Nationwide House Energy Rating Scheme — Class 2 summary
NatHERS Certificate No. 0006139530

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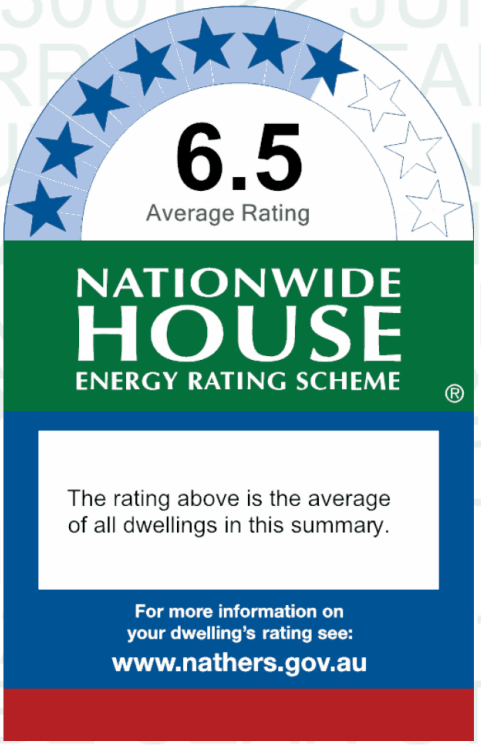

Property

Address 142 Ocean Street , Narrabeen , NSW , 2101

Lot/DP Lot 12 Sec 47 DP 111254

NatHERS climate zone 56

Accredited assessor

B Carr

STS

ENQUIRIES@SUSTAINABLETHERMALSOLUTIONS.COM.AU

0420312721

Accreditation No. DMN/12/1457

Assessor Accrediting Organisation Design Matters National

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=AVyhvlgWS . When using either link, ensure you are visiting hstar.com.au

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m^2/p.a.)	Cooling load (MJ/m^2/p.a.)	Total load (MJ/m^2/p.a.)	Star rating
0006139497	1	25.27	4.61	29.88	7.7
0006139505	2	19.17	10.06	29.23	7.7
0006139513	3	42.34	19.91	62.25	5.2
0006139521	4	37.93	21.39	59.32	5.4
Average		31.18	13.99	45.17	6.5

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated buildings 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.

Explanatory Notes

About this report

This summary rating is the average rating of all NCC Class 2 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the 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. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

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). 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.

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, input and creation of the NatHERS Certificate is by the assessor. 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.

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006139497

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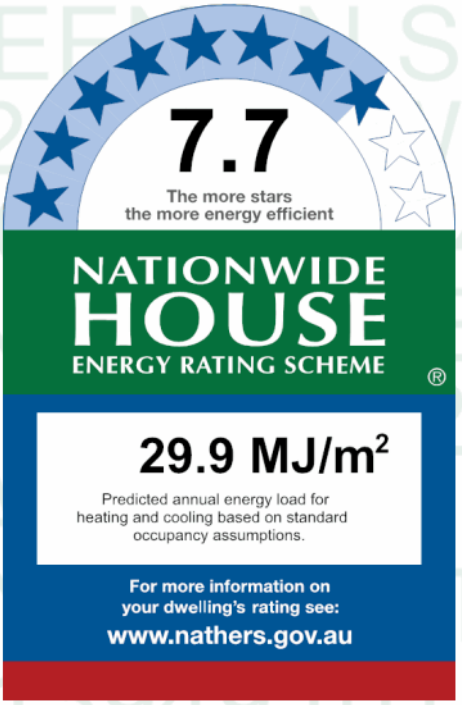

Property

Address	Unit 1, 142 Ocean Street , Narrabeen , NSW , 2101
Lot/DP	Lot 12 Sec 47 DP 111254
NCC Class*	2
Type	New Home

Plans

Main Plan	0586/1.06.21
Prepared by	PopovBass

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	643.8	Suburban
Unconditioned*	4.5	**NatHERS climate zone**
Total	648.3	56
Garage		

Thermal performance

Heating	Cooling
25.3 MJ/m^2	4.6 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	B Carr
Business name	STS
Email	ENQUIRIES@SUSTAINABLETHERMALSOLUTIONS.COM.AU
Phone	0420312721
Accreditation No.	DMN/12/1457
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

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Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

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

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

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	W111	2700	2670	Sliding	45	E	None
Kitchen/Living	ALM-002-01 A	W110	2700	4160	Sliding	60	N	None
Kitchen/Living	ALM-002-01 A	W109	1800	1930	Sliding	45	E	None
Laundry	ALM-001-01 A	W107	2700	960	Casement	90	W	None
Bed 1	ALM-002-01 A	W103	2700	3740	Sliding	40	N	None
Bed 2	ALM-002-01 A	W104	2700	3160	Sliding	40	N	None
Bed 2	ALM-002-01 A	W105	2700	1800	Sliding	45	E	None
Media	ALM-002-01 A	W106	1950	1820	Sliding	45	N	None
Entry/Hall	ALM-002-01 A	W115	2700	5600	Sliding	60	S	None
Entry/Hall	ALM-002-01 A	W113	2700	735	Other	00	E	None
Ens/WIR	ALM-002-01 A	W102	1800	810	Double Hung	45	N	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								

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry/Hall	2100	820	90	W
Car Park	2200	3700	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Ceramic tile/Plasterboard	30	Light	Glass fibre batt: R2.5	Yes
EW-002	Timber/Plasterboard	50	Medium	Glass fibre batt: R2.5	Yes
EW-003	Concrete wall/Plasterboard	50	Medium	Glass fibre batt: R2.5	No
EW-004	Retaining Concrete wall	50	Medium		No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-002	2700	8000	S		No
Kitchen/Living	EW-001	2700	4700	E	1300	Yes
Kitchen/Living	EW-002	2700	4161	N	2800	Yes
Kitchen/Living	EW-002	2700	2350	E	5545	Yes
Kitchen/Living	EW-002	2700	3856	N		No
Laundry	EW-002	2700	1600	N		No
Laundry	EW-002	2700	1660	W	2100	Yes
Bed 1	EW-002	2700	3741	N	1000	Yes
Bed 2	EW-002	2700	3161	N	1000	Yes
Bed 2	EW-002	2700	1801	E	2100	Yes
Bed 2	EW-002	2700	500	N	1000	Yes
Media	EW-002	2700	1821	N	1000	Yes
Entry/Hall	EW-001	2700	5601	S	1000	Yes
Entry/Hall	EW-002	2700	736	E		No
Entry/Hall	EW-002	2700	3163	S		No
Entry/Hall	EW-003	2700	1450	W	12000	Yes
Ens/WIR	EW-002	2700	1850	N	1000	Yes
Ens/WIR	EW-003	2700	6540	W	4230	Yes
Ens/WIR	EW-003	2700	3600	S	1800	Yes
Car Park	EW-004	2600	41800	S		No
Car Park	EW-004	2600	41800	N		No
Car Park	EW-004	2600	12200	W		No
Car Park	EW-004	2600	12200	E		No

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	101.68	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK	47.20			
Laundry/Car Park	Concrete Slab 200 mm: ceramic tiles/bare	4.50			Ceramic tile
Bed 1/Car Park	Concrete Slab 200 mm: carpet/bare	16.50			Carpet 10 + rubber underlay 8
Bed 2/Car Park	Concrete Slab 200 mm: carpet/bare	12.40			Carpet 10 + rubber underlay 8
Media/Car Park	Concrete Slab 200 mm: timber/bare	15.40			
Entry/Hall/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK-V3	23.50			
Ens/WIR/Car Park	Concrete Slab 200 mm: carpet/bare	7.50			Carpet 10 + rubber underlay 8
Ens/WIR/Car Park	Concrete Slab 200 mm: ceramic tiles/bare-v2	8.30			Ceramic tile
Car Park/Ground	Concrete Slab 200 mm: bare/bare	513.00			

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Kitchen/Living	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard		No
Neighbour/Laundry	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard		No
Neighbour/Bed 1	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard		No
Neighbour/Bed 2	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard		No
Neighbour/Media	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard		No
Neighbour/Entry/Hall	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard		No
Neighbour/Ens/WIR	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard		No
Kitchen/Living/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK		No
Laundry/Car Park	Concrete Slab 200 mm: ceramic tiles/bare		No
Bed 1/Car Park	Concrete Slab 200 mm: carpet/bare		No
Bed 2/Car Park	Concrete Slab 200 mm: carpet/bare		No
Media/Car Park	Concrete Slab 200 mm: timber/bare		No
Entry/Hall/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK-V3		No
Ens/WIR/Car Park	Concrete Slab 200 mm: carpet/bare		No
Ens/WIR/Car Park	Concrete Slab 200 mm: ceramic tiles/bare-v2		No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	19	Downlight		Sealed
Laundry	2	Downlight		Sealed
Bed 1	6	Downlight		Sealed
Bed 2	5	Downlight		Sealed
Media	6	Downlight		Sealed
Entry/Hall	10	Downlight		Sealed
Ens/WIR	6	Downlight		Sealed
Ens/WIR	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
No Data Available			

* 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

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006139505

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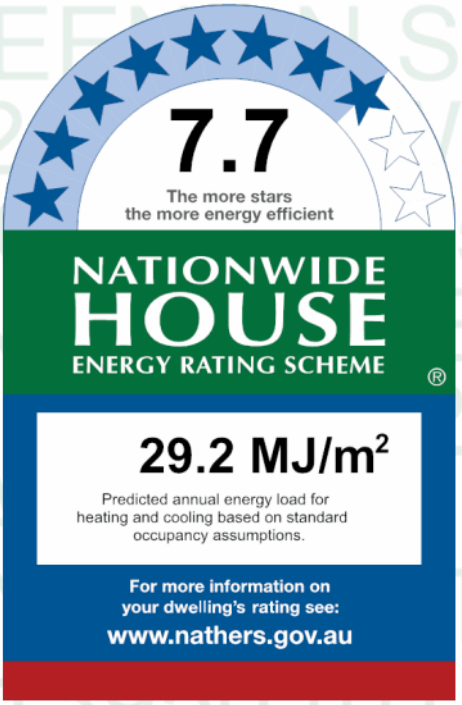

Property

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Lot/DP	Lot 12 Sec 47 DP 111254
NCC Class*	2
Type	New Home

Plans

Main Plan	0586/1.06.21
Prepared by	PopovBass

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	692.4	Suburban
Unconditioned*	4.5	**NatHERS climate zone**
Total	696.9	56
Garage		

Thermal performance

Heating	Cooling
19.2 MJ/m^2	**10.1** MJ/m^2

Accredited assessor

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Business name	STS
Email	ENQUIRIES@SUSTAINABLETHERMALSOLUTIONS.COM.AU
Phone	0420312721
Accreditation No.	DMN/12/1457
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

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Windows

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

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

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*
Rumpus	ALM-002-01 A	W003	1700	751	Other	00	W	None
Rumpus	ALM-002-01 A	W002	2600	4845	Sliding	45	W	None
Rumpus	ALM-002-01 A	W001	2600	4010	Sliding	45	N	None
Kitchen/Living	ALM-002-01 A	W111	2700	2670	Sliding	45	W	None
Kitchen/Living	ALM-002-01 A	W110	2700	4160	Sliding	60	N	None
Kitchen/Living	ALM-002-01 A	W109	1800	1930	Sliding	45	W	None
Kitchen/Living	ALM-002-01 A	W108	700	3060	Sliding	45	N	None
Laundry	ALM-001-01 A	W107	2700	960	Sliding	90	E	None
Bed 1	ALM-002-01 A	W103	2700	3740	Sliding	40	N	None
Bed 2	ALM-002-01 A	W104	2700	3160	Sliding	40	N	None
Bed 2	ALM-002-01 A	W105	2700	1800	Sliding	45	W	None
Bed 3	ALM-002-01 A	W106	1950	1820	Sliding	45	N	None
Entry/Hall	ALM-002-01 A	W112	2700	3725	Sliding	60	S	None
Entry/Hall	ALM-002-01 A	W113	2700	735	Other	00	W	None
Ens/WIR	ALM-002-01 A	W102	1800	810	Double Hung	45	N	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	

* Refer to glossary.

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
Entry/Hall	2100	820	90	E
Car Park	2200	3700	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Ceramic tile/Plasterboard	30	Light	Glass fibre batt: R2.5	Yes
EW-002	Timber/Plasterboard	50	Medium	Glass fibre batt: R2.5	Yes
EW-003	Concrete wall/Plasterboard	50	Medium	Glass fibre batt: R2.5	No
EW-004	Retaining Concrete wall	50	Medium		No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Rumpus	EW-002	2600	4900	S		No
Rumpus	EW-001	2600	752	W	300	Yes
Rumpus	EW-001	2600	700	S	300	Yes
Rumpus	EW-001	2600	6925	W	1300	Yes
Rumpus	EW-002	2600	4011	N	500	Yes
Kitchen/Living	EW-002	2700	700	E	3700	Yes
Kitchen/Living	EW-002	2700	7000	S		No
Kitchen/Living	EW-001	2700	752	W	300	Yes
Kitchen/Living	EW-001	2700	700	S	300	Yes
Kitchen/Living	EW-001	2700	4700	W	1300	Yes
Kitchen/Living	EW-002	2700	4161	N	2800	Yes
Kitchen/Living	EW-002	2700	2350	W	5545	Yes
Kitchen/Living	EW-002	2700	3856	N		No
Laundry	EW-002	2700	1600	N		No
Laundry	EW-002	2700	1660	E	2100	Yes
Bed 1	EW-002	2700	3741	N	1000	Yes
Bed 2	EW-002	2700	3161	N	1000	Yes
Bed 2	EW-002	2700	1801	W	2100	Yes

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bed 2	EW-002	2700	500	N	2400	Yes
Bed 3	EW-002	2700	1821	N	2400	Yes
Entry/Hall	EW-001	2700	6000	S	1000	Yes
Entry/Hall	EW-002	2700	736	W		No
Entry/Hall	EW-002	2700	3122	S		No
Entry/Hall	EW-003	2700	1450	E	12000	Yes
Ens/WIR	EW-002	2700	1850	N	1000	Yes
Ens/WIR	EW-003	2700	6540	E	4230	Yes
Ens/WIR	EW-003	2700	3600	S	1800	Yes
Car Park	EW-004	2600	41800	S		No
Car Park	EW-004	2600	41800	N		No
Car Park	EW-004	2600	12200	E		No
Car Park	EW-004	2600	12200	W		No

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	101.68	
IW-002	Concrete wall/Plasterboard	25.16	Glass fibre batt: R2.5

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Rumpus/Ground	Concrete Slab 200 mm: timber/bare	45.30			
Kitchen/Living/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK	14.50			
Kitchen/Living/Rumpus	Concrete Slab 200 mm: timber/bare-CARPARK-V3	39.00			
Laundry/Car Park	Concrete Slab 200 mm: ceramic tiles/bare	4.50			Ceramic tile
Bed 1/Car Park	Concrete Slab 200 mm: carpet/bare	16.50			Carpet 10 + rubber underlay 8
Bed 2/Car Park	Concrete Slab 200 mm: carpet/bare	12.40			Carpet 10 + rubber underlay 8
Bed 3/Car Park	Concrete Slab 200 mm: carpet/bare	15.40			Carpet 10 + rubber underlay 8
Entry/Hall/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK-V3	23.50			
Ens/WIR/Car Park	Concrete Slab 200 mm: carpet/bare	7.50			Carpet 10 + rubber underlay 8
Ens/WIR/Car Park	Concrete Slab 200 mm: ceramic tiles/bare-v2	8.30			Ceramic tile
Car Park/Ground	Concrete Slab 200 mm: bare/bare	513.00			

* Refer to glossary.

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living/Rumpus	Concrete Slab 200 mm: timber/bare-CARPARK-V3		No
Neighbour/Kitchen/Living	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard		No
Neighbour/Laundry	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard		No
Neighbour/Bed 1	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard		No
Neighbour/Bed 2	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard		No
Neighbour/Bed 3	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard		No
Neighbour/Entry/Hall	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard		No
Neighbour/Ens/WIR	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard		No
Kitchen/Living/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK		No
Laundry/Car Park	Concrete Slab 200 mm: ceramic tiles/bare		No
Bed 1/Car Park	Concrete Slab 200 mm: carpet/bare		No
Bed 2/Car Park	Concrete Slab 200 mm: carpet/bare		No
Bed 3/Car Park	Concrete Slab 200 mm: carpet/bare		No
Entry/Hall/Car Park	Concrete Slab 200 mm: timber/bare-CARPARK-V3		No
Ens/WIR/Car Park	Concrete Slab 200 mm: carpet/bare		No
Ens/WIR/Car Park	Concrete Slab 200 mm: ceramic tiles/bare-v2		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Rumpus	20	Downlight		Sealed
Kitchen/Living	21	Downlight		Sealed
Laundry	2	Downlight		Sealed
Bed 1	6	Downlight		Sealed
Bed 2	5	Downlight		Sealed
Bed 3	6	Downlight		Sealed
Entry/Hall	10	Downlight		Sealed
Ens/WIR	6	Downlight		Sealed
Ens/WIR	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
as_ROOF-B013.rof #1001 © Concrete slab 200mm - Drained Tile walking surface - no insulation - Susp. Ceiling under		50	Medium

Explanatory notes

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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.

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006139513

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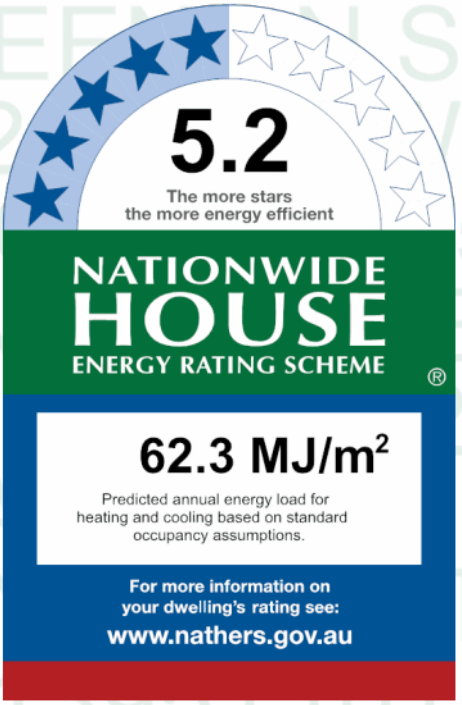

Property

Address	Unit 3, 142 Ocean Street , Narrabeen , NSW , 2101
Lot/DP	Lot 12 Sec 47 DP 111254
NCC Class*	2
Type	New Home

Plans

Main Plan	0586/1.06.21
Prepared by	PopovBass

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	130.8	Suburban
Unconditioned*	4.5	**NatHERS climate zone**
Total	135.3	56
Garage		

Thermal performance

Heating	Cooling
42.3 MJ/m^2	19.9 MJ/m^2

Accredited assessor

Name	B Carr
Business name	STS
Email	ENQUIRIES@SUSTAINABLETHERMALSOLUTIONS.COM.AU
Phone	0420312721
Accreditation No.	DMN/12/1457
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

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=zNerTkwtQ.
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

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E - Clear	4.3	0.53	0.50	0.56

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W111	2700	2670	Sliding	45	E	None
Kitchen/Living	ALM-004-03 A	W110	2700	4160	Sliding	60	N	None
Kitchen/Living	ALM-004-03 A	W109	1800	1930	Sliding	45	E	None
Kitchen/Living	ALM-004-03 A	W219	700	3060	Sliding	45	N	None
Laundry	ALM-001-01 A	W107	2700	960	Casement	90	W	None
Bed 1	ALM-004-03 A	W103	2700	3740	Sliding	10	N	None
Bed 2	ALM-004-03 A	W104	2700	3160	Sliding	10	N	None
Bed 2	ALM-004-03 A	W105	2700	1800	Sliding	45	E	None
Media	ALM-004-03 A	W106	1950	1820	Sliding	45	N	None
Entry/Hall	ALM-004-03 A	W115	2700	5600	Sliding	60	S	None
Entry/Hall	ALM-004-03 A	W113	2700	735	Other	00	E	None
Ens/WIR	ALM-004-03 A	W102	1800	810	Double Hung	45	N	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								

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry/Hall	2100	820	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Ceramic tile/Plasterboard	30	Light	Glass fibre batt: R2.5	Yes
EW-002	Timber/Plasterboard	50	Medium	Glass fibre batt: R2.5	Yes
EW-003	Concrete wall/Plasterboard	50	Medium	Glass fibre batt: R2.5	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-002	2700	8000	S		No
Kitchen/Living	EW-001	2700	4700	E	1300	Yes
Kitchen/Living	EW-002	2700	4161	N	2800	Yes
Kitchen/Living	EW-002	2700	2350	E	5545	Yes
Kitchen/Living	EW-002	2700	3856	N		No
Laundry	EW-002	2700	1600	N		No
Laundry	EW-002	2700	1660	W	2100	Yes
Bed 1	EW-002	2700	3741	N	1000	Yes
Bed 2	EW-002	2700	3161	N	1000	Yes
Bed 2	EW-002	2700	1801	E	2100	Yes
Bed 2	EW-002	2700	500	N	1000	Yes
Media	EW-002	2700	1821	N	1000	Yes
Entry/Hall	EW-001	2700	5601	S	1000	Yes
Entry/Hall	EW-002	2700	736	E		No
Entry/Hall	EW-002	2700	3163	S		No
Entry/Hall	EW-003	2700	1450	W	12000	Yes
Ens/WIR	EW-002	2700	1850	N	1000	Yes
Ens/WIR	EW-003	2700	6540	W	4230	Yes
Ens/WIR	EW-003	2700	3600	S	1800	Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	101.68	

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living/Neighbour	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard	47.20			
Laundry/Neighbour	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard	4.50			Ceramic tile
Bed 1/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	16.50			Carpet 10 + rubber underlay 8
Bed 2/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	12.40			Carpet 10 + rubber underlay 8
Media/Neighbour	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard	15.40			
Entry/Hall/Neighbour	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard	23.50			
Ens/WIR/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	7.30			Carpet 10 + rubber underlay 8
Ens/WIR/Neighbour	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard	8.50			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	19	Downlight		Sealed
Laundry	2	Downlight		Sealed
Bed 1	6	Downlight		Sealed
Bed 2	5	Downlight		Sealed
Media	6	Downlight		Sealed
Entry/Hall	10	Downlight		Sealed
Ens/WIR	6	Downlight		Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
as_ROOF-B013.rof #2016 © Concrete slab 200mm - Drained Tile walking surface - R2.5 insulation under slab - Susp. Ceiling under	R2.5	50	Medium

* Refer to glossary.

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006139521

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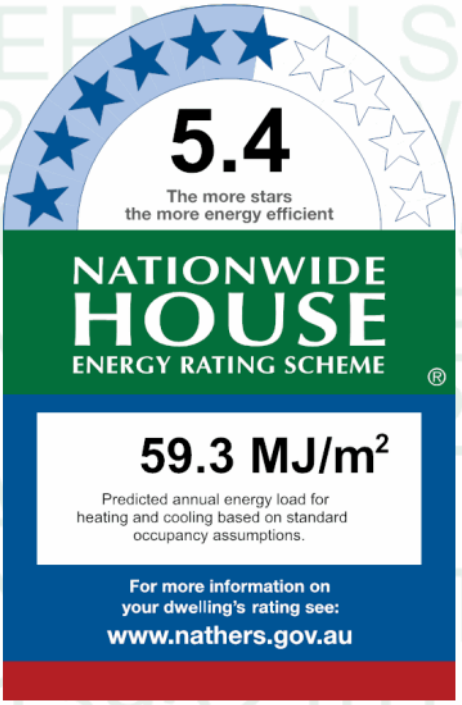

Property

Address	Unit 4, 142 Ocean Street , Narrabeen , NSW , 2101
Lot/DP	Lot 12 Sec 47 DP 111254
NCC Class*	2
Type	New Home

Plans

Main Plan	0586/1.06.21
Prepared by	PopovBass

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	130.3	Suburban
Unconditioned*	4.5	**NatHERS climate zone**
Total	134.8	56
Garage		

Thermal performance

Heating	Cooling
37.9 MJ/m^2	21.4 MJ/m^2

Accredited assessor

Name	B Carr
Business name	STS
Email	ENQUIRIES@SUSTAINABLETHERMALSOLUTIONS.COM.AU
Phone	0420312721
Accreditation No.	DMN/12/1457
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

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=HPqoEXNRq.
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

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E - Clear	4.3	0.53	0.50	0.56

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W111	2700	2670	Sliding	45	W	None
Kitchen/Living	ALM-004-03 A	W110	2700	4160	Sliding	60	N	None
Kitchen/Living	ALM-004-03 A	W109	1800	1930	Sliding	45	W	None
Kitchen/Living	ALM-004-03 A	W108	700	3060	Sliding	45	N	None
Laundry	ALM-001-01 A	W107	2700	960	Casement	90	E	None
Bed 1	ALM-004-03 A	W103	2700	3740	Sliding	10	N	None
Bed 2	ALM-004-03 A	W104	2700	3160	Sliding	10	N	None
Bed 2	ALM-004-03 A	W105	2700	1800	Sliding	45	W	None
Bed 3	ALM-004-03 A	W106	1950	1820	Sliding	45	N	None
Entry/Hall	ALM-004-03 A	W212	2700	3725	Sliding	60	S	None
Entry/Hall	ALM-004-03 A	W113	2700	735	Other	00	W	None
Ens/WIR	ALM-004-03 A	W102	1800	810	Double Hung	45	N	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								

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry/Hall	2100	820	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Ceramic tile/Plasterboard	30	Light	Glass fibre batt: R2.5	Yes
EW-002	Timber/Plasterboard	50	Medium	Glass fibre batt: R2.5	Yes
EW-003	Concrete wall/Plasterboard	50	Medium	Glass fibre batt: R2.5	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-002	2700	7000	S	1000	Yes
Kitchen/Living	EW-001	2700	4700	W	1300	Yes
Kitchen/Living	EW-002	2700	4161	N	2800	Yes
Kitchen/Living	EW-002	2700	2350	W	5545	Yes
Kitchen/Living	EW-002	2700	3856	N		No
Laundry	EW-002	2700	1600	N		No
Laundry	EW-002	2700	1660	E	1440	Yes
Bed 1	EW-002	2700	3741	N	1000	Yes
Bed 2	EW-002	2700	3161	N	1000	Yes
Bed 2	EW-002	2700	1801	W	1440	Yes
Bed 2	EW-002	2700	500	N	2400	Yes
Bed 3	EW-002	2700	1821	N	2400	Yes
Entry/Hall	EW-001	2700	6200	S	1000	Yes
Entry/Hall	EW-002	2700	736	W		No
Entry/Hall	EW-002	2700	3122	S		No
Entry/Hall	EW-003	2700	1450	E	12000	Yes
Ens/WIR	EW-002	2700	1850	N	1000	Yes
Ens/WIR	EW-003	2700	6540	E	4230	Yes
Ens/WIR	EW-003	2700	3600	S	1800	Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	101.68	

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living/Neighbour	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard	46.70			
Laundry/Neighbour	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard	4.50			Ceramic tile
Bed 1/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	16.50			Carpet 10 + rubber underlay 8
Bed 2/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	12.40			Carpet 10 + rubber underlay 8
Bed 3/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	15.40			Carpet 10 + rubber underlay 8
Entry/Hall/Neighbour	Concrete Suspended Slab 200 mm: timber/air gap/plasterboard	23.50			
Ens/WIR/Neighbour	Concrete Suspended Slab 200 mm: carpet/air gap/plasterboard	7.30			Carpet 10 + rubber underlay 8
Ens/WIR/Neighbour	Concrete Suspended Slab 200 mm: ceramic tile/air gap/plasterboard	8.50			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
No Data Available			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	21	Downlight		Sealed
Laundry	2	Downlight		Sealed
Bed 1	6	Downlight		Sealed
Bed 2	5	Downlight		Sealed
Bed 3	6	Downlight		Sealed
Entry/Hall	10	Downlight		Sealed
Ens/WIR	6	Downlight		Sealed
Ens/WIR	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
as_ROOF-B013.rof #2016 © Concrete slab 200mm - Drained Tile walking surface - R2.5 insulation under slab - Susp. Ceiling under	R2.5	50	Medium

* 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.
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