW-001	2300	450	E		No

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-001	Brick wall	301.53	
IW-002	Concrete wall	28.73	

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Rumpus/Ground	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	10.50		R1.0	Ceramic tile
Rumpus/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	48.05		R1.0	Ceramic tile
Cinema/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	1.50		R1.0	Ceramic tile
Cinema/Ground	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	31.90		R1.0	Ceramic tile
Laundry/Ground	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	9.41		R1.0	Ceramic tile
LG lift/Ground	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	2.60		R1.0	Ceramic tile
Bed 3/Outdoor Air	LG Concrete Slab 200 mm: carpet/bare R1 insulation	17.29		R1.0	Carpet 10 + felt underlay 10
Bed 4/Ground	LG Concrete Slab 200 mm: carpet/bare R1 insulation	2.30		R1.0	Carpet 10 + felt underlay 10
Bed 4/Outdoor Air	LG Concrete Slab 200 mm: carpet/bare R1 insulation	13.30		R1.0	Carpet 10 + felt underlay 10
Bed 7/Ground	LG Concrete Slab 200 mm: carpet/bare R1 insulation	15.03		R1.0	Carpet 10 + felt underlay 10
Bed 5/Outdoor Air	LG Concrete Slab 200 mm: carpet/bare R1 insulation	16.82		R1.0	Carpet 10 + felt underlay 10
Bed 6/Outdoor Air	LG Concrete Slab 200 mm: carpet/bare R1 insulation	16.70		R1.0	Carpet 10 + felt underlay 10
Ensuite 3/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	3.53		R1.0	Ceramic tile

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Ensuite 4/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	3.93		R1.0	Ceramic tile
Ensuite 7/Ground	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	2.00		R1.0	Ceramic tile
Ensuite 7/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	1.93		R1.0	Ceramic tile
Ensuite 5/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	3.90		R1.0	Ceramic tile
Ensuite 6/Outdoor Air	LG Concrete Slab 200 mm: ceramic tiles/bare R1 insulation	3.90		R1.0	Ceramic tile
Garage/Laundry	GF concrete/PB ceiling below	9.41			
Garage/Bed 7	GF concrete/PB ceiling below	4.44			
Garage/Ground	GF Concrete Slab 200 mm: bare/bare	19.20			
GF Lift/LG lift	GF Concrete Slab 200 mm: bare/bare	2.60			
Entry/Rumpus	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	9.58			Ceramic tile
Entry/Cinema	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	15.40			Ceramic tile
Kitchen/Cinema	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	18.00			Ceramic tile
Kitchen/Bed 6	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	2.80			Ceramic tile
Kitchen/Outdoor Air	GF concrete/PB ceiling below	4.20			
Living Dining/Rumpus	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	53.55			Ceramic tile
Living Dining/Bed 3	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	11.00			Ceramic tile
Living Dining/Bed 4	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	15.60			Ceramic tile
Living Dining/Bed 7	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	10.59			Ceramic tile
Living Dining/Bed 5	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	4.70			Ceramic tile
Living Dining/Bed 6	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	9.30			Ceramic tile
Living Dining/Ensuite 3	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	3.53			Ceramic tile
Living Dining/Ensuite 4	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	3.93			Ceramic tile
Living Dining/Ensuite 7	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	3.93			Ceramic tile
Living Dining/Ensuite 5	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	3.90			Ceramic tile
Living Dining/Ensuite 6	GF Concrete Slab 200 mm: ceramic tiles/plasterboard	3.90			Ceramic tile
1st Fl Lift/GF Lift	1st Conc fl 200mm: tile/Ceiling : 7	2.60			Ceramic tile
Lobby/Entry	1st Conc fl 200mm: tile/Ceiling : 7	14.87			Ceramic tile
Bed 1/Garage	1st Fl Concrete Slab 200 mm: carpet/plasterboard	1.50			Carpet 10 + felt underlay 10
Bed 1/Entry	1st Fl Concrete Slab 200 mm: carpet/plasterboard	6.63			Carpet 10 + felt underlay 10
Bed 1/Living Dining	1st Fl Concrete Slab 200 mm: carpet/plasterboard	12.00			Carpet 10 + felt underlay 10
Ensuite 1 dress/Living Dining	1st Conc fl 200mm: tile/Ceiling : 7	9.60			Ceramic tile
Ensuite 1 dress/Garage	1st Conc fl 200mm: tile/Ceiling : 7	9.50			Ceramic tile

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed 2/Kitchen	1st FI Concrete Slab 200 mm: carpet/plasterboard	19.45			Carpet 10 + felt underlay 10
Ensuite 2/Kitchen	1st Conc fl 200mm: tile/Ceiling : 7	6.76			Ceramic tile

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Living Dining/Rumpus	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Entry/Rumpus	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Kitchen/Cinema	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Entry/Cinema	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Garage/Laundry	GF concrete/PB ceiling below		No
GF Lift/LG lift	GF Concrete Slab 200 mm: bare/bare		No
Living Dining/Bed 3	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Bed 4	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Bed 7	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Garage/Bed 7	GF concrete/PB ceiling below		No
Living Dining/Bed 5	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Kitchen/Bed 6	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Bed 6	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Ensuite 3	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Ensuite 4	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Ensuite 7	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Ensuite 5	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Living Dining/Ensuite 6	GF Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Bed 1/Garage	1st FI Concrete Slab 200 mm: carpet/plasterboard		No
Ensuite 1 dress/Garage	1st Conc fl 200mm: tile/Ceiling : 7		No
1stFI Lift/GF Lift	1st Conc fl 200mm: tile/Ceiling : 7		No
Lobby/Entry	1st Conc fl 200mm: tile/Ceiling : 7		No
Bed 1/Entry	1st FI Concrete Slab 200 mm: carpet/plasterboard		No
Bed 2/Kitchen	1st FI Concrete Slab 200 mm: carpet/plasterboard		No
Ensuite 2/Kitchen	1st Conc fl 200mm: tile/Ceiling : 7		No
Bed 1/Living Dining	1st FI Concrete Slab 200 mm: carpet/plasterboard		No
Ensuite 1 dress/Living Dining	1st Conc fl 200mm: tile/Ceiling : 7		No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
Rumpus	9	Downlight		Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Cinema	8	Downlight		Sealed
Laundry	3	Downlight		Sealed
Bed 3	6	Downlight		Sealed
Bed 4	6	Downlight		Sealed
Bed 7	5	Downlight		Sealed
Bed 5	5	Downlight		Sealed
Bed 6	6	Downlight		Sealed
Ensuite 3	2	Downlight		Sealed
Ensuite 4	2	Downlight		Sealed
Ensuite 7	2	Downlight		Sealed
Ensuite 5	2	Downlight		Sealed
Ensuite 6	2	Downlight		Sealed
Garage	4	Downlight		Sealed
Entry	4	Downlight		Sealed
Kitchen	6	Downlight		Sealed
Living Dining	16	Downlight		Sealed
Lobby	4	Downlight		Sealed
Bed 1	4	Downlight		Sealed
Ensuite 1 dress	6	Downlight		Sealed
Bed 2	4	Downlight		Sealed
Ensuite 2	2	Downlight		Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Rumpus	2	1400
Bed 3	1	1400
Bed 4	1	1400
Bed 7	1	1400
Bed 5	1	1400
Bed 6	1	1400
Bed 1	1	1400
Bed 2	1	1400

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slate roof tiles raked ceiling	R3.5	50	Medium
LG: Terrace above insulated below R1.5	R1.5	50	Medium

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
GF Terrace above insulated below R1.5	R1.5	50	Medium
Concrete membrane roof Insulated above R1.5	R1.5	50	Medium
Planter above insulated below R1.5	R5.6	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).