Nationwide House Energy Rating Scheme — Class 2 summary NatHERS Certificate No. 0006623370

Generated on 02 Nov 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640

Lot/DP 11-15/243192

NatHERS climate zone

Accredited assessor

Dean Gorman Greenview Consulting Pty Ltd

dean@greenview.net.au

8544 1683

Accreditation No. DMN/13 Assessor Accrediting Organisation

DMN/13/1645

20

Design Matters National



Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=zPulyHPJV 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
0006623102-01	1	136.2	0.8	136.9	6
0006623110	2	115.8	1.2	117	6.5
0006623128	3 6 8	127.8	0.8	128.6	6.2
0006623136-01	4	134.5	1.4	135.9	6
0006623144	5	121.6	3.3	124.8	6.3

Continued Over

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.





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The rating above is the average of all dwellings in this summary.

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



Summary of all dwellings (continued)

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
0006623151	6	125.8	2.1	127.8	6.2
0006623169	7	117.6	3.1	120.7	6.4
0006623177	8	103	3	106	6.8
0006623185	9	105.2	3.5	108.7	6.8
0006623193	10	87.3	3.1	90.4	7.3
0006623201	11	126.6	2	128.6	6.2
0006623219-01	12	104.2	1	105.2	6.9
0006623227-01	13	122.3	9.4	131.6	6.1
0006623235	14	105	8.8	113.8	6.6
0006623243	15	104.6	9	113.6	6.6
0006623268-01	16	124.5	12.4	136.9	6
0006623276	17	130.9	5.8	136.7	6
0006623284	18	108.4	12.2	120.6	6.4
0006623292	19	94.7	11.1	105.8	6.8
0006623300	20	86.8	12.6	99.5	7
0006623318	21	102.1	12.6	114.7	6.6
0006623326	22	94.4	12.6	106.9	6.8
0006623334	23	122.9	13.3	136.1	6
0006623342	24	103.8	10.1	113.9	6.6
A	Verage	112.75	6.47	119.20	6.46

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. 0006623102-01

Generated on 03 Nov 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 1, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Lot/DP NCC Class*

2

11-15/243192

Type

New Dwelling

Plans

Main Plan Prepared by

BGXPC **Brewster Murray**

Construction and environment

Assessed floor area (m²)*

Conditioned*	67.0
Unconditioned*	8.0
Total	75.0
Garage	0.0

Suburban NatHERS climate zone

Exposure Type

20

Accredited assessor

Name **Business name** Email Phone

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts



136.9 MJ/m²

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Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
136.2	0.8
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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p=ucXQkklXi. 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

Mindau	Window	Maximum	SUCC*	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-003-03 A	ALM-003-03 A Aluminium A DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.47	0.45	0.49	
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.53	0.50	0.56	
Custom* window	/S					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	

Window ID	D Window Maximum SHGC*	SHCC*	ouserration to	lorance rangee		
WINDOWID	Description	U-value*	3000	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-003-03 A	n/a	2400	1000	n/a	90	Ν	No
Kitchen/Living	ALM-004-03 A	n/a	2400	1510	n/a	00	Ν	No
Kitchen/Living	ALM-003-03 A	n/a	1200	1200	n/a	90	S	No
Bath	ALM-003-03 A	n/a	945	745	n/a	90	E	No
Bedroom 1	ALM-003-03 A	n/a	1200	1445	n/a	90	Ν	No
Bedroom 1	ALM-003-03 A	n/a	1200	745	n/a	90	E	No
Bedroom 2	ALM-003-03 A	n/a	1200	745	n/a	90	E	No
Bedroom 2	ALM-003-03 A	n/a	1200	1200	n/a	90	S	No

Roof window type and performance

Default* roof windows

Minulaur	Window		Maximum SHGC*		SUC0*	Subs	Substitution tolerance range			
Window ID	Descrip	otion	U-valı	ue*	SHGC	SHGC low	ver limit	SHG	C upper limit	
No Data Avai	lable									
Custom* roo	fwindows									
Window ID	Windov	-	Maxim		SHGC*	Subs	titution to	lerance	e ranges	
WINCOW ID	Descrip	otion	U-valı	ue*	01100	SHGC low	ver limit	SHG	C upper limit	
No Data Avai	lable									
Deefw		bodulo								
	Mindow SC	Chedule Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outd shad		Indoor shade	
Location	Window ID	Window				Orientation				
Location No Data Avai	Window ID lable	Window	%			Orientation				
Location No Data Avai	Window ID lable	Window no.	%	(mm)		Orientation				

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Av	ailable							



External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	1045	90	S

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:6	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:1	0.50	Medium	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:4W2:4	0.85	Dark	Bulk Insulation R0.7	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	3845	Ν	3300	YES
Kitchen/Living	EW-1	2700	2245	S	1600	YES
Kitchen/Living	EW-2	2400	1300	S	0	NO
Kitchen/Living	EW-3	300	1300	S	300	NO
Kitchen/Living	EW-1	2700	745	S	300	YES
Kitchen/Living	EW-1	2700	500	W	3000	YES
Bath	EW-2	2700	500	Ν	200	YES
Bath	EW-2	2700	3500	E	825	NO
Bath	EW-2	2700	600	S	200	YES
Bedroom 1	EW-1	2700	1100	Ν	200	NO
Bedroom 1	EW-1	1200	1500	Ν	0	NO
Bedroom 1	EW-4	1500	1500	Ν	800	NO
Bedroom 1	EW-1	2700	1200	Ν	200	NO
Bedroom 1	EW-1	2700	4545	E	100	YES
Bedroom 1	EW-1	2700	1900	W	6900	YES
Bedroom 2	EW-1	2700	3645	E	100	YES
Bedroom 2	EW-1	2700	900	S	150	NO
Bedroom 2	EW-2	2400	1300	S	0	NO
Bedroom 2	EW-5	300	1300	S	200	NO
Bedroom 2	EW-1	2700	1000	S	200	NO
Bedroom 2	EW-1	2700	1400	W	1900	YES



Internal wall type

Wall ID	Wall type	A rea (m ²)	Bulk insulation
IW-1 - Single Skin Brick		53.00	No insulation
IW-2 - Cavity brick, plasterboard		22.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation n (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	32.60 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	8.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	18.40 None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	11.50 None	No Insulation	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab on Ground 100mm	4.80 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No
Hallway	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade

None Present

6.0 Star Rating as of 03 Nov 2021



Construction

Added insulation (R-value)

Solar absorptance

Roof shade



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 softw are 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.
, and a onergy roug	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 NathEPS 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.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623110

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 2, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP NCC Class'

11-15/243192

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prenared by	Browsto

Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	67.0
Unconditioned*	0.0
Total	67.0
Garage	0.0



ccredited assessor

Dean Gorman

8544 1683

DMN/13/1645

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

117.0 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
115.8	1.2
MJ/m ²	MJ/m ²

About the rating

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Certificate check

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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	Maximum	Substitution tolerance ranges		
WINDOW ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	51160	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	Ν	Yes

0006623110 NatHERS Certificate

6.5 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	90	S	Yes
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	90	Ν	No
Bedroom 2	ALM-001-01 A	n/a	1200	1200	n/a	90	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	3000	SHGC lower limit	SHGC upper limit	
	ble					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ilable							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Ava	ailable							

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	1045	90	S

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	(colour)	(R-value)	wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No

0006623110 NatHERS Certificate

6.5 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:6	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:4W2:4	0.85	Dark	Bulk Insulation R0.7	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	4045	Ν	3400	YES
Kitchen/Living	EW-1	2700	2145	S	1900	YES
Kitchen/Living	EW-2	2400	1300	S	0	NO
Kitchen/Living	EW-3	300	1300	S	800	NO
Kitchen/Living	EW-1	2700	600	S	300	NO
Bedroom 1	EW-1	2700	700	Ν	300	NO
Bedroom 1	EW-2	1200	1600	Ν	0	NO
Bedroom 1	EW-4	1500	1600	Ν	900	NO
Bedroom 1	EW-1	2700	800	Ν	300	NO
Bedroom 1	EW-1	2700	2000	E	200	YES
Bedroom 1	EW-1	2700	1800	W	4100	YES
Bedroom 2	EW-1	2700	1200	E	100	YES
Bedroom 2	EW-1	2700	1000	S	200	NO
Bedroom 2	EW-2	2400	1300	S	0	NO
Bedroom 2	EW-5	300	1300	S	800	NO
Bedroom 2	EW-1	2700	800	S	200	NO
Bedroom 2	EW-1	2700	1700	W	2100	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		47.00	No insulation
IW-2 - Cavity brick, plasterboard		45.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m²) ventilatio	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	33.20 None	No Insulation	Ceramic Tiles 8mm
Bath/LDR	Concrete Slab on Ground 100mm	7.20 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	11.80 None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	10.80 None	No Insulation	Carpet+Rubber Underlay 18mm

6.5 Star Rating as of 24 Sep 2021



Location	Construction	Area Sub-floor (m) ventilatio	Added insulation n (R-value)	Covering	
Kitchen/Living	Concrete Slab on Ground 100mm	3.80 None	No Insulation	Ceramic Tiles 8mm	

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath/LDR	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath/LDR	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 2, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640



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.

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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 softw are 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.
, and a onergy roug	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 NathEPS 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.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623128

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 3, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP NCC Class' 11-15/243192

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prenared by	Browsto

Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	68.0
Unconditioned*	0.0
Total	68.0
Garage	0.0



Accredited assessor

Dean Gorman

8544 1683

DMN/13/1645

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

the more energy efficient IONWIDE ENERGY RATING SCHEME

The more stars

128.6 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

leating	Coc
27.8	0.8
/J/m ²	MJ/

oling

R

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=XFXKQocKv. 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	Maximum	SUCC*	Substitution tolerance ranges		
WINDOW ID	Description	U-value*	SHGC*	SHGC lower limit SHGC upp	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

Window ID	Window Description	Maximum	SHGC*	Substitution tolerance ranges		
		U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	Ν	Yes

0006623128 NatHERS Certificate

6.2 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	90	S	Yes
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	90	Ν	No
Bedroom 2	ALM-001-01 A	n/a	1200	1200	n/a	90	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SU/20*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	3000	SHGC lower limit	SHGC upper limit	
	ble					

Root window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ailable							

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Ava	ailable							

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	1045	90	S

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	(colour)	(R-value)	wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No

0006623128 NatHERS Certificate

6.2 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:6	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:4W2:4	0.85	Dark	Bulk Insulation R0.7	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	4145	Ν	3500	YES
Kitchen/Living	EW-1	2700	2245	S	1900	YES
Kitchen/Living	EW-2	2400	1200	S	0	NO
Kitchen/Living	EW-3	300	1200	S	800	NO
Kitchen/Living	EW-1	2700	645	S	200	YES
Kitchen/Living	EW-1	2700	400	W	2800	YES
Bedroom 1	EW-1	2700	800	Ν	300	NO
Bedroom 1	EW-2	1200	1500	Ν	0	NO
Bedroom 1	EW-4	1500	1500	Ν	900	NO
Bedroom 1	EW-1	2700	800	Ν	300	NO
Bedroom 1	EW-1	2700	1600	E	0	NO
Bedroom 1	EW-1	2700	1900	W	7000	YES
Bedroom 2	EW-1	2700	1400	E	0	NO
Bedroom 2	EW-1	2700	1000	S	200	NO
Bedroom 2	EW-2	2400	1200	S	0	NO
Bedroom 2	EW-5	300	1200	S	700	NO
Bedroom 2	EW-1	2700	900	S	200	NO
Bedroom 2	EW-1	2700	1700	W	2000	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		47.00	No insulation
IW-2 - Cavity brick, plasterboard		45.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	32.90 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.60 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	12.70 None	No Insulation	Carpet+Rubber Underlay 18mm



Location	Construction	Area Sub-floor (m) ventilation	Added insulation (R-value)	Covering
Bedroom 2	Concrete Slab on Ground 100mm	11.50 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	3.30 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			



Explanatory notes

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
, and a onergy roug	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
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Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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.
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(NOC) Class	buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
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	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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.
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Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623136-01

Generated on 03 Nov 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 4, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Lot/DP NCC Class* 11-15/243192 2

Type

New Dwelling

Plans

Main Plan Prepared by

BGXPC **Brewster Murray**

Construction and environment

Assessed floor area (m²)*

Conditioned*	71.0
Unconditioned*	0.0
Total	71.0
Garage	0.0

Exposure Type Suburban NatHERS climate zone

20

ccredited assessor

Name **Business name** Email

dean@greenview.net.au 8544 1683

DMN/13/1645

Dean Gorman

Accreditation No.

Phone

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd



135.9 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
134.5	1.4
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



p=QRfDjSvsx. 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	Maximum		Substitution to	lerance ranges
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.53	0.50	0.56
ALM-003-03 A	ALM-003-03 A Aluminium A DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.47	0.45	0.49
Custom* window	/S				
Window ID	Window	Maximum	SHCC*	Substitution to	lerance ranges

Mindow/ID	Window ID Window Maximum SHGC*	SHCC*	oubstitution toler under ranges			
	Description	U-value*	onee	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	n/a	2400	2400	n/a	45	Ν	No
Kitchen/Living	ALM-003-03 A	n/a	1200	1200	n/a	45	S	No
Kitchen/Living	ALM-003-03 A	n/a	1200	1200	n/a	45	W	No
Kitchen/Living	ALM-003-03 A	n/a	600	1445	n/a	45	W	No
Bedroom 1	ALM-003-03 A	n/a	1200	1200	n/a	90	Ν	No
Bedroom 2	ALM-003-03 A	n/a	1200	1200	n/a	90	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution to	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit		
No Data Availat	ble						
Custom* roof w	vindows						
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges		
	Description U-value*	3000	SHGC lower limit	SHGC upper limit			
No Data Availat	-1-						

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		
	Skylight	

Location	Skylight ID	Skylight No.	shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Ava	ailable							

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	1045	90	S



External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:6	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:1W2:13	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	No
EW-6	Cavity BrickZ:4W2:4	0.85	Dark	Bulk Insulation R0.7	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	3945	Ν	3400	YES
Kitchen/Living	EW-1	2700	1845	S	1800	YES
Kitchen/Living	EW-2	2400	1400	S	0	NO
Kitchen/Living	EW-3	300	1400	S	700	NO
Kitchen/Living	EW-1	2700	700	S	200	NO
Kitchen/Living	EW-1	2700	3600	W	200	YES
Kitchen/Living	EW-2	2700	600	S	100	YES
Kitchen/Living	EW-2	2700	1900	W	200	NO
Kitchen/Living	EW-2	2700	600	Ν	100	YES
Kitchen/Living	EW-1	2700	900	W	100	YES
Kitchen/Living	EW-2	1800	1600	W	0	NO
Kitchen/Living	EW-4	900	1600	W	900	NO
Kitchen/Living	EW-1	2700	300	W	300	NO
Bedroom 1	EW-1	2700	1000	Ν	200	NO
Bedroom 1	EW-2	2400	1600	Ν	0	NO
Bedroom 1	EW-5	300	1600	Ν	900	NO
Bedroom 1	EW-1	2700	800	Ν	200	NO
Bedroom 1	EW-1	2700	2400	E	2800	YES
Bedroom 1	EW-1	2700	1900	W	4300	YES
Bedroom 2	EW-1	2700	1300	E	2800	YES
Bedroom 2	EW-1	2700	1000	S	200	NO
Bedroom 2	EW-2	2400	1300	S	0	NO
Bedroom 2	EW-6	300	1300	S	700	NO
Bedroom 2	EW-1	2700	1100	S	200	NO
Bedroom 2	EW-1	2700	1600	W	1900	YES



Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		50.00	No insulation
IW-2 - Cavity brick, plasterboard		22.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilatio		Covering
Kitchen/Living	Concrete Slab on Ground 100mm	33.90 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	8.30 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	14.00 None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	11.60 None	No Insulation	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab on Ground 100mm	3.50 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No
Hallway	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade

None Present

6.0 Star Rating as of 03 Nov 2021



Construction

Added insulation (R-value)

Solar absorptance

Roof shade



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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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 softw are 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 dow nlights, 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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NCC) Class	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 know n 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. 0006623144

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 5, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

11-15/243192

NCC Class'

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prepared by	Brewste

ster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	45.0
Unconditioned*	8.0
Total	53.0
Garage	0.0



ccredited assessor

Dean Gorman

8544 1683

DMN/13/1645

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

124.8 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Coolin
121.6	3.3
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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Certificate check

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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	Maximum	SHGC*	Substitution tolerance ranges		
WINdow ID	Description U-value*	SHGC lower limit	SHGC upper limit			
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
Custom* window	/S					

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3160	SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	90	E	No

0006623144 NatHERS Certificate

6.3 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes
Bath	ALM-001-01 A	n/a	900	730	n/a	90	E	No
Bedroom 1	ALM-001-01 A	n/a	1200	720	n/a	90	W	No
Bedroom 1	ALM-001-01 A	n/a	1200	720	n/a	90	W	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges			
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit		
No Data Available	9						
Custom* roof win	dows						
Window ID	Window	Maximum	SHGC*	Substitution to	on tolerance ranges		
	Description	U-value*	SURC	SHGC lower limit	SHGC upper limit		
No Data Available)						

or 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 (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2200	1000	90	E

External wall type

WallSolarWall shadeBulk insulationReflectiveIDtypeabsorptance(colour)(R-value)wall wrap*	Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*	
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0006623144 NatHERS Certificate

6.3 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:3	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:2W2:2	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:5	0.85	Dark	Bulk Insulation R0.7	No
EW-6	Cavity BrickZ:3W2:7	0.85	Dark	Bulk Insulation R0.7	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	400	Ν	200	NO
Kitchen/Living	EW-1	2700	1000	E	200	NO
Kitchen/Living	EW-2	1115	1200	E	0	NO
Kitchen/Living	EW-3	1585	1200	E	900	NO
Kitchen/Living	EW-1	2700	1845	E	1700	NO
Kitchen/Living	EW-1	2700	3545	W	3000	YES
Bath	EW-1	2700	1245	E	200	NO
Bath	EW-2	1115	900	E	0	NO
Bath	EW-4	1585	900	E	900	NO
Bath	EW-1	2700	1200	E	200	NO
Bath	EW-1	2700	400	S	0	NO
Bedroom 1	EW-1	2700	600	Ν	5300	YES
Bedroom 1	EW-2	1115	900	W	0	NO
Bedroom 1	EW-5	1585	900	W	700	NO
Bedroom 1	EW-1	2700	1400	W	200	NO
Bedroom 1	EW-2	1115	900	W	0	NO
Bedroom 1	EW-6	1585	900	W	700	NO
Bedroom 1	EW-1	2700	700	W	300	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		37.00	No Insulation
IW-2 - Single Skin Brick		38.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	26.30 None	No Insulation	Ceramic Tiles 8mm



Location	Construction	Area Sub-floor (m) ventilatio		Covering
Bath	Concrete Slab on Ground 100mm	7.80 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	14.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	4.30 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 5, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640



Explanatory notes

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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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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.			
	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			
Assessed floor area	design documents.			
Colling popotrotions	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes			
Ceiling penetrations	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			
Conditioned	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).			
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered			
Exposure category - open	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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4			
(NOC) Class	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.			
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional			
Provisional value	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.			
Color hast usin coefficient (CLICC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released			
Solar heat gain coefficient (SHGC)	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 know n 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.			
Vortical chading factures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy			
Vertical shading features	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. 0006623151

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 6, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

11-15/243192

NCC Class'

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prepared by	Brewste

rewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	48.0
Unconditioned*	8.0
Total	56.0
Garage	0.0



Accredited assessor

Dean Gorman

8544 1683

DMN/13/1645

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

the more energy efficient IONWIDE ENERGY RATING SCHEME

The more stars

127.8 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
125.8	2.1
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit



hstar.com.au/QR/Generate? p=xbSuqDdPj. 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-003-03 A	ALM-003-03 A Aluminium A DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.47	0.45	0.49	
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53	0.50	0.56	
Custom* windov	VS					
	Window	Maximum		Substitution tolerance ranges		

Window ID	Window	Maximum	SHGC*	oubstitution tolerance ranges		
	Description	U-value*		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-003-03 A	n/a	1200	1200	n/a	90	E	No
Kitchen/Living	ALM-004-03 A	n/a	2400	1500	n/a	45	W	Yes
Kitchen/Living	ALM-003-03 A	n/a	2400	1000	n/a	90	W	No
Bath	ALM-003-03 A	n/a	900	730	n/a	90	E	No
Bedroom 1	ALM-003-03 A	n/a	1200	720	n/a	90	W	No
Bedroom 1	ALM-003-03 A	n/a	1200	720	n/a	90	W	No

Roof window type and performance

Default* roof windows

VVIIIUUVV	Window Maximum	SUCC*	Substitution tolerance ranges		
Description	U-value*	SURC	SHGC lower limit	SHGC upper limit	
e					
ndows					
Window	Maximum	SHCC*	Substitution tolerance ranges		
Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
Э					
1	windows Description	e ndows Window Maximum Description U-value*	e ndows Window Maximum Description U-value* SHGC*	Description U-value* SHGC lower limit adows Maximum SHGC* Substitution to Window Maximum SHGC* SHGC lower limit	

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Avai	lable							

Skylight type and performance

Skylight IE)		Skylight d	escriptior	n				
No Data Av	vailable								_
Skylig	ht sched	lule							
Location	Skylight	Skylight	Skylight shaft length	Area	Orientation	Outdoor	Diffuser	Skylight shaft	

ID NO. (m²) snade reflectance (mm) No Data Available

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
Kitchen/Living	2040	820	90	E	



External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-3	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:1W2:2	0.50	Medium	Bulk Insulation R1.2	No
EW-5	Cavity BrickZ:1W2:4	0.85	Dark	Bulk Insulation R0.7	No
EW-6	Cavity BrickZ:2W2:2	0.85	Dark	Bulk Insulation R0.7	No
EW-7	Cavity BrickZ:3W2:5	0.50	Medium	Bulk Insulation R1.2	No
EW-8	Cavity BrickZ:3W2:7	0.85	Dark	Bulk Insulation R0.7	No
EW-9	Cavity BrickZ:3W2:9	0.85	Dark	Bulk Insulation R0.7	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	600	Ν	200	YES
Kitchen/Living	EW-4	1585	2900	Ν	4200	NO
Kitchen/Living	EW-1	2700	1545	E	300	NO
Kitchen/Living	EW-3	1200	1200	E	0	NO
Kitchen/Living	EW-5	1501	1200	E	900	NO
Kitchen/Living	EW-1	2700	900	E	300	NO
Kitchen/Living	EW-1	2700	600	S	2700	YES
Kitchen/Living	EW-1	2700	3645	W	2900	YES
Bath	EW-1	2700	1300	E	300	NO
Bath	EW-3	1115	900	E	0	NO
Bath	EW-6	1586	900	E	800	NO
Bath	EW-1	2700	245	E	300	NO
Bedroom 1	EW-1	2700	400	Ν	0	NO
Bedroom 1	EW-7	1585	4145	S	6400	NO
Bedroom 1	EW-1	2700	745	W	200	YES
Bedroom 1	EW-3	1115	800	W	0	NO
Bedroom 1	EW-8	1586	800	W	800	NO
Bedroom 1	EW-1	2700	1400	W	200	NO
Bedroom 1	EW-3	1115	900	W	0	NO
Bedroom 1	EW-9	1586	900	W	800	NO
Bedroom 1	EW-1	2700	300	W	200	NO
Kitchen/Living	EW-1	2700	1590	E	1500	NO



Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		40.00	No insulation
IW-2 - Cavity brick, plasterboard		37.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	27.10 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	8.20 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.90 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	4.50 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			



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 softw are and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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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 dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Centring perfect actions	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
Conditioned	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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmand with scattered
Exposure category - open	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.
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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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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
ROOI WINDOW	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.
Salar haat gain asofficiant (SLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
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Skylight (also know n 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.
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Vartical chading factures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
Vertical shading features	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. 0006623169

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 7, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

11-15/243192

NCC Class'

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prenared by	Browsto

Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	50.0
Unconditioned*	0.0
Total	50.0
Garage	0.0



ccredited assessor

Name

Dean Gorman **Business name** Greenview Consulting Pty Ltd

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

dean@greenview.net.au

8544 1683

DMN/13/1645

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

120.7 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

leating	Coc
17.6	3.1
/J/m ²	MJ/

oling

R

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

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hstar.com.au/QR/Generate? p=uHAfLpHFN. When using either link, ensure you are visiting hstar.com.au

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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.

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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	Maximum	SHGC*	Substitution tolerance ranges		
WINDOW ID	Description U-value*		SHGC	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3000	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	E	Yes

0006623169 NatHERS Certificate

6.4 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1440	n/a	90	Ν	No
Bedroom 1	ALM-001-01 A	n/a	1200	1440	n/a	90	E	No

Roof window type and performance

Default* roof windows

Window ID	Window	Window		Maximum		Substitution tolerance ranges			
	Descri	ption	U-value*		SHGC*	SHGC lowe	er limit	SHGC upper limit	
No Data Ava	ilable								
Custom* roc	of windows								
Window		N	Maximum		SUCC*	Substitution tolerance ranges			
Window ID	Descri	ption	U-value*		SHGC*	SHGC lowe	er limit	SHGC upper limit	
No Data Ava	ilable								
Roof w	indow so	chedule							
Location	Window	Window	Opening	Height	Width	Orientation	Outdoo	or Indoor	

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade	
No Data Ava	ailable								

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Av	ailable							

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
No Data Available					

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No

0006623169 NatHERS Certificate

6.4 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-3	Cavity BrickZ:1W2:7	0.50	Medium	Bulk Insulation R1.2	No
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	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	3545	E	3100	YES
Kitchen/Living	EW-3	1585	3700	Ν	2800	NO
Kitchen/Living	EW-1	2700	3500	Ν	2800	YES
Bedroom 1	EW-1	2700	900	E	300	NO
Bedroom 1	EW-4	1115	1500	E	0	NO
Bedroom 1	EW-5	1586	1500	E	900	NO
Bedroom 1	EW-1	2700	800	E	200	NO
Bedroom 1	EW-1	2700	700	S	0	NO
Bedroom 1	EW-1	2700	800	Ν	3700	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		37.00	No insulation
IW-2 - Cavity brick, plasterboard		48.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m²) ventilatio		Covering
Kitchen/Living	Concrete Slab on Ground 100mm	25.00 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.70 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	3.70 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			



Explanatory notes

About this report

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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.
	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
Assessed floor area	design documents.
Colling popotrotions	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	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
Conditioned	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.
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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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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.
Color hast usin coefficient (CLICC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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.
Vortical chading factures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
Vertical shading features	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. 0006623177

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 8, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

11-15/243192

NCC Class'

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prepared by	Brewste

rewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	49.0
Unconditioned*	0.0
Total	49.0
Garage	0.0



Accredited assessor

Dean Gorman

8544 1683

DMN/13/1645

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

the more energy efficient IONWIDE ENERGY RATING SCHEME

The more stars

106.0 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Coolin
103.0	3.0
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit



hstar.com.au/QR/Generate? p=wdVCCGUbw. 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 Maximum		Window Maximum SHGC*		Window Maximum		Substitution to	lerance ranges
WINDOW ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit			
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73			
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60			

Custom* windows

Window ID	Window	Maximum	SHCC*	Substitution to	lerance ranges
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Availal	ble				

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes

		ficate	6.8 Star R	ating as of 2	24 Sep 2021					
Location	Winc ID	dow	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orienta	tion	Window shading device*
Bedroom 1	ALM	-001-01 A	n/a	1200	1440	n/a	90	W		No
Roof w	v indow t	type and	perform	ance						
Default* roof										
Window ID	Wind	low cription		Maximur U-value		SHGC*		itution to		•
No Data Ava		ription		U-value			SHGC low	er limit	SHG	C upper lim
Custom* roo							Subst	itution to	loranco	ranges
Window ID	Wind Desc	ow cription		Maximur U-value		SHGC*	SHGC low			C upper lim
No Data Ava	ailable									
Roof w	vindow of	schedule								
	Window	Window		ening	Height	Width		Outd	oor	Indoor
Location	ID	no.	οφ Ορ	%	(mm)	(mm)	Orientation	shade		shade
No Data Ava	ailable									
Skvliat	nt type a	and perfo	rmance							
				liaht descr	ription					
Skylight ID				light descr	ription					
Skylight ID	ailable			light descr	ription					
Skylight ID No Data Ava	ailable nt sched			light descr	ription					
Skylight ID No Data Ava Skyligh				ht Anngth (ntation	Outdoor D shade	iffuser		/light shaft flectance
Skylight ID No Data Ava Skyligh Location	n t sched Skylight ID	lule Skylight	Sky Skylig shaft lei	ht Anngth (rea Orior	ntation		iffuser		
Skylight ID No Data Ava Skyligh Location No Data Ava	nt sched Skylight ID	lule Skylight	Sky Skylig shaft lei (mm	ht Anngth (rea Orior	ntation		iffuser		
Skylight ID No Data Ava Skyligh Location No Data Ava Externa	nt sched Skylight ID	Ule Skylight No.	Skylig shaft ler (mm	iht Ai ngth (i	rea Orior	ntation				
Skylight ID No Data Ava Skyligh Location No Data Ava Externa	al door	lule Skylight No.	Skylig shaft ler (mm	iht Ai ngth (i	rea m²) Orier	ntation	shade D		re	
Skylight ID No Data Ava Skyligh Location No Data Ava Externa Location No Data Ava	al door	lule Skylight No. Schedule Height (Skylig shaft ler (mm	iht Ai ngth (i	rea m²) Orier	ntation	shade D		re	
Skylight ID No Data Ava Skyligh Location No Data Ava Externa Location No Data Ava Externa Wall W	ailable	lule Skylight No. Schedule Height (Skylig shaft lei (mm	iht Ai ngth (i	rea m²) Orier	le	shade D		ntation	

0.50

0.50

Medium

Medium

Bulk Insulation R1.2

Bulk Insulation R1.2

EW-2

EW-3

Cavity Brick

Cavity BrickZ:1W2:1

No

No

0006623177 NatHERS Certificate

6.8 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:4	0.50	Medium	Bulk Insulation R1.2	No
EW-6	Cavity BrickZ:3W2:6	0.85	Dark	Bulk Insulation R0.7	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	2200	Ν	2800	YES
Kitchen/Living	EW-3	1585	5000	Ν	2800	NO
Kitchen/Living	EW-1	2700	3545	W	3600	YES
Bedroom 1	EW-1	2700	800	Ν	3900	YES
Bedroom 1	EW-1	1115	700	S	0	NO
Bedroom 1	EW-5	1585	700	S	0	NO
Bedroom 1	EW-1	2700	800	W	200	NO
Bedroom 1	EW-4	1200	1500	W	0	NO
Bedroom 1	EW-6	1501	1500	W	900	NO
Bedroom 1	EW-1	2700	900	W	200	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		52.00	No Insulation
IW-2 - Single Skin Brick		37.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilatio		Covering
Kitchen/Living	Concrete Slab on Ground 100mm	24.80 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.70 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	3.70 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			



Explanatory notes

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, and a onergy roug	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
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O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
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	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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.
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	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
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Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623185

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 9, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW, 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP NCC Class' 11-15/243192

2 New Dwelling

Plans

Type

Main Plan	BGXPC
Prepared by	Brewste

Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	49.0
Unconditioned*	0.0
Total	49.0
Garage	0.0



Accredited assessor

Dean Gorman

8544 1683

DMN/13/1645

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

the more energy efficient IONWIDE ENERGY RATING SCHEME

The more stars

108.7 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
105.2	3.5
MJ/m ²	MJ/m ²

About the rating

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Verification

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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

Mindow ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3160	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	E	Yes

	NatHERS Certif	hcate	6.8 Star Rating a	is of 24 Se	ep 2021					NATIONWID HOUSSI
Location	Wind ID	low		ight nm)	Width (mm)	Window type	Opening %	^J Orienta	tion	Window shading device*
Bedroom 1	ALM-	001-01 A	n/a 12	200	1440	n/a	90	E		No
Roof w	indow t	vpe and i	performance	Э						
Default* roc										
Window ID	Wind			imum		SHGC*	Sub	stitution to	lerance	ranges
		ription	U-v	alue*			SHGC lo	ower limit	SHG	C upper limi
No Data Ava	aliadie									
Custom* ro	of windows						Sub	atitution to	laranaa	Kongoo
Window ID	Winde Desc	ow ription	Maximum SHGC* U-value*		SHGC lower limit SHG			GC upper limit		
No Data Ava	ailable									
Roof w	/indow ક	schedule								
Location	Window ID	Window no.	Opening %		eight mm)	Width (mm)	Orientation	Outd shad		Indoor shade
No Data Ava	ailable									
Skyligl	nt type a	nd perfor	mance							
Skylight ID			Skylight d	lescriptio	on					
No Data Ava	ailable									
Skylia	at schod									
Skyligi	nt sched		Skylight	A 110 G			Outdoor		<u>Ola</u>	diadet els eff
Location	Skylight ID	Skylight No.	shaft length (mm)	Area (m ²)	Orien	tation	Outdoor shade	Diffuser		light shaft flectance
No Data Ava	ailable						_			
Externa	al door a	schedule								
Location		Height (n	nm)	Width (mm)		Opening %	Orie	ntation	
No Data Ava	ailable									
Externa	al wall ty	/pe								
Wall W	al wall ty /all /pe	/pe	Solar absorptanc		all shad blour)	-	Bulk insulatior (R-value)	ı		ective wrap*

EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-3	Cavity BrickZ:1W2:6	0.50	Medium	Bulk Insulation R1.2	No

0006623185 NatHERS Certificate

6.8 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	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	3545	E	3100	YES
Kitchen/Living	EW-3	1585	3545	W	0	NO
Bedroom 1	EW-1	2700	800	E	200	NO
Bedroom 1	EW-4	1200	1500	E	0	NO
Bedroom 1	EW-5	1501	1500	E	900	NO
Bedroom 1	EW-1	2700	900	E	200	NO
Bedroom 1	EW-1	2700	3000	S	2800	YES
Bedroom 1	EW-1	2700	800	Ν	3600	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		36.00	No insulation
IW-2 - Cavity brick, plasterboard		45.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	25.20 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	12.90 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	3.60 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 9, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade	
None Present				



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.

Accredited assessors

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

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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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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 low er 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. 0006623193

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 10, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

Type

11-15/243192

2

NCC Class*

New Dwelling

Plans

Main Plan BGXPC
Prepared by Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	48.0
Unconditioned*	0.0
Total	48.0
Garage	0.0

Accredited assessor

Name Business name

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

The more stars

90.4 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
87.3	3.1
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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

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	Maximum	SHGC*	Substitution tolerance ranges	
WINDOW ID	Description	U-value*		SHGC lower limit	SHGC upper limit
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	51160	SHGC lower limit	SHGC upper limit
No Data Availal	ble				

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes

		ate	7.3 Star Ra	tung as of 2	24 Sep 2021					NATIONWII HOUS INTROVEMING SCH
Location	Window ID	V	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orienta	tion	Window shading device*
Bedroom 1	ALM-00	1-01 A	n/a	1200	1440	n/a	90	W		No
Roof win	dow tva	be and	performa	ance						
Default* roof w										
Window ID	Window			Maximur		SHGC*	Subst	itution to	lerance	ranges
	Descrip	tion		U-value) *		SHGC low	er limit	SHG	iC upper lim
No Data Availal	ble									
Custom* roof w	vindows									
Window ID	Window Descrip			Maximur U-value		SHGC*		itution to		-
No Data Availal	-			- 10100	-		SHGC low	er iimit	SHG	C upper lim
Roof win	ndow sc	hedule								
Location	Window ID	Window no.		ning %	Height (mm)	Width (mm)	Orientation	Outd shad		Indoor shade
No Data Availal		110.		/0	((1111)		5100	0	Shude
							_			
Skylight	type and	d perfor	mance							
Skylight ID			Skyl	ight desci	ription					
No Data Availal	hle									
No Data Availal	ble									
_		е								
	Schedul Skylight S	Skylight	Skyligh shaft len	ath A	rea سکا Orier	itation	Outdoor D	iffuser		ylight shaft
Skylight	Schedul Skylight S D N			gth A	rea m²) Orier	itation	Outdoor D shade	iffuser		ylight shaft eflectance
Skylight	Schedul Skylight S D N	Skylight	shaft len	gth A	- Orior	itation		iffuser		
Skylight Location S II	Schedul Skylight S D N	Skylight No.	shaft len	gth A	- Orior	itation		iffuser		
Skylight Location No Data Availal External	Schedul Skylight S D N	Skylight No.	shaft len (mm)	gth (- Orior	itation				eflectance
Skylight Location S I C No Data Availa External Location	schedul Skylight S D ble door sc	Skylight No. chedule	shaft len (mm)	gth (m ²) Orier	itation	shade D		re	eflectance
Skylight Location No Data Availa External Location	schedul Skylight S D ble door sc	Skylight No. chedule	shaft len (mm)	gth (m ²) Orier	itation	shade D		re	eflectance
Skylight	schedul Skylight S D M ble door sc	Skylight No. Chedule Height (n	shaft len (mm)	gth (m ²) Orier	itation	shade D		re	eflectance
Skylight Location No Data Availal External No Data Availal External Wall Wall Wall	schedul Skylight S D M ble door sc	Skylight No. Chedule Height (n	shaft len (mm) nm) So	gth (i	(m²) Orier	le l	shade D Opening % Bulk insulation		ntation Ref	flective
Skylight Location No Data Availal External Location No Data Availal External	schedul Skylight S D M ble door sc	Skylight No. Chedule Height (n	shaft len (mm) nm) So	gth (i	dth (mm)	le l	Shade D		ntation Ref	eflectance

EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No	
EW-3	Cavity BrickZ:1W2:1	0.50	Medium	Bulk Insulation R1.2	No	

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0006623193 NatHERS Certificate

7.3 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:6	0.85	Dark	Bulk Insulation R0.7	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-3	1585	3545	E	0	NO
Kitchen/Living	EW-2	2700	3545	W	3600	YES
Bedroom 1	EW-2	2700	800	Ν	3600	YES
Bedroom 1	EW-2	2700	500	S	2800	YES
Bedroom 1	EW-2	2700	800	W	300	NO
Bedroom 1	EW-4	1200	1500	W	0	NO
Bedroom 1	EW-5	1501	1500	W	1000	NO
Bedroom 1	EW-2	2700	900	W	400	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		52.00	No Insulation
IW-2 - Single Skin Brick		36.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	25.20 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	12.60 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	3.60 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade	
None Present				



Explanatory notes

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Glossary

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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).					
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmand with scattered					
Exposure category - open	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.					
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(NOC) Class	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.					
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional					
Provisional value	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					
ROOI WINDOW	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.					
Salar haat gain asofficiant (SLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released					
Solar heat gain coefficient (SHGC)	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 know n 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.					
Vartical chading factures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy					
Vertical shading features	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. 0006623201

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 11, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

Type

11-15/243192

2

NCC Class*

- - - -

New Dwelling

Plans

Main Plan BGXPC
Prepared by Brewste

Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	43.
Unconditioned*	8.0
Total	51.
Garage	0.0

Accredited assessor

Name

Business name

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

128.6 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
126.6	2.0
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



p=XWrmNThFj. 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

Mfreedow ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-003-03 A	ALM-003-03 A Aluminium A DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.47	0.45	0.49	
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.53	0.50	0.56	
Custom* window	/S					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	

Window ID	window	iviaximum	SHGC*	oubolituion toloranoo rangoo		
	Description	U-value*	3000	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-003-03 A	n/a	1200	1440	n/a	90	Ν	No
Kitchen/Living	ALM-004-03 A	n/a	2400	2200	n/a	45	E	Yes
Bath	ALM-003-03 A	n/a	945	730	n/a	90	S	No
Bedroom 1	ALM-003-03 A	n/a	1200	1440	n/a	90	E	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					

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 ashadula	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²) Orientatio	on Outdo shade		user	Skylight shaft reflectance		
No Data Av	No Data Available									
Extern	External door schedule									
Location		Height (m	im)	Width (mm)	Oper	ing %	Orienta	ition		
No Data Av	ailable									



External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:2W2:3	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:3	0.85	Dark	Bulk Insulation R0.7	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	3600	Ν	100	YES
Kitchen/Living	EW-1	2700	3745	E	2800	YES
Bath	EW-1	2700	1245	S	100	NO
Bath	EW-2	1455	800	S	0	NO
Bath	EW-3	1245	800	S	700	NO
Bath	EW-1	2700	300	S	200	NO
Bedroom 1	EW-1	2700	1500	Ν	3900	YES
Bedroom 1	EW-1	2700	700	E	200	NO
Bedroom 1	EW-2	1200	1800	E	0	NO
Bedroom 1	EW-4	1500	1800	E	900	NO
Bedroom 1	EW-1	2700	800	E	200	NO
Bedroom 1	EW-1	2700	4045	S	100	NO
Kitchen/Living	EW-1	2700	1390	S	100	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		29.00	No Insulation
IW-2 - Single Skin Brick		35.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilatio	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	25.40 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.60 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.20 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	4.50 None	No Insulation	Ceramic Tiles 8mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction Added insulation (R-value)		Solar absorptance	Roof shade
None Present			



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 softw are 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.
Account 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
Assessed floor area	design documents.
Colling popotrotions	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	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
Conditioned	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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmand with scattered
Exposure category – open	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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 know n 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
Rooi Willdow	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 boot goin coofficient (SUCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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.
Vortical chading factures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
Vertical shading features	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. 0006623219

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 12, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Lot/DP

Type

11-15/243192

2

NCC Class*

New Dwelling

Plans

Main Plan BGXPC
Prepared by Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	67.0
Unconditioned*	8.0
Total	75.0
Garage	0.0

Accredited assessor

Name

Business name

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Exposure Type

NatHERS climate zone

Suburban

20

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

105.2 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
104.2	1.0
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



p=FNOzzufvV. 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	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

Window ID	Window	Maximum SHGC		Substitution tolerance ranges		
	Description	U-value*	3160	SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	1500	n/a	45	W	Yes
6.9 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	2400	1000	n/a	90	W	No
Bath	ALM-001-01 A	n/a	945	730	n/a	90	S	No
Bedroom 1	ALM-001-01 A	n/a	1200	720	n/a	90	W	No
Bedroom 1	ALM-001-01 A	n/a	1200	720	n/a	90	W	No
Bedroom 2	ALM-001-01 A	n/a	1200	970	n/a	90	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	0100*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window ID	Description	U-value*		SHGC lower limit	SHGC upper limit	
	ble					

Root 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	

Skylight Skylight Skylight Outdoor Skylight shaft Area shaft length Orientation Diffuser Location ID No. (m^{2}) shade reflectance (mm) No Data Available

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				



External wall type

	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:2	0.50	Medium	Bulk Insulation R1.2	No
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:2W2:2	0.50	Medium	Bulk Insulation R1.2	No
EW-6	Cavity BrickZ:2W2:4	0.85	Dark	Bulk Insulation R0.7	No
EW-7	Cavity BrickZ:3W2:5	0.50	Medium	Bulk Insulation R1.2	No
EW-8	Cavity BrickZ:3W2:8	0.85	Dark	Bulk Insulation R0.7	No
EW-9	Cavity BrickZ:3W2:10	0.85	Dark	Bulk Insulation R0.7	No
EW-10	Cavity BrickZ:5W2:7	0.85	Dark	Bulk Insulation R0.7	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-3	1585	2800	S	4600	NO
Kitchen/Living	EW-2	2700	3790	W	3300	YES
Bath	EW-5	1585	2345	E	3200	NO
Bath	EW-2	2700	845	S	200	NO
Bath	EW-4	1455	800	S	0	NO
Bath	EW-6	1246	800	S	900	NO
Bath	EW-2	2700	1745	S	200	NO
Bedroom 1	EW-2	2700	600	Ν	6600	YES
Bedroom 1	EW-7	1585	2455	E	6700	NO
Bedroom 1	EW-2	2700	3545	S	200	NO
Bedroom 1	EW-2	2700	300	W	200	NO
Bedroom 1	EW-4	1200	800	W	0	NO
Bedroom 1	EW-8	1501	800	W	800	NO
Bedroom 1	EW-2	2700	1400	W	200	NO
Bedroom 1	EW-4	1200	800	W	0	NO
Bedroom 1	EW-9	1501	800	W	800	NO
Bedroom 1	EW-2	2700	800	W	200	NO
Bedroom 2	EW-2	2700	1200	E	0	NO
Bedroom 2	EW-2	2700	1000	S	200	NO
Bedroom 2	EW-4	1200	1000	S	0	NO
Bedroom 2	EW-10	1501	1000	S	900	NO
Bedroom 2	EW-2	2700	1145	S	200	NO



Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		45.00	No Insulation
IW-2 - Single Skin Brick		56.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	36.70 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	8.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.30 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	3.30 None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	11.50 None	No Insulation	Carpet+Rubber Underlay 18mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bath	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed	
Kitchen/Living	1	Exhaust Fans	300	Sealed	
Bath	1	Exhaust Fans	300	Sealed	

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Construction Added insulation (R-value)		Roof shade
None Present			



Construction Added

Added insulation (R-value)

Solar absorptance

Roof shade



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.

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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 softw are 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					
Assessed floor area	design documents.					
Cailing papatrotions	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes					
Ceiling penetrations	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					
Conditioned	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).					
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmand with scattered					
Exposure category – open	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.					
I levizoutel e le ediner fe etcure	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper					
Horizontal shading feature	levels.					
National Construction Code	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4					
(NOC) Class	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.					
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional					
Provisional value	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					
ROOI WIIIdow	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 hast rain soofficiant (SLICC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released					
Solar heat gain coefficient (SHGC)	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 know n 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.					
	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy					
Vertical shading features	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. 0006623227-01

Generated on 03 Nov 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 13, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW . 2640

Lot/DP NCC Class 11-15/243192

Type

2 New Dwelling

Plans

Main Plan

Prepared by

Brewster Murray

Construction and environment

67.0

8.0 75.0

0.0

BGXPC

Assessed floor area (m²)*

Conditioned*	
Unconditioned*	
Total	
Garage	

Exposure Type Suburban NatHERS climate zone

20

ccredited assessor

Name **Business name** Email Phone

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

the more energy efficient IONWIDE ENERGY RATING SCHEME

The more stars

131.6 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
122.3	9.4
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit



hstar.com.au/QR/Generate? p=ToZTVRrWe. 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	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SURC	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3000	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	Ν	Yes

6.1 Star Rating as of 03 Nov 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	90	S	No
Bath	ALM-001-01 A	n/a	945	745	n/a	90	E	No
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	10	Ν	No
Bedroom 1	ALM-001-01 A	n/a	1200	745	n/a	10	E	No
Bedroom 2	ALM-001-01 A	n/a	1200	745	n/a	10	E	No
Bedroom 2	ALM-001-01 A	n/a	1200	1200	n/a	10	S	No

Roof window type and performance

Default* roof windows

MindaudD	Window	Maximum	SU/20*	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availal	ole					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	

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

No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								
Extern	al door	schedule						

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				



External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:5	0.50	Medium	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:4W2:4	0.85	Dark	Bulk Insulation R0.7	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	4045	Ν	3300	YES
Kitchen/Living	EW-1	2700	1945	S	200	NO
Kitchen/Living	EW-1	1200	1400	S	0	NO
Kitchen/Living	EW-3	1501	1400	S	800	NO
Kitchen/Living	EW-1	2700	645	S	200	YES
Kitchen/Living	EW-1	2700	400	W	2800	YES
Bath	EW-2	2700	3700	E	100	NO
Bath	EW-1	2700	600	S	100	YES
Bath	EW-1	2700	600	Ν	100	YES
Bedroom 1	EW-1	2700	1000	Ν	100	NO
Bedroom 1	EW-2	1200	1500	Ν	0	NO
Bedroom 1	EW-4	1501	1500	Ν	400	NO
Bedroom 1	EW-1	2700	1100	Ν	100	NO
Bedroom 1	EW-1	2700	4345	E	100	YES
Bedroom 1	EW-1	2700	1900	W	4400	YES
Bedroom 2	EW-1	2700	3645	E	200	YES
Bedroom 2	EW-1	2700	900	S	200	NO
Bedroom 2	EW-2	1200	1400	S	0	NO
Bedroom 2	EW-5	1501	1400	S	200	NO
Bedroom 2	EW-1	2700	800	S	200	NO
Bedroom 2	EW-1	2700	1500	W	400	YES
Bedroom 2	EW-1	2700	445	S	1700	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		52.00	No insulation
IW-2 - Cavity brick, plasterboard		22.00	No Insulation



Floor type

Location	Construction	Area Sub-floor (m²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	32.80 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	8.10 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.50 None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 150mm	12.30 None	No Insulation	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab, Unit Below 150mm	6.40 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Hallway	Plasterboard	Bulk Insulation R2.5	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light

* Refer to glossary. Generated on 03 Nov 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 13, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640



Explanatory notes

About this report

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.		
, and a onergy roug	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		
Assessed floor area	design documents.		
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes		
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.		
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it		
Conditioned	will include garages.		
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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).		
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered		
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4		
(NOC) Class	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.		
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional		
Provisional value	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 NathEPS 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.		
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released		
Solar heat gain coefficient (SHGC)	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 know n 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.		
Vortical chading fortures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy		
Vertical shading features	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. 0006623235

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 14, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

11-15/243192 2

NCC Class*

Type

New Dwelling

Plans

Main Plan BGXPC
Prepared by Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	68.0
Unconditioned*	0.0
Total	68.0
Garage	0.0

Accredited assessor

Name

Business name

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

The more stars

113.8 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
105.0	8.8
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



p=CuXlcPYsL. 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.

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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?

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	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit 0.73 0.60	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

Window ID	Window ID Window Maximum SHGC* -	Substitution tolerance ranges			
	Description	U-value*	51160	SHGC lower limit	SHGC upper limit
No Data Availal	ble				

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	Ν	Yes

6.6 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	45	S	No
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	10	Ν	No
Bedroom 2	ALM-001-01 A	n/a	1200	1200	n/a	10	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SIGC	SHGC lower limit SHGC uppe		
No Data Availal	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
windowid	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ilable							

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	S	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No

6.6 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:6	0.50	Medium	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:1	0.50	Medium	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:4W2:4	0.50	Medium	Bulk Insulation R0.7	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	4145	Ν	3600	YES
Kitchen/Living	EW-1	2700	2245	S	200	YES
Kitchen/Living	EW-1	1200	1300	S	0	NO
Kitchen/Living	EW-3	1501	1300	S	900	NO
Kitchen/Living	EW-1	2700	600	S	200	NO
Bedroom 1	EW-1	2700	600	Ν	200	NO
Bedroom 1	EW-1	1200	1700	Ν	0	NO
Bedroom 1	EW-4	1501	1700	Ν	800	NO
Bedroom 1	EW-1	2700	800	Ν	200	NO
Bedroom 1	EW-1	2700	2400	E	100	YES
Bedroom 1	EW-1	2700	2000	W	4200	YES
Bedroom 2	EW-1	2700	1400	E	100	YES
Bedroom 2	EW-1	2700	1000	S	200	NO
Bedroom 2	EW-1	1200	1300	S	0	NO
Bedroom 2	EW-5	1501	1300	S	800	NO
Bedroom 2	EW-1	2700	800	S	200	NO
Bedroom 2	EW-1	2700	1700	W	200	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		47.00	No insulation
IW-2 - Cavity brick, plasterboard		43.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	33.60 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	7.20 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	12.80 None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 150mm	10.60 None	No Insulation	Carpet+Rubber Underlay 18mm

0006623235	NatHERS	Certificate
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6.6 Star Rating as of 24 Sep 2021



Location	Construction		Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	3.50	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up 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.

Accredited assessors

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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 softw are and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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 low er 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. 0006623243

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 15, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Lot/DP

Type

11-15/243192

2

NCC Class

New Dwelling

Plans

Main Plan	BGXPC
Prepared by	Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	68.0
Unconditioned*	0.0
Total	68.0
Garage	0.0

Suburban NatHERS climate zone

20

Exposure Type

Accredited assessor

Name

Business name

Email

Phone

dean@greenview.net.au 8544 1683

DMN/13/1645

Greenview Consulting Pty Ltd

Dean Gorman

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient NATIONWIDE HOUSE

ENERGY RATING SCHEME

113.6 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
104.6	9.0
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate? p=teXEpgqPG. When using either link, ensu



p=teXEpgqPG. 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	Maximum	SHGC*	Substitution tolerance ranges		
window ID	Description	U-value*		SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Stom windows

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	3000	SHGC lower limit	SHGC upper limit
No Data Availal	ble				

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	Ν	Yes

6.6 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	45	S	No
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	10	Ν	No
Bedroom 2	ALM-001-01 A	n/a	1200	1200	n/a	10	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Availal	ole					
Custom* roof w	vindows					
	145	B. a view was		Substitution to	lerance ranges	
MindowID	Window	Maximum	SHCC*		J	
Window ID	Window Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ilable							

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	S	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No

6.6 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:6	0.50	Medium	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:1	0.50	Medium	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:4W2:4	0.50	Medium	Bulk Insulation R0.7	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	4145	Ν	3400	YES
Kitchen/Living	EW-1	2700	2245	S	200	YES
Kitchen/Living	EW-1	1200	1300	S	0	NO
Kitchen/Living	EW-3	1501	1300	S	800	NO
Kitchen/Living	EW-1	2700	545	S	200	YES
Kitchen/Living	EW-1	2700	500	W	100	YES
Bedroom 1	EW-1	2700	600	Ν	200	NO
Bedroom 1	EW-1	1200	1700	Ν	0	NO
Bedroom 1	EW-4	1501	1700	Ν	800	NO
Bedroom 1	EW-1	2700	800	Ν	200	NO
Bedroom 1	EW-1	2700	1700	E	0	NO
Bedroom 1	EW-1	2700	2000	W	4300	YES
Bedroom 2	EW-1	2700	1500	E	0	NO
Bedroom 2	EW-1	2700	1000	S	200	NO
Bedroom 2	EW-1	1200	1300	S	0	NO
Bedroom 2	EW-5	1501	1300	S	800	NO
Bedroom 2	EW-1	2700	800	S	200	NO
Bedroom 2	EW-1	2700	1700	W	100	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		47.00	No insulation
IW-2 - Cavity brick, plasterboard		44.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	32.50 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	7.60 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	13.00 None	No Insulation	Carpet+Rubber Underlay 18mm



Location	Construction	Area Sub-floor (m) ventilation	Added insulation (R-value)	Covering
Bedroom 2	Concrete Slab, Unit Below 150mm	10.90 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	3.60 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Construction Added insulation (R-value)		Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light



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Account 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
Assessed floor area	design documents.
Colling popotrotions	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmand with scattered
Exposure category – open	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.
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	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 know n 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
Rooi Willdow	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 hast goin coofficiant (SUCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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.
Vortical chading fosturas	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
Vertical shading features	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. 0006623268-01

Generated on 03 Nov 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 16, 680, 682, 684 688 East Street 165 Alexandra Street, East Albury, NSW . 2640

Lot/DP

11-15/243192

NCC Class

Type

2 New Dwelling

Plans

Main Plan

Prepared by

BGXPC **Brewster Murray**

Construction and environment

72.0

0.0 72.0

0.0

Assessed floor area (m²)*

Conditioned*
Unconditioned*
Total
Garage

Suburban NatHERS climate zone

Exposure Type

20

ccredited assessor

Name **Business name** Email Phone

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

136.9 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Coolin
124.5	12.4
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit



hstar.com.au/QR/Generate? p=BtYhxnzHh. 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.

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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?

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-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	Ν	Yes

6.0 Star Rating as of 03 Nov 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	45	S	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1200	n/a	10	W	No
Kitchen/Living	ALM-001-01 A	n/a	600	1425	n/a	45	W	No
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	10	Ν	No
Bedroom 2	ALM-001-01 A	n/a	1200	1200	n/a	10	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SU/20*	Substitution tolerance ranges		
window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Availat	ala					

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ilable							

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	S	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
No Data Available					



External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-4	Cavity BrickZ:1W2:6	0.50	Medium	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:1W2:14	0.85	Dark	Bulk Insulation R0.7	No
EW-6	Cavity BrickZ:3W2:1	0.50	Medium	Bulk Insulation R0.7	No
EW-7	Cavity BrickZ:4W2:4	0.50	Medium	Bulk Insulation R0.7	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	3945	Ν	3400	YES
Kitchen/Living	EW-1	2700	1945	S	200	YES
Kitchen/Living	EW-1	1200	1300	S	0	NO
Kitchen/Living	EW-4	1501	1300	S	200	NO
Kitchen/Living	EW-1	2700	800	S	200	NO
Kitchen/Living	EW-1	2700	3700	W	300	YES
Kitchen/Living	EW-2	2700	500	S	3900	YES
Kitchen/Living	EW-2	2700	1800	W	300	NO
Kitchen/Living	EW-2	2700	600	Ν	400	YES
Kitchen/Living	EW-1	2700	900	W	300	YES
Kitchen/Living	EW-2	1800	1600	W	0	NO
Kitchen/Living	EW-5	901	1600	W	900	NO
Kitchen/Living	EW-1	2700	400	W	300	NO
Bedroom 1	EW-1	2700	900	Ν	300	NO
Bedroom 1	EW-1	1200	1700	Ν	0	NO
Bedroom 1	EW-6	1501	1700	Ν	300	NO
Bedroom 1	EW-1	2700	800	Ν	300	NO
Bedroom 1	EW-1	2700	2600	E	0	YES
Bedroom 1	EW-1	2700	1900	W	4300	YES
Bedroom 2	EW-1	2700	1200	E	0	YES
Bedroom 2	EW-1	2700	1000	S	300	NO
Bedroom 2	EW-1	1200	1300	S	0	NO
Bedroom 2	EW-7	1501	1300	S	300	NO
Bedroom 2	EW-1	2700	1100	S	300	NO
Bedroom 2	EW-1	2700	1500	W	200	YES



Internal wall type

Wall ID	Wall type	A rea (m ²)	Bulk insulation
IW-1 - Single Skin Brick		50.00	No insulation
IW-2 - Cavity brick, plasterboard		22.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	34.60 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	8.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	14.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 150mm	11.60 None	No Insulation	Carpet+Rubber Underlay 18mm
Entry	Concrete Slab, Unit Below 150mm	3.80 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No
Entry	Plasterboard	Bulk Insulation R2.5	No

Ceiling penetrations*

Location	Quantity	Туре	Type Diameter (mm ²) Se	
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light

* Refer to glossary. Generated on 03 Nov 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 16, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640

6.0 Star Rating as of 03 Nov 2021



Construction Added insulation (R-value)

Solar absorptance Roof shade



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 softw are 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.
, initial offer gy load	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 NathEPS 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.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623276

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 17, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

Type

11-15/243192

2

NCC Class'

New Dwelling

Plans

Main Plan	BGXPC			
Prepared by	Brewster Murray			

Construction and environment

Assessed floor area (m²)*

Conditioned*	60.0
Unconditioned*	8.0
Total	68.0
Garage	0.0

ccredited assessor

Name

Business name

Email

Phone

Accreditation No.

Assessor Accrediting Organisation

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

DMN/13/1645

Dean Gorman

Design Matters National

Declaration of interest

Declaration completed: no conflicts

the more energy efficient IONWIDE ENERGY RATING SCHEME

The more stars

136.7 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
130.9	5.8
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

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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	Maximum	SUCC*	Substitution tolerance ranges		
window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-003-03 A	ALM-003-03 A Aluminium A DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.47	0.45	0.49	
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain Iow-E -Clear	4.3	0.53	0.50	0.56	
Custom* window	/S					
Window ID	Window	Maximum	SHCC*	Substitution to	lerance ranges	

Window ID	Window	Maximum	SHGC*	oubstitution tolerande ranges		
WINDOW ID	Description	U-value*		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*
Stairs L1	ALM-003-03 A	n/a	1200	960	n/a	90	Ν	No
Kitchen/Living	ALM-003-03 A	n/a	1200	1200	n/a	45	E	No
Kitchen/Living	ALM-004-03 A	n/a	2400	2400	n/a	45	W	Yes
Bedroom 1	ALM-003-03 A	n/a	1200	730	n/a	90	W	No
Bedroom 1	ALM-003-03 A	n/a	1200	730	n/a	90	W	No
Bath	ALM-003-03 A	n/a	945	730	n/a	90	E	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SUCC*	Substitution to	lerance ranges	
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	-1-					

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 de	Skylight description					
No Data Avai	lable								
Skylight schedule									
Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance	

No Data Available

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
Stairs G	2200	1000	90	W	



External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R1.5	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.5	No
EW-3	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:3	0.50	Medium	Bulk Insulation R0.7	No
EW-6	Cavity BrickZ:4W2:5	0.50	Medium	Bulk Insulation R0.7	No
EW-7	Cavity BrickZ:4W2:7	0.50	Medium	Bulk Insulation R0.7	No
EW-8	Cavity BrickZ:5W2:2	0.50	Medium	Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Stairs G	EW-1	2700	7300	Ν	0	NO
Stairs G	EW-1	2700	1300	E	0	NO
Stairs G	EW-1	2700	900	S	0	NO
Stairs G	EW-1	2700	1300	W	1500	NO
Stairs L1	EW-2	2700	6400	Ν	200	NO
Stairs L1	EW-2	2700	1245	E	200	YES
Stairs L1	EW-2	2700	1245	W	200	NO
Kitchen/Living	EW-3	2700	600	Ν	100	YES
Kitchen/Living	EW-3	2700	1200	E	200	NO
Kitchen/Living	EW-3	1200	1200	E	0	NO
Kitchen/Living	EW-5	1501	1200	E	800	NO
Kitchen/Living	EW-3	2700	1945	E	200	NO
Kitchen/Living	EW-3	2700	3690	W	2800	YES
Bedroom 1	EW-3	2700	500	Ν	3800	YES
Bedroom 1	EW-3	1200	800	W	0	NO
Bedroom 1	EW-6	1501	800	W	800	NO
Bedroom 1	EW-3	2700	1400	W	200	NO
Bedroom 1	EW-3	1200	1000	W	0	NO
Bedroom 1	EW-7	1501	1000	W	800	NO
Bedroom 1	EW-3	2700	700	W	200	NO
Bath	EW-3	2700	1245	E	200	NO
Bath	EW-3	1455	900	E	0	NO
Bath	EW-8	1246	900	E	800	NO
Bath	EW-3	2700	1100	E	200	NO
Bath	EW-3	2700	500	S	0	NO



Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		36.00	No Insulation
IW-2 - Single Skin Brick		56.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Stairs G	Concrete Slab on Ground 150mm	9.50 None	No Insulation	Ceramic Tiles 8mm
Stairs L1/Stairs G	Concrete Above Plasterboard 100mm	8.00	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	28.10 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	14.00 None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.90 None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	3.90 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Stairs G	Plasterboard	Bulk Insulation R3.5	No
Stairs G	Concrete Above Plasterboard	No Insulation	No
Stairs L1	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bath	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200



Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	No Added Insulation, No air Gap	0.30	Light
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up 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.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.						
, and a onergy roug	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						
Assessed floor area	design documents.						
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes						
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.						
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it						
Conditioned	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.						
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	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered						
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4						
(NOC) Class	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.						
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional						
Provisional value	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 NathEPS 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.						
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released						
Solar heat gain coefficient (SHGC)	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 know n 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						
vertical shaung leatures	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. 0006623284

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 18, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

11-15/243192

2

NCC Class

Type

New Dwelling

Plans

Main Plan	BGXPC
Prepared by	Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	50.0
Unconditioned*	7.0
Total	57.0
Garage	0.0

Accredited assessor

Name Business name

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

120.6 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
108.4	12.2
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



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	Maximum	SUCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
Custom* windov	VS					
	Mindow	Movimum		Substitution to	lerance ranges	

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3160	SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1445	n/a	90	E	No

6.4 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes
Bedroom 1	ALM-001-01 A	n/a	1200	730	n/a	10	W	No
Bedroom 1	ALM-001-01 A	n/a	1200	730	n/a	10	W	No
Bath	ALM-001-01 A	n/a	945	730	n/a	90	E	No

Roof window type and performance

Default* roof windows

Window ID Des	scription	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
					Si IGC upper III III	
No Data Available						
Custom* roof windows						
Window ID Window		Maximum	SHGC*	Substitution tolerance ranges		
Des Des	scription	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Available						

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 (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								
External door schedule								

Location Height (mm) Width (mm) Opening % Orientation No Data Available External wall type

WallSolarWall shadeBulk insulationReflectionIDtypeabsorptance(colour)(R-value)wall shade	ective wrap*
--	-----------------

6.4 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R1.2	No
EW-3	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:1W2:5	0.50	Medium	Bulk Insulation R1.2	No
EW-5	Cavity BrickZ:1W2:8	0.85	Dark	Bulk Insulation R0.7	No
EW-6	Cavity BrickZ:2W2:6	0.85	Dark	Bulk Insulation R0.7	No
EW-7	Cavity BrickZ:2W2:8	0.85	Dark	Bulk Insulation R0.7	No
EW-8	Cavity BrickZ:3W2:2	0.85	Dark	Bulk Insulation R0.7	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	600	Ν	200	YES
Kitchen/Living	EW-4	1500	300	W	5200	NO
Kitchen/Living	EW-1	2700	2345	E	200	NO
Kitchen/Living	EW-3	1200	1500	E	0	NO
Kitchen/Living	EW-5	1501	1500	E	800	NO
Kitchen/Living	EW-1	2700	900	E	200	NO
Kitchen/Living	EW-1	2700	600	S	0	YES
Kitchen/Living	EW-1	2700	3645	W	2900	YES
Bedroom 1	EW-3	2700	945	W	300	YES
Bedroom 1	EW-3	1200	900	W	0	NO
Bedroom 1	EW-6	1501	900	W	900	NO
Bedroom 1	EW-1	2700	1500	W	300	NO
Bedroom 1	EW-3	1200	700	W	0	NO
Bedroom 1	EW-7	1501	700	W	900	NO
Bedroom 1	EW-1	2700	300	W	400	NO
Bath	EW-1	2700	1400	E	200	NO
Bath	EW-3	1455	1845	E	0	NO
Bath	EW-8	1246	1845	E	200	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		41.00	No insulation
IW-2 - Cavity brick, plasterboard		38.00	No Insulation



Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	31.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	14.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.00 None	No Insulation	Ceramic Tiles 8mm
Hallway	Concrete Slab, Unit Below 200mm	4.90 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Hallway	Plasterboard	Bulk Insulation R2.5	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	Medium

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 18, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640



Explanatory notes

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Exposure category - open	sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
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Solar heat gain coefficient (SHGC)	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 know n 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.
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Vertical shading features	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. 0006623292

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 19, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW 2640

Lot/DP

Type

11-15/243192

NCC Class*

New Dwelling

2

Plans

Main Plan BGXPC Prepared by Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	50.0
Unconditioned*	0.0
Total	50.0
Garage	0.0

20

Exposure Type

NatHERS climate zone

Suburban

ccredited assessor

Name

Business name

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

105.8 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
94.7	11.1
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

visiting hstar.com.au

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



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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?

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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	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	E	Yes

6.8 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1440	n/a	90	Ν	No
Bedroom 1	ALM-001-01 A	n/a	1200	1440	n/a	10	E	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	CUCC*	Substitution tolerance ranges		
window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Availat						

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ilable							

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	Ν	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
No Doto Available					

No Data Available

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No

6.8 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-3	Cavity BrickZ:1W2:7	0.50	Medium	Bulk Insulation R1.2	No
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	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	3545	E	3000	YES
Kitchen/Living	EW-3	1585	3700	Ν	11100	NO
Kitchen/Living	EW-1	2700	3500	Ν	300	YES
Bedroom 1	EW-1	2700	900	E	300	NO
Bedroom 1	EW-4	1200	2300	E	0	NO
Bedroom 1	EW-5	1500	2300	E	900	NO
Bedroom 1	EW-1	2700	700	S	4000	NO
Bedroom 1	EW-1	2700	800	Ν	3900	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		37.00	No insulation
IW-2 - Cavity brick, plasterboard		48.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	25.00 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	7.70 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	13.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	3.70 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up 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 dw elling 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 dw elling is.

Accredited assessors

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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

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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 softw are and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
, and a onergy roug	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 NathEPS 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.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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.
Vortical chading fortures	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
Vertical shading features	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. 0006623300

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 20, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW 2640

Exposure Type

NatHERS climate zone

Suburban

20

Lot/DP

Type

11-15/243192

2

NCC Class'

New Dwelling

Plans

Main Plan	BGXPC
Prepared by	Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	49.0
Unconditioned*	0.0
Total	49.0
Garage	0.0

ccredited assessor

Name **Business name**

Email

Phone

Accreditation No.

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au

8544 1683

DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts



99.5 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
86.8	12.6
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



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	Maximum	SHGC*	* Substitution to	lerance ranges	
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
Custom* window	vs					
				Cule at it at an to		

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3160	SHGC lower limit SHGC upper	SHGC upper limit	
No Data Availa	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1440	n/a	90	Ν	No

0006623300	NatHERS	Certificate
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Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes
Bedroom 1	ALM-001-01 A	n/a	1200	1440	n/a	10	W	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Availat						

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Ava	ailable							

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	Ν	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
No Doto Available					

No Data Available

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 20, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640

7.0 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-3	Cavity BrickZ:1W2:1	0.50	Medium	Bulk Insulation R1.2	No
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:6	0.85	Dark	Bulk Insulation R0.7	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	2200	Ν	800	YES
Kitchen/Living	EW-3	1585	5000	Ν	2800	NO
Kitchen/Living	EW-1	2700	3545	W	3400	YES
Bedroom 1	EW-1	2700	800	Ν	3900	YES
Bedroom 1	EW-1	2700	700	S	7400	NO
Bedroom 1	EW-1	2700	800	W	200	NO
Bedroom 1	EW-4	1200	1500	W	0	NO
Bedroom 1	EW-5	1500	1500	W	800	NO
Bedroom 1	EW-1	2700	900	W	200	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		52.00	No Insulation
IW-2 - Single Skin Brick		37.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	24.80 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	7.70 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	13.10 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	3.70 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Construction Added insulation (R-value)		Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light



Explanatory notes

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
, and a onergy roug	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	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.
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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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 NathEPS 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.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623318

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 21, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW 2640

Lot/DP

Type

11-15/243192

2

NCC Class'

New Dwelling

Plans

Main Plan	BGXPC
Prepared by	Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	49.0
Unconditioned*	0.0
Total	49.0
Garage	0.0

Suburban NatHERS climate zone 20

Exposure Type

ccredited assessor

Name **Business name**

Email

Phone

Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

Dean Gorman

DMN/13/1645

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

114.7 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
102.1	12.6
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate? p=jumRctsKP 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	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	E	Yes

0006623318 NatH	IERS Certificate	6.6 Star F	Rating as of 24 s	Sep 2021				HOUSE
Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientat	Window ion shading device*
Bedroom 1	ALM-001-01 A	n/a	1200	1440	n/a	10	E	No
Roof win	dow type and	d perform	ance					
Window ID	Window		Maximum U-value*		SHGC*	Substitution tolerance range		erance ranges
	Description				0.100	SHGC low	er limit	SHGC upper limit
	•					000		
No Data Availat	•							
No Data Availab Custom* roof w	ble							
Custom* roof w	ble		Maximum		8400*			erance ranges
	vindows		Maximum U-value*		SHGC*		itution tol	

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	S	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-3	Cavity BrickZ:1W2:6	0.50	Medium	Bulk Insulation R1.2	No

6.6 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:1	0.85	Dark	Bulk Insulation R0.7	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	3545	E	3200	YES
Kitchen/Living	EW-3	1585	3545	W	8000	NO
Bedroom 1	EW-1	2700	800	E	400	NO
Bedroom 1	EW-4	1200	2400	E	0	NO
Bedroom 1	EW-5	1500	2400	E	900	NO
Bedroom 1	EW-1	2700	3000	S	200	YES
Bedroom 1	EW-1	2700	800	Ν	3900	YES

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Single Skin Brick		36.00	No insulation
IW-2 - Cavity brick, plasterboard		45.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	25.20 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	7.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	12.90 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	3.60 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up 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 dw elling 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 dw elling 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).

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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 softw are 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.
, initial offer gy load	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
Assessed floor area	design documents.
O liter and the first	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes
Ceiling penetrations	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
Conditioned	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.
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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).
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
Exposure category - open	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 me.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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NOC) Class	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.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	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 NathEPS 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.
Color hast usin as officiant (CLCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solar heat gain coefficient (SHGC)	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 know n 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
vertical shaung leatures	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. 0006623326

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 22, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Lot/DP

11-15/243192 2

NCC Class

Type

New Dwelling

Plans

Main Plan	BGXPC
Prepared by	Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	48.0
Unconditioned*	0.0
Total	48.0
Garage	0.0

Accredited assessor

Name Business name

Email

Phone

ccreditation No

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

DMN/13/1645

Exposure Type

NatHERS climate zone

Suburban

20

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

The more stars the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

106.9 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
94.4	12.6
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



p=WgCZDGVzl. 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.

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Certificate check

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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	Maximum	SUCC*	Substitution tolerance ranges		
Desci	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Stom windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes

JUU0023320 Natr	IERS Certificate	0.0 Star F	Rating as of 24	Sep 2021				NATIONWIDE HOUSE INTEGY RATING SCHIME
Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientatio	Window n shading device*
Bedroom 1	ALM-001-01 A	n/a	1200	1440	n/a	10	W	No
Default* roof wi	dow type and	a periorni	ance			Quitat		
Window ID Window Description			Maximum U-value*	SHGC*	Substitution tolerance ranges			
	•		0-value			SHGC low	ver limit	SHGC upper limit
No Data Availat	ble							
Custom* roof w	vindows							
	Window		Maximum		SUCC*	Substitution toleran		ance ranges
Minuterry ID	Description		U-value*		SHGC*	SHGC low	ver limit	SHGC upper limit
Window ID	Decemption							

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bath	GEN-04-006a	n/a	50	0.30	S	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:1	0.50	Medium	Bulk Insulation R1.2	No

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 22, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640

6.8 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-4	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-5	Cavity BrickZ:3W2:4	0.50	Medium	Bulk Insulation R1.2	No
EW-6	Cavity BrickZ:3W2:6	0.85	Dark	Bulk Insulation R0.7	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-3	1585	3545	E	10700	NO
Kitchen/Living	EW-2	2700	3545	W	3700	YES
Bedroom 1	EW-2	2700	800	Ν	11200	YES
Bedroom 1	EW-2	1115	500	S	0	YES
Bedroom 1	EW-5	1585	500	S	2800	YES
Bedroom 1	EW-2	2700	800	W	500	NO
Bedroom 1	EW-4	1200	1500	W	0	NO
Bedroom 1	EW-6	1501	1500	W	900	NO
Bedroom 1	EW-2	2700	900	W	500	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		52.00	No Insulation
IW-2 - Single Skin Brick		36.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	25.20 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	7.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	12.60 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	3.60 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light



Explanatory notes

About this report

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Glossary

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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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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.
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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 low er 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. 0006623334

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 23, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW . 2640

Lot/DP

11-15/243192

2

NCC Class

Type

New Dwelling

Plans

Main Plan	BGXPC				
Prepared by	Brewster Murray				

Construction and environment

Assessed floor area (m²)*

Conditioned*	43.0
Unconditioned*	7.0
Total	50.0
Garage	0.0

Accredited assessor

Name Business name

Email

Phone

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683

DMN/13/1645

Exposure Type

NatHERS climate zone

Suburban

20

Accreditation No.

Assessor Accrediting Organisation

Design Matters National

Declaration of interest

Declaration completed: no conflicts

the more energy efficient NATIONWIDE HOUSE ENERGY RATING SCHEME

The more stars

136.1 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

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

Thermal performance

Heating	Cooling
122.9	13.3
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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



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	Maximum	SUCC*	Substitution tolerance ranges		
	Vindow ID Description U-value* SHGC*	SHGC	SHGC lower limit	SHGC upper limit		
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
Custom* windov	VS					
	Mindow	Movimum		Substitution to	lerance ranges	

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3160	SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1445	n/a	90	Ν	No

6.0 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	E	Yes
Bath	ALM-001-01 A	n/a	945	730	n/a	90	S	No
Bedroom 1	ALM-001-01 A	n/a	1200	1445	n/a	10	E	No

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	window Maximum		SHGC*	Substitution tolerance ranges		
window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
	ole					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade	
No Data Available									

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Kitchen/Living	GEN-04-006a	n/a	50	0.30	Ν	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation (R-value)	Reflective
ID	type	absorptance	(colour)		wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No

6.0 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-2	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:2W2:3	0.50	Medium	Bulk Insulation R0.7	No
EW-4	Cavity BrickZ:3W2:3	0.85	Dark	Bulk Insulation R0.7	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	3800	Ν	200	YES
Kitchen/Living	EW-1	2700	3745	E	2700	YES
Bath	EW-1	2700	1345	S	200	NO
Bath	EW-1	1455	1000	S	0	NO
Bath	EW-3	1246	1000	S	800	NO
Bedroom 1	EW-1	2700	1500	Ν	4000	YES
Bedroom 1	EW-1	2700	800	E	200	NO
Bedroom 1	EW-2	1200	1500	E	0	NO
Bedroom 1	EW-4	1501	1500	E	800	NO
Bedroom 1	EW-1	2700	900	E	200	NO
Bedroom 1	EW-1	2700	4245	S	200	NO
Kitchen/Living	EW-1	2700	1190	S	200	NO

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		29.00	No Insulation
IW-2 - Single Skin Brick		35.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	25.80 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.40 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.40 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	3.70 None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Bath	Plasterboard	Bulk Insulation R3.5	No

0006623334 NatHERS Certificate		6.0 Star Rating as of 24 Sep 2021		
Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*	
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No	
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No	

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light

A STAR



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 softw are 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.		
Account 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		
Assessed floor area	design documents.		
Colling popotrotions	features that require a penetration to the ceiling, including dow nlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes		
Ceiling penetrations	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		
Conditioned	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).		
	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmand with scattered		
Exposure category – open	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	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4		
(NOC) Class	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.		
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional		
Provisional value	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 know n 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		
Rooi Willdow	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 boot goin coofficient (SUCC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released		
Solar heat gain coefficient (SHGC)	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 know n 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.		
Vortical chading fosturas	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy		
Vertical shading features	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. 0006623342

Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21)

Property

Address

Unit 24, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW 2640

Lot/DP

11-15/243192

2

NCC Class'

Type

New Dwelling

Plans

Main Plan	BGXPC
Prepared by	Brewster Murray

Construction and environment

Assessed floor area (m²)*

Conditioned*	66.0
Unconditioned*	8.0
Total	74.0
Garage	0.0

Suburban NatHERS climate zone 20

Exposure Type

ccredited assessor

Name **Business name**

Email

Phone

Accreditation No.

Design Matters National

Declaration of interest

dean@greenview.net.au 8544 1683

Greenview Consulting Pty Ltd

Dean Gorman

DMN/13/1645

Assessor Accrediting Organisation

Declaration completed: no conflicts

The more stars the more energy efficient IONWIDE ENERGY RATING SCHEME

113.9 MJ/m²

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions

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

Thermal performance

Heating	Cooling
103.8	10.1
MJ/m ²	MJ/m ²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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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	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73	
ALM-001-01 A	ALM-001-01 A Aluminium A SG Clear	6.7	0.57	0.54	0.60	

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit
No Data Availal	ole				

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	W	Yes

6.6 Star Rating as of 24 Sep 2021



Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bath	ALM-001-01 A	n/a	900	730	n/a	90	S	No
Bedroom 1	ALM-001-01 A	n/a	1200	720	n/a	10	W	No
Bedroom 1	ALM-001-01 A	n/a	1200	720	n/a	10	W	No
Bedroom 2	ALM-001-01 A	n/a	1200	970	n/a	10	S	No

Roof window type and performance

Default* roof windows

Window ID	Window	findow Maximum c		Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					
Custom* roof w	vindows					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade	
No Data Ava	vilabla								_

No Data Available

Skylight type and performance

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Kitchen/Living	GEN-04-006a	n/a	50	0.30	S	None	No	0.50

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
No Data Available					
External wa	ll type				

 Wall	Solar	Wall shade	Bulk insulation	Reflective
type	absorptance	(colour)	(R-value)	wall wrap*

6.6 Star Rating as of 24 Sep 2021



Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Bulk Insulation R1.2	No
EW-2	Cavity Brick	0.50	Medium	Bulk Insulation R0.7	No
EW-3	Cavity BrickZ:1W2:2	0.50	Medium	Bulk Insulation R1.2	No
EW-4	Cavity BrickZ:2W2:2	0.50	Medium	Bulk Insulation R1.2	No
EW-5	Cavity BrickZ:2W2:5	0.50	Medium	Bulk Insulation R0.7	No
EW-6	Cavity Brick	0.85	Dark	Bulk Insulation R0.7	No
EW-7	Cavity BrickZ:3W2:5	0.50	Medium	Bulk Insulation R1.2	No
EW-8	Cavity BrickZ:3W2:8	0.50	Medium	Bulk Insulation R0.7	No
EW-9	Cavity BrickZ:3W2:10	0.85	Dark	Bulk Insulation R0.7	No
EW-10	Cavity BrickZ:5W2:8	0.85	Dark	Bulk Insulation R0.7	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-3	1585	3600	S	4000	NO
Kitchen/Living	EW-2	2700	3790	W	3300	YES
Bath	EW-4	1585	845	N	8400	NO
Bath	EW-2	2700	845	S	300	NO
Bath	EW-2	1455	800	S	0	NO
Bath	EW-5	1246	800	S	800	NO
Bath	EW-2	2700	1745	S	300	NO
Bedroom 1	EW-2	2700	600	Ν	4200	YES
Bedroom 1	EW-7	1585	2455	E	6700	NO
Bedroom 1	EW-2	2700	3545	S	300	NO
Bedroom 1	EW-2	2700	300	W	300	NO
Bedroom 1	EW-2	1200	800	W	0	NO
Bedroom 1	EW-8	1501	800	W	800	NO
Bedroom 1	EW-2	2700	1400	W	300	NO
Bedroom 1	EW-6	1200	800	W	0	NO
Bedroom 1	EW-9	1501	800	W	800	NO
Bedroom 1	EW-2	2700	800	W	300	NO
Bedroom 2	EW-2	2700	900	E	100	NO
Bedroom 2	EW-2	2700	900	S	300	NO
Bedroom 2	EW-6	1200	1000	S	0	NO
Bedroom 2	EW-10	1501	1000	S	800	NO
Bedroom 2	EW-2	2700	1145	S	300	NO



Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		45.00	No Insulation
IW-2 - Single Skin Brick		55.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²) ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	36.30 None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	8.00 None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.30 None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	2.30 None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 150mm	12.20 None	No Insulation	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
Bath	Plasterboard	Bulk Insulation R2.5	No
Bedroom 1	Plasterboard	Bulk Insulation R2.5	No
Kitchen/Living	Plasterboard	Bulk Insulation R2.5	No
Bedroom 2	Plasterboard	Bulk Insulation R2.5	No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm ²)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.30	Light

* Refer to glossary. Generated on 24 Sep 2021 using BERS Pro v4.4.0.6 (3.21) for Unit 24, 680, 682, 684 688 East Street 165 Alexandra Street , East Albury , NSW , 2640



Construction Added insulation (R-value)

Solar absorptance Roof shade



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 softw are 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 dow nlights, 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 balc levels.	
National Construction Code	the NOC groups buildings by their function and use, and assigns a classification code. NatHERS software models NOC Class 1, 2 or 4
(NCC) Class	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 know n 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).