Nationwide House Energy Rating Scheme — Multiple Class1-dwelling summary NatHERS Certificate No. 0007973530

Generated on 19 Aug 2022 using BERS Pro v4.4.1.5 (3.21)

Property

Address 113-115 Springwood Street , Ettalong Beach , NSW , 2257

Lot/DP 87A/411980

NatHERS climate zone 15

Accredited assessor

Terry Chapman

CHAPMAN ENVIRONMENTAL SERVICES PTY LTD

terry@basixcertificates.com.au

0414 265 292

Accreditation No. 20920

Assessor Accrediting Organisation ABSA

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=OlnSQOShO . 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
0007973498	1	51.3	21.5	72.9	5.7
0007973506	2	48.7	15.7	64.4	6.1
0007973514	3	50.2	16	66.2	6
0007973522	4	52.4	29.4	81.8	5.2

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 is a summary of NCC Class 1 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.

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0007973498

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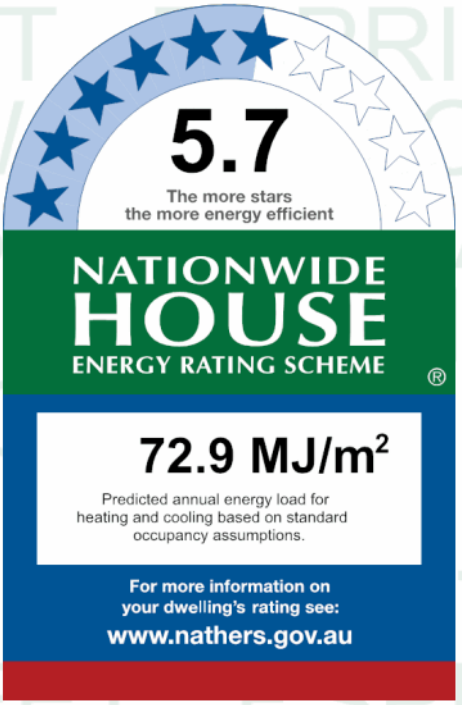

Property

Address	Unit 1, 113-115 Springwood Street , Ettalong Beach , NSW , 2257
Lot/DP	87A/411980
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	21087
Prepared by	CKDS Architecture

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	111.0	Suburban
Unconditioned*	39.0	**NatHERS climate zone**
Total	151.0	15
Garage	39.0	

Thermal performance

Heating	Cooling
51.3	**21.5**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Terry Chapman
Business name	CHAPMAN ENVIRONMENTAL SERVICES PTY LTD
Email	terry@basixcertificates.com.au
Phone	0414 265 292
Accreditation No.	20920
Assessor Accrediting Organisation	ABSA
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.

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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

I have modeled the shading in accordance with NatHERS principles

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
AWS-068-03 A	AWS-068-03 A RES SERIES 517 FIXED WINDOW SG 638ComPlsClr	4.4	0.62	0.59	0.65
AWS-011-10 A	AWS-011-10 A 541/542 Al Sliding Door SG 6EVanClr	4.5	0.54	0.51	0.57
AWS-059-07 A	AWS-059-07 A Commercial Series 456 Awning Windows SG 6.38CPClr	5.4	0.50	0.48	0.53

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	AWS-068-03 A	n/a	2325	1000	n/a	00	N	No
Kitchen/Living	AWS-011-10 A	n/a	2100	1860	n/a	45	E	No
Kitchen/Living	AWS-011-10 A	n/a	2100	1800	n/a	45	E	No
Kitchen/Living	AWS-011-10 A	n/a	2900	4400	n/a	60	S	No
Kitchen/Living	AWS-068-03 A	n/a	1250	4400	n/a	00	S	No
Bedroom 2	AWS-059-07 A	n/a	1800	900	n/a	90	S	No
Master Bed	AWS-059-07 A	n/a	1800	900	n/a	90	S	No
Bedroom 1-1	AWS-059-07 A	n/a	2750	1000	n/a	33	N	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
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
Kitchen/Living	2040	1000	90	N
Garage 1	2700	5000	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.30	Light	Foil, Anti-glare one side + Bulk Insulation R2.5	No
EW-2	Fibro Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.5	No
EW-3	Metal Clad Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.5	No
EW-4	Brick Veneer	0.50	Medium	Foil, Anti-glare one side + Bulk Insulation R2.5	No
EW-5	Brick Veneer	0.30	Light	No insulation	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	1290	N	0	YES
Kitchen/Living	EW-2	2100	1290	N	2600	YES
Kitchen/Living	EW-1	600	9795	E	0	NO
Kitchen/Living	EW-3	2100	9795	E	0	NO
Kitchen/Living	EW-1	600	4695	S	0	YES
Kitchen/Living	EW-2	3300	4695	S	2300	YES
Bedroom 1	EW-1	2700	895	W	0	YES
Bedroom 1	EW-2	1600	895	W	7800	YES
Bedroom 1	EW-2	300	3400	N	1700	NO
Bedroom 1	EW-1	600	2790	E	0	NO
Bedroom 1	EW-3	2100	2790	E	0	NO
Bedroom 2	EW-1	2700	1800	E	4700	YES
Bedroom 2	EW-1	2700	3095	S	500	NO
Master Bed	EW-4	2700	3395	S	500	NO
Master Bed	EW-1	2700	2100	W	0	NO
Garage 1	EW-5	2786	6500	N	0	NO
Garage 1	EW-5	2786	900	E	4700	YES
Bedroom 1-1	EW-1	2700	895	W	1300	NO
Bedroom 1-1	EW-1	2750	3400	N	800	NO
Bedroom 1-1	EW-1	600	895	E	0	NO
Bedroom 1-1	EW-3	2100	895	E	0	NO

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		111.00	No insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		45.00	Bulk Insulation, No Air Gap R2.5
IW-3 - Cavity brick, plasterboard		33.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Waffle pod slab 225 mm 100mm	47.80	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1	Waffle pod slab 225 mm 100mm	9.10	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Hall	Waffle pod slab 225 mm 100mm	5.70	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 2	Waffle pod slab 225 mm 100mm	13.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Bathroom	Waffle pod slab 225 mm 100mm	5.30	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Master Bed	Waffle pod slab 225 mm 100mm	19.30	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Ensuite	Waffle pod slab 225 mm 100mm	8.10	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Garage 1	Waffle pod slab 225 mm 100mm	39.10	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1-1	Waffle pod slab 225 mm 100mm	2.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Hall	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Bathroom	Plasterboard	Bulk Insulation R2.5	No
Master Bed	Plasterboard	Bulk Insulation R2.5	No
Ensuite	Plasterboard	Bulk Insulation R2.5	No
Garage 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1-1	Plasterboard	Bulk Insulation R2.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	10	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bedroom 1	1	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Bedroom 2	1	Downlights - LED	150	Sealed
Bathroom	1	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Master Bed	2	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.30	Light

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.

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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. 0007973506

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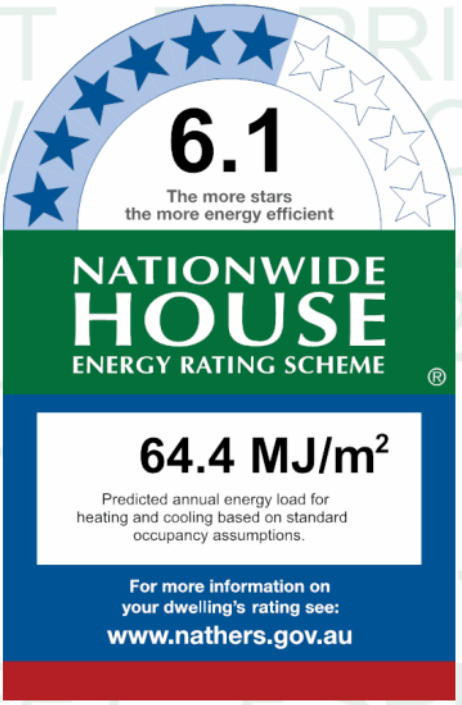

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Garage	39.0	

Thermal performance

Heating	**Cooling**
48.7 MJ/m^2	**15.7** MJ/m^2

Accredited assessor

Name	Terry Chapman
Business name	CHAPMAN ENVIRONMENTAL SERVICES PTY LTD
Email	terry@basixcertificates.com.au
Phone	0414 265 292
Accreditation No.	20920
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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? 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.

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Additional notes

I have modeled the shading in accordance with NatHERS principles

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	
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AWS-011-10 A	AWS-011-10 A 541/542 Al Sliding Door SG 6EVanClr	4.5	0.54	0.51	0.57
AWS-059-07 A	AWS-059-07 A Commercial Series 456 Awning Windows SG 6.38CPClr	5.4	0.50	0.48	0.53

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	AWS-068-03 A	n/a	2000	950	n/a	00	N	No
Kitchen/Living	AWS-011-10 A	n/a	2900	4400	n/a	60	S	No
Kitchen/Living	AWS-068-03 A	n/a	1250	4400	n/a	00	S	No
Bedroom 2	AWS-059-07 A	n/a	2100	900	n/a	33	S	No
Master Bed	AWS-059-07 A	n/a	2100	900	n/a	33	S	No
Bedroom 1-1	AWS-059-07 A	n/a	2700	1000	n/a	33	N	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
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
Kitchen/Living	2040	1020	90	N
Garage 1	2700	4800	90	N

* Refer to glossary.

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.30	Light	Foil, Anti-glare one side + Bulk Insulation R2.5	No
EW-2	Fibro Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.5	No
EW-3	Brick Veneer	0.30	Light	No insulation	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	1290	N	0	YES
Kitchen/Living	EW-2	2100	1290	N	2600	YES
Kitchen/Living	EW-2	2100	9795	E	0	NO
Kitchen/Living	EW-1	600	4595	S	0	YES
Kitchen/Living	EW-2	3300	4595	S	2300	YES
Bedroom 1	EW-1	2700	895	W	0	YES
Bedroom 1	EW-2	1600	895	W	7900	YES
Bedroom 1	EW-2	300	3300	N	1700	NO
Bedroom 1	EW-2	2100	2790	E	0	NO
Bedroom 2	EW-1	2700	1800	E	4600	YES
Bedroom 2	EW-1	2700	3095	S	500	NO
Master Bed	EW-1	2700	3495	S	500	NO
Master Bed	EW-1	2700	2100	W	0	NO
Garage 1	EW-3	2786	800	N	700	YES
Garage 1	EW-3	2786	700	W	800	YES
Garage 1	EW-3	2786	5800	N	0	NO
Garage 1	EW-3	2786	900	E	4600	YES
Bedroom 1-1	EW-1	2700	995	W	1300	NO
Bedroom 1-1	EW-1	2700	3300	N	700	NO
Bedroom 1-1	EW-1	600	995	E	0	NO
Bedroom 1-1	EW-2	2100	995	E	0	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		111.00	No insulation
IW-2 - Cavity brick, plasterboard		39.00	No Insulation
IW-3 - Cavity wall, direct fix plasterboard, single gap		45.00	Bulk Insulation, No Air Gap R2.5

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Waffle pod slab 225 mm 100mm	46.80	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1	Waffle pod slab 225 mm 100mm	8.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Hall	Waffle pod slab 225 mm 100mm	5.70	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 2	Waffle pod slab 225 mm 100mm	13.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Bathroom	Waffle pod slab 225 mm 100mm	5.30	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Master Bed	Waffle pod slab 225 mm 100mm	19.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Ensuite	Waffle pod slab 225 mm 100mm	8.30	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Garage 1	Waffle pod slab 225 mm 100mm	39.20	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1-1	Waffle pod slab 225 mm 100mm	3.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Hall	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Bathroom	Plasterboard	Bulk Insulation R2.5	No
Master Bed	Plasterboard	Bulk Insulation R2.5	No
Ensuite	Plasterboard	Bulk Insulation R2.5	No
Garage 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1-1	Plasterboard	Bulk Insulation R2.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	10	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bedroom 1	1	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed
Bedroom 2	1	Downlights - LED	150	Sealed
Bathroom	1	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Master Bed	2	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.30	Light

Explanatory notes

About this report

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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.
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Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
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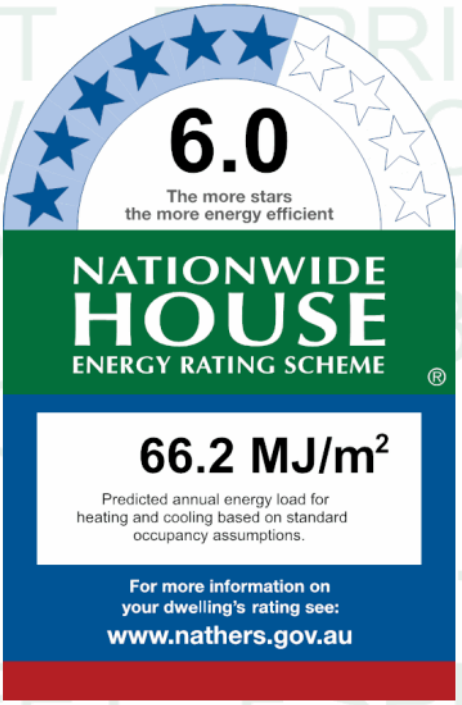
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS 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. 0007973514

Generated on 19 Aug 2022 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 3, 113-115 Springwood Street , Ettalong Beach , NSW , 2257
Lot/DP	87A/411980
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	21087
Prepared by	CKDS Architecture

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	111.0	Suburban
Unconditioned*	39.0	**NatHERS climate zone**
Total	150.0	15
Garage	39.0	

Thermal performance

Heating	**Cooling**
50.2 MJ/m^2	**16.0** MJ/m^2

Accredited assessor

Name	Terry Chapman
Business name	CHAPMAN ENVIRONMENTAL SERVICES PTY LTD
Email	terry@basixcertificates.com.au
Phone	0414 265 292
Accreditation No.	20920
Assessor Accrediting Organisation	ABSA
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=UUwjQqLbL.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

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

I have modeled the shading in accordance with NatHERS principles

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
AWS-011-10 A	AWS-011-10 A 541/542 Al Sliding Door SG 6EVanClr	4.5	0.54	0.51	0.57
AWS-068-03 A	AWS-068-03 A RES SERIES 517 FIXED WINDOW SG 638ComPlsClr	4.4	0.62	0.59	0.65
AWS-059-07 A	AWS-059-07 A Commercial Series 456 Awning Windows SG 6.38CPClr	5.4	0.50	0.48	0.53

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	AWS-011-10 A	n/a	2700	4400	n/a	60	S	No
Kitchen/Living	AWS-068-03 A	n/a	1250	4400	n/a	00	S	No
Kitchen/Living	AWS-068-03 A	n/a	2000	950	n/a	00	N	No
Bedroom 2	AWS-059-07 A	n/a	2100	900	n/a	90	S	No
Master Bed	AWS-059-07 A	n/a	2100	900	n/a	90	S	No
Bedroom 1-1	AWS-059-07 A	n/a	2700	1000	n/a	33	N	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
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
Kitchen/Living	2040	1020	90	N
Garage 1	2700	4800	90	N

* Refer to glossary.

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.30	Light	Foil, Anti-glare one side + Bulk Insulation R2.5	No
EW-2	Fibro Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.5	No
EW-3	Brick Veneer	0.30	Light	No insulation	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	600	4595	S	0	YES
Kitchen/Living	EW-2	3300	4595	S	2300	YES
Kitchen/Living	EW-2	2100	9795	W	0	NO
Kitchen/Living	EW-1	2700	1290	N	0	YES
Kitchen/Living	EW-2	2100	1290	N	2600	YES
Bedroom 1	EW-2	2100	2790	W	0	NO
Bedroom 1	EW-2	300	3300	N	1700	NO
Bedroom 1	EW-1	2700	895	E	0	YES
Bedroom 1	EW-2	1600	895	E	7900	YES
Bedroom 2	EW-1	2700	3095	S	500	NO
Bedroom 2	EW-1	2700	1800	W	4600	YES
Master Bed	EW-1	2700	2100	E	0	NO
Master Bed	EW-1	2700	3495	S	500	NO
Garage 1	EW-3	2786	900	W	4600	YES
Garage 1	EW-3	2786	5800	N	0	NO
Garage 1	EW-3	2786	700	E	800	YES
Garage 1	EW-3	2786	800	N	700	YES
Bedroom 1-1	EW-1	600	995	W	0	NO
Bedroom 1-1	EW-2	2100	995	W	0	NO
Bedroom 1-1	EW-1	2700	3300	N	700	NO
Bedroom 1-1	EW-1	2700	995	E	1300	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		45.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		111.00	No insulation
IW-3 - Cavity brick, plasterboard		39.00	No Insulation

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Waffle pod slab 225 mm 100mm	46.80	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1	Waffle pod slab 225 mm 100mm	8.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Hall	Waffle pod slab 225 mm 100mm	5.70	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 2	Waffle pod slab 225 mm 100mm	13.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
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Master Bed	Waffle pod slab 225 mm 100mm	19.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
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Bedroom 1-1	Waffle pod slab 225 mm 100mm	3.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Hall	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Bathroom	Plasterboard	Bulk Insulation R2.5	No
Master Bed	Plasterboard	Bulk Insulation R2.5	No
Ensuite	Plasterboard	Bulk Insulation R2.5	No
Garage 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1-1	Plasterboard	Bulk Insulation R2.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	10	Downlights - LED	150	Sealed
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Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.30	Light

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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. 0007973522

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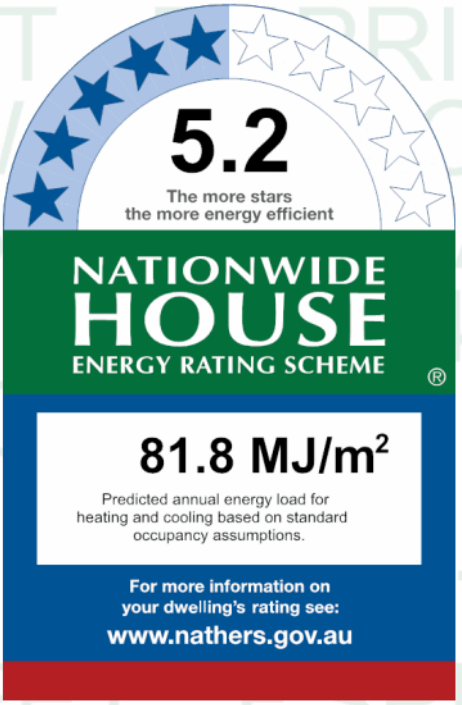

Property

Address	Unit 4, 113-115 Springwood Street , Ettalong Beach , NSW , 2257
Lot/DP	87A/411980
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	21087
Prepared by	CKDS Architecture

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	111.0	Suburban
Unconditioned*	40.0	**NatHERS climate zone**
Total	151.0	15
Garage	40.0	

Thermal performance

Heating	**Cooling**
52.4 MJ/m^2	**29.4** MJ/m^2

Accredited assessor

Name	Terry Chapman
Business name	CHAPMAN ENVIRONMENTAL SERVICES PTY LTD
Email	terry@basixcertificates.com.au
Phone	0414 265 292
Accreditation No.	20920
Assessor Accrediting Organisation	ABSA
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=oNjXGtszz.
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

I have modeled the shading in accordance with NatHERS principles

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
AWS-011-10 A	AWS-011-10 A 541/542 Al Sliding Door SG 6EVanClr	4.5	0.54	0.51	0.57
AWS-068-03 A	AWS-068-03 A RES SERIES 517 FIXED WINDOW SG 638ComPlsClr	4.4	0.62	0.59	0.65
AWS-059-07 A	AWS-059-07 A Commercial Series 456 Awning Windows SG 6.38CPClr	5.4	0.50	0.48	0.53

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	AWS-011-10 A	n/a	2700	4400	n/a	60	S	No
Kitchen/Living	AWS-068-03 A	n/a	1250	4400	n/a	00	S	No
Kitchen/Living	AWS-011-10 A	n/a	2100	1800	n/a	45	W	No
Kitchen/Living	AWS-011-10 A	n/a	2100	1800	n/a	45	W	No
Kitchen/Living	AWS-068-03 A	n/a	2000	950	n/a	00	N	No
Bedroom 2	AWS-059-07 A	n/a	2100	900	n/a	90	S	No
Master Bed	AWS-059-07 A	n/a	2100	900	n/a	90	S	No
Bedroom 1-1	AWS-059-07 A	n/a	2700	1000	n/a	33	N	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
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
Kitchen/Living	2040	1020	90	N
Garage 1	2700	5000	90	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.30	Light	Foil, Anti-glare one side + Bulk Insulation R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.5	No
EW-3	Fibro Cavity Panel Direct Fix	0.30	Light	Anti-glare foil with bulk no gap R2.5	No
EW-4	Brick Veneer	0.30	Light	No insulation	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	600	4595	S	0	YES
Kitchen/Living	EW-2	3300	4595	S	2300	YES
Kitchen/Living	EW-1	600	9795	W	0	NO
Kitchen/Living	EW-2	2100	9795	W	0	NO
Kitchen/Living	EW-1	2700	1290	N	0	YES
Kitchen/Living	EW-3	2100	1290	N	2600	YES
Bedroom 1	EW-1	600	2790	W	0	NO
Bedroom 1	EW-2	2100	2790	W	0	NO
Bedroom 1	EW-3	300	3300	N	1700	NO
Bedroom 1	EW-1	2700	895	E	0	YES
Bedroom 1	EW-3	1600	895	E	7900	YES
Bedroom 2	EW-1	2700	3095	S	500	NO
Bedroom 2	EW-1	2700	1800	W	4600	YES
Master Bed	EW-1	2700	2100	E	0	NO
Master Bed	EW-1	2700	3495	S	500	NO
Garage 1	EW-4	2786	900	W	4600	YES
Garage 1	EW-4	2786	6600	N	0	NO
Bedroom 1-1	EW-1	600	995	W	0	NO
Bedroom 1-1	EW-2	2100	995	W	0	NO
Bedroom 1-1	EW-1	2700	3300	N	700	NO
Bedroom 1-1	EW-1	2700	995	E	1300	NO

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		45.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		111.00	No insulation
IW-3 - Cavity brick, plasterboard		33.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Waffle pod slab 225 mm 100mm	46.80	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1	Waffle pod slab 225 mm 100mm	8.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Hall	Waffle pod slab 225 mm 100mm	5.70	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 2	Waffle pod slab 225 mm 100mm	13.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Bathroom	Waffle pod slab 225 mm 100mm	5.30	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Master Bed	Waffle pod slab 225 mm 100mm	19.90	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm
Ensuite	Waffle pod slab 225 mm 100mm	8.30	None	Waffle Pod 225mm	Ceramic Tiles 8mm
Garage 1	Waffle pod slab 225 mm 100mm	39.70	None	Waffle Pod 225mm	Cork Tiles or Parquetry 8mm
Bedroom 1-1	Waffle pod slab 225 mm 100mm	3.20	None	Waffle Pod 225mm	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Hall	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Bathroom	Plasterboard	Bulk Insulation R2.5	No
Master Bed	Plasterboard	Bulk Insulation R2.5	No
Ensuite	Plasterboard	Bulk Insulation R2.5	No
Garage 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1-1	Plasterboard	Bulk Insulation R2.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	10	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bedroom 1	1	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Bedroom 2	1	Downlights - LED	150	Sealed
Bathroom	1	Downlights - LED	150	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Master Bed	2	Downlights - LED	150	Sealed
Ensuite	1	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.30	Light

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.
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