

Nationwide House Energy Rating Scheme — Class 2 summary

NatHERS Certificate No. 0008915680

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NatHERS climate zone 10

Accredited assessor



Dean Gorman

Greenview Consulting Pty Ltd

dean@greenview.net.au

8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National



Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=LLjPmUgRD.
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
0008910655	1	9.4	10.3	19.7	8.7
0008915530	2	5.3	9.6	14.9	9.3
0008915589	3	4.4	28.6	33	7.1
0008915597	4	3.4	32.7	36.1	6.7
0008915639	5	6.3	18.6	24.9	8

National Construction Code (NCC) requirements

Continued Over

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.

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
<u>0008915670</u>	6	12.6	10.1	22.7	8.3
<u>0008915548</u>	7	3.3	29.9	33.2	7.1
<u>0008915571</u>	8	10.2	27.6	37.8	6.5
<u>0008915605</u>	9	10.1	25.6	35.7	6.8
<u>0008915647</u>	10	2.2	19.7	22	8.4
<u>0008915662</u>	11	4.1	37.8	41.8	6.1
<u>0008915555</u>	12	3.8	34.6	38.3	6.4
<u>0008915563</u>	13	5.2	18	23.2	8.2
<u>0008915613</u>	14	7.9	11.7	19.6	8.7
<u>0008915621</u>	15	4.2	34.9	39.1	6.4
<u>0008915654</u>	16	7.9	33.1	41	6.2
Average		6.27	23.92	30.19	7.43

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. 0008910655

Generated on 15 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 1, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 74.0	Suburban
Unconditioned* 0.0	NatHERS climate zone
Total 74.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation
Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
9.4	10.3
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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National Construction Code (NCC) requirements

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

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

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

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1800	940	n/a	60	NE	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	45	SE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Bedroom 2	ALM-002-01 A	n/a	1800	1800	n/a	35	SE	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
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No Data Available

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2400	1000	90	NW
Kitchen/Living	2400	1000	90	SE

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	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3645	NW	3400	YES
Kitchen/Living	EW-1	2700	9000	NE	0	NO
Kitchen/Living	EW-1	2700	3645	SE	2000	YES
Bedroom 1	EW-1	2700	3500	SW	3100	YES
Bedroom 1	EW-1	2700	3600	NW	300	NO
Bedroom 1	EW-1	2700	1200	NE	3700	YES
Bedroom 2	EW-1	2700	2000	NE	3700	YES
Bedroom 2	EW-1	2700	3545	SE	100	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		53.00	No insulation

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-2 - Cavity brick, plasterboard		23.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	32.80	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.40	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	7.80	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
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No
Bathroom	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900

Location	Quantity	Diameter (mm)
Bedroom 1	1	900
Bedroom 2	1	900

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

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915530

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 2, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 46.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 54.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
5.3	9.6
MJ/m ²	MJ/m ²

About the rating

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

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	45	SE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	45	SE	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2400	1000	90	NW
Kitchen/Living	2400	1000	90	SE

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	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3545	NW	2600	YES
Kitchen/Living	EW-1	2700	900	NE	3100	YES
Kitchen/Living	EW-1	2700	3545	SE	1600	YES
Kitchen/Living	EW-1	2700	300	SW	0	YES
Bedroom 1	EW-1	2700	1700	SW	0	NO
Bedroom 1	EW-1	2700	3600	NW	0	NO
Bedroom 1	EW-1	2700	400	NE	6700	YES
Bathroom	EW-1	2700	3545	SE	0	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		35.00	No Insulation
IW-2 - Single Skin Brick		40.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	26.70	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	4.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.10	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	8.00	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
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bathroom	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

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

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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.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915589

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 3, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 74.0	Suburban
Unconditioned* 0.0	NatHERS climate zone
Total 74.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

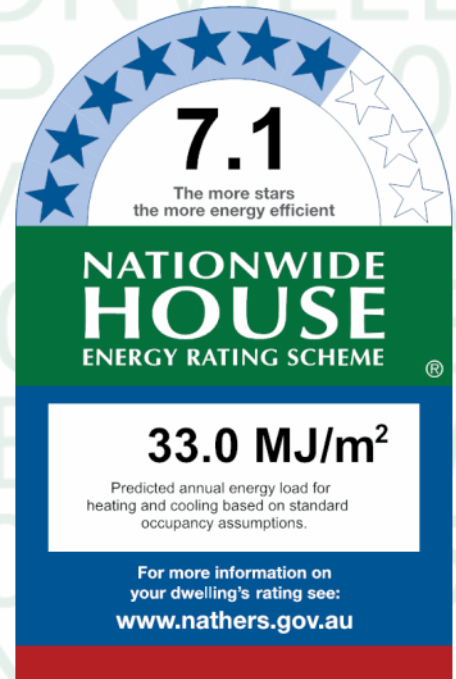
Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

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

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

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



Thermal performance

Heating	Cooling
4.4	28.6
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=BcSjGhdpF. When using either link, ensure you are visiting hstar.com.au



Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1200	940	n/a	10	NE	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	10	SE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Bedroom 2	ALM-001-01 A	n/a	1200	1800	n/a	10	SE	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
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No Data Available

Skylight schedule

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

External door schedule

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

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3695	NW	3400	YES
Kitchen/Living	EW-2	2700	9000	NE	100	NO
Kitchen/Living	EW-2	2700	3695	SE	100	YES
Bedroom 1	EW-1	2700	3500	SW	100	YES
Bedroom 1	EW-1	2700	3600	NW	300	NO
Bedroom 1	EW-2	2700	1200	NE	3800	YES
Bedroom 2	EW-2	2700	2000	NE	100	YES
Bedroom 2	EW-1	2700	3545	SE	200	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		53.00	No insulation

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-2 - Cavity brick, plasterboard		23.00	No Insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	32.90	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	5.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.40	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 150mm	12.90	None	No Insulation	Ceramic Tiles 8mm
Bathroom/LDry	Concrete Slab, Unit Below 150mm	7.90	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 R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bathroom/LDry	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom/LDry	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900

Location	Quantity	Diameter (mm)
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.32	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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Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915597

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 4, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 46.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 54.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

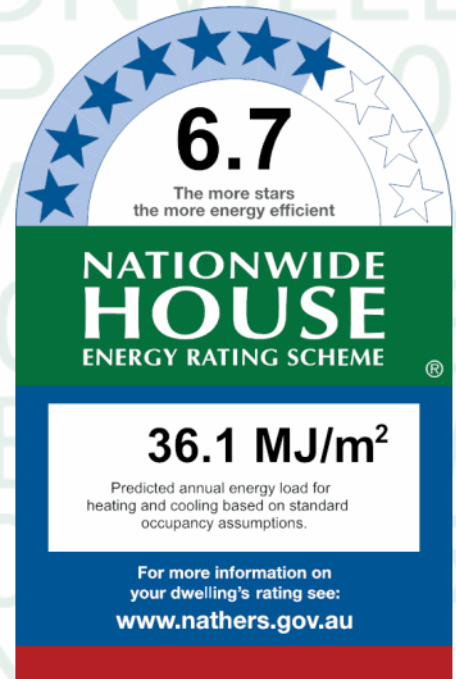
Declaration of interest Declaration completed: no conflicts

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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.

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Thermal performance

Heating	Cooling
3.4	32.7
MJ/m ²	MJ/m ²

About the rating

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Certificate check

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Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	45	SE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	45	SE	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

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

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No
EW-3	Cavity Brick	0.50	Medium	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3595	NW	2600	YES
Kitchen/Living	EW-1	2700	900	NE	100	YES
Kitchen/Living	EW-2	2700	3545	SE	200	YES
Kitchen/Living	EW-2	2700	300	SW	3600	YES
Bedroom 1	EW-3	2700	1700	SW	0	NO
Bedroom 1	EW-3	2700	3600	NW	100	NO
Bedroom 1	EW-3	2700	400	NE	3700	YES
Bathroom	EW-3	2700	3595	SE	500	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1	Cavity brick, plasterboard	35.00	No Insulation
IW-2	Cavity wall, direct fix plasterboard, single gap	40.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	26.70	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	4.30	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.10	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	8.00	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 R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

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



Explanatory notes

About this report

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Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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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.
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Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915639

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 5, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 51.0	Suburban
Unconditioned* 7.0	NatHERS climate zone
Total 58.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

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

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

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



Thermal performance

Heating	Cooling
6.3	18.6
MJ/m ²	MJ/m ²

About the rating

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Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=oOUI7VZZu. When using either link, ensure you are visiting hstar.com.au



Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NW	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	NE	No
Bedroom 1	ALM-002-01 A	n/a	2400	2400	n/a	45	SE	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
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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	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	4100	NW	2400	NO
Kitchen/Living	EW-1	2700	645	NE	0	NO
Kitchen/Living	EW-1	2700	4600	SW	0	YES
Bathroom	EW-1	2700	3490	NE	0	NO
Bedroom 1	EW-1	2700	4345	NE	0	NO
Bedroom 1	EW-1	2700	4100	SE	1300	NO
Bedroom 1	EW-1	2700	600	SW	6600	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		43.00	No Insulation
IW-2 - Single Skin Brick		32.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	27.70	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	5.90	None	No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	Concrete Slab on Ground 100mm	7.50	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	17.30	None	No Insulation	Carpet 10mm

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

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

Explanatory notes

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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915670

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 6, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 66.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 74.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

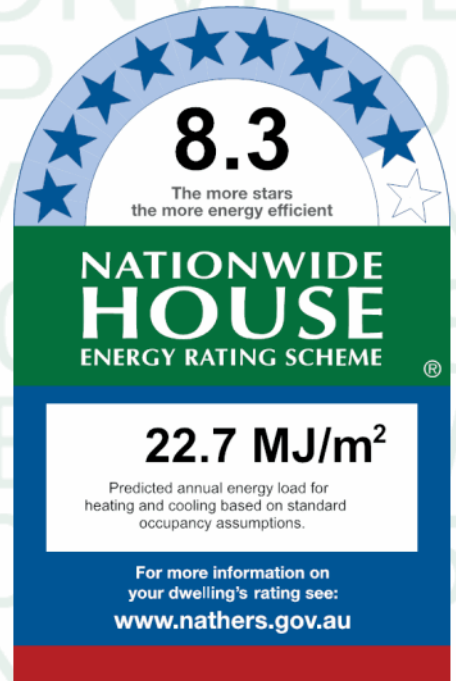
Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
12.6	10.1
MJ/m ²	MJ/m ²

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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".

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1200	700	n/a	90	SE	No
Kitchen/Living	ALM-002-01 A	n/a	1200	750	n/a	00	SE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Bedroom 1	ALM-002-01 A	n/a	600	1800	n/a	00	SW	No
Bathroom	ALM-001-01 A	n/a	800	600	n/a	90	SW	No
Bedroom 2	ALM-002-01 A	n/a	1800	1800	n/a	35	SE	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
-------------	----------------------

No Data Available

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2400	1000	90	NW
Kitchen/Living	2400	1000	90	SE

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	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3645	NW	3350	YES
Kitchen/Living	EW-1	2700	900	NE	3000	YES
Kitchen/Living	EW-1	2700	3590	SE	3450	YES
Kitchen/Living	EW-1	2700	1490	SW	0	YES
Bedroom 1	EW-1	2700	3700	NW	0	NO
Bedroom 1	EW-1	2700	1500	NE	6700	YES
Bedroom 1	EW-1	2700	400	SE	1600	YES
Bedroom 1	EW-1	2700	4300	SW	200	NO
Bathroom	EW-1	2700	2245	SW	0	NO
Bathroom	EW-1	2700	400	NW	1600	YES
Bedroom 2	EW-1	2700	1500	NE	6700	YES
Bedroom 2	EW-1	2700	3700	SE	200	NO
Bedroom 2	EW-1	2700	3745	SW	0	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		22.00	No Insulation
IW-2 - Single Skin Brick		48.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 150mm	36.60	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 150mm	15.60	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 150mm	8.00	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 150mm	13.70	None	No Insulation	Carpet 10mm

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

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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The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

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

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915548

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 7, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 51.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 59.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

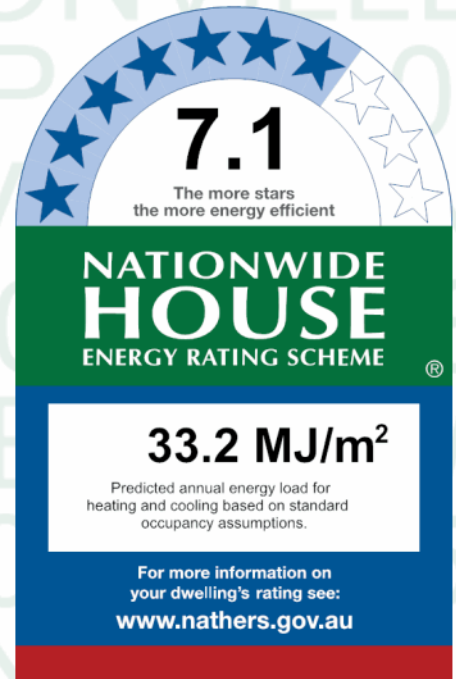
Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

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

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

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



Thermal performance

Heating	Cooling
3.3	29.9
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=BhXtgwPLa. When using either link, ensure you are visiting hstar.com.au



Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NW	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	NE	No
Bedroom 1	ALM-001-01 A	n/a	1200	1800	n/a	10	SE	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

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

External door schedule

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

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Cavity Brick	0.50	Medium	No insulation	No
EW-3	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	4100	NW	2400	NO
Kitchen/Living	EW-2	2700	695	NE	100	NO
Kitchen/Living	EW-3	2700	4600	SW	100	YES
Bathroom	EW-3	2700	3590	NE	100	NO
Bedroom 1	EW-3	2700	4395	NE	100	NO
Bedroom 1	EW-1	2700	4100	SE	200	NO
Bedroom 1	EW-3	2700	600	SW	100	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1	Cavity brick, plasterboard	43.00	No Insulation
IW-2	Cavity wall, direct fix plasterboard, single gap	32.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²)	ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	27.80	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	6.00	None	No Insulation	Ceramic Tiles 8mm
Bathroom	Concrete Slab, Unit Below 150mm	7.60	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	17.30	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

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



Explanatory notes

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Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915571

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 8, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 66.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 74.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

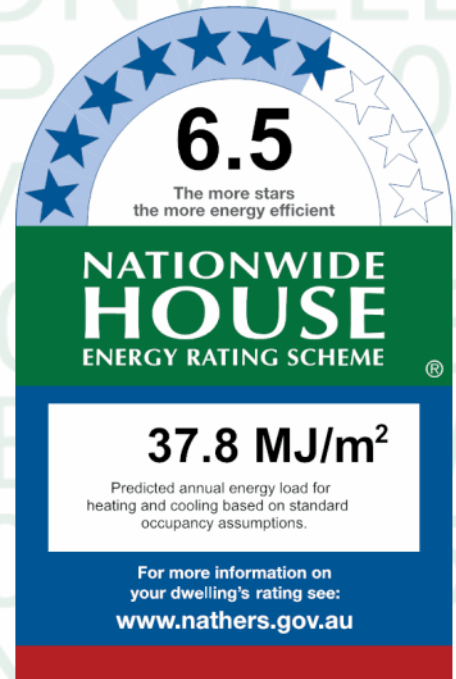
Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

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Thermal performance

Heating	Cooling
10.2	27.6
MJ/m ²	MJ/m ²

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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? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	2400	2400	n/a	45	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	10	SE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NW	No
Bedroom 1	ALM-002-01 A	n/a	600	1800	n/a	00	SW	No
Bathroom	ALM-001-01 A	n/a	800	600	n/a	90	SW	No
Bedroom 2	ALM-001-01 A	n/a	1200	1800	n/a	10	SE	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

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

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No
EW-3	Cavity Brick	0.50	Medium	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3695	NW	3400	YES
Kitchen/Living	EW-2	2700	900	NE	100	YES
Kitchen/Living	EW-3	2700	3640	SE	100	YES
Kitchen/Living	EW-3	2700	1590	SW	500	YES
Bedroom 1	EW-2	2700	3700	NW	100	NO
Bedroom 1	EW-2	2700	1500	NE	3800	YES
Bedroom 1	EW-2	2700	400	SE	7900	YES
Bedroom 1	EW-1	2700	4300	SW	200	NO
Bathroom	EW-2	2700	2295	SW	100	NO
Bathroom	EW-2	2700	400	NW	6000	YES
Bedroom 2	EW-2	2700	1500	NE	100	YES
Bedroom 2	EW-1	2700	3700	SE	200	NO

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 2	EW-2	2700	3795	SW	100	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		22.00	No Insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		52.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	31.70	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	4.90	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.60	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	8.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 150mm	13.80	None	No Insulation	Carpet 10mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.32	Light

Explanatory notes

About this report

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Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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Disclaimer

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The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

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

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915605

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 9, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 64.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 71.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

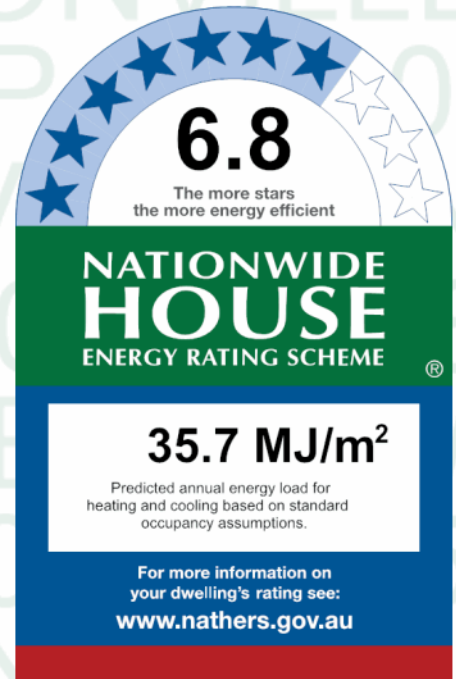
Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

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

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

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



Thermal performance

Heating	Cooling
10.1	25.6
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=yTYXKQYKA. When using either link, ensure you are visiting hstar.com.au



Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	600	1800	n/a	00	SW	Yes
Kitchen/Living	ALM-002-01 A	n/a	2400	2300	n/a	45	NW	No
Kitchen/Living	ALM-001-01 A	n/a	1800	950	n/a	60	NE	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	NE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	45	SW	No
Bedroom 2	ALM-002-01 A	n/a	1800	1800	n/a	45	SW	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
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	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	4500	SW	0	YES
Kitchen/Living	EW-1	2700	3800	NW	2900	NO
Kitchen/Living	EW-1	2700	8045	NE	0	NO
Bathroom	EW-1	2700	3490	NE	200	NO
Bedroom 1	EW-1	2700	1400	NW	0	YES
Bedroom 1	EW-1	2700	3545	SW	200	NO
Bedroom 2	EW-1	2700	3445	NW	200	YES
Bedroom 2	EW-1	2700	3545	SW	0	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		51.00	No insulation
IW-2 - Cavity brick, plasterboard		23.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	30.40	None	No Insulation	Ceramic Tiles 8mm
Bathroom	Concrete Slab on Ground 100mm	7.60	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.20	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.20	None	No Insulation	Carpet 10mm
Kitchen/Living	Concrete Slab on Ground 100mm	6.00	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
Bathroom	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	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

Roof *type*

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

None Present

Explanatory notes

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U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915647

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 10, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 47.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 55.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
2.2	19.7
MJ/m ²	MJ/m ²

About the rating

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Verification

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National Construction Code (NCC) requirements

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Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NE	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	45	SW	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NE	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	SW	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
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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	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	800	NW	3000	YES
Kitchen/Living	EW-1	2700	3590	NE	3300	YES
Kitchen/Living	EW-1	2700	1300	SE	0	YES
Kitchen/Living	EW-1	2700	3700	SW	300	NO
Bedroom 1	EW-1	2700	1500	NW	6700	YES
Bedroom 1	EW-1	2700	3600	NE	0	NO
Bathroom	EW-1	2700	3545	SW	0	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity brick, plasterboard		41.00	No Insulation
IW-2 - Single Skin Brick		37.00	No insulation

Floor type

Location	Construction	Area Sub-floor (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	27.50	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	4.20	None	No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Concrete Slab on Ground 100mm	15.50	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	8.00	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
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bathroom	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

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

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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Glossary

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Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915662

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 11, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 64.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 72.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

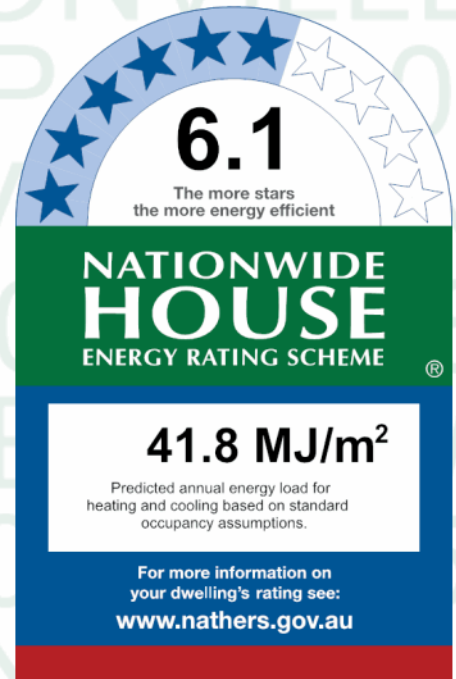
Declaration of interest Declaration completed: no conflicts

National Construction Code (NCC) requirements

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

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

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



Thermal performance

Heating	Cooling
4.1	37.8
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=DVITxgZzM. When using either link, ensure you are visiting hstar.com.au



Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61
ALM-002-01 A	ALM-002-01 A Aluminium B SG Clear	6.7	0.70	0.66	0.73
ALM-001-03 A	ALM-001-03 A Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-03 A	n/a	600	1800	n/a	00	SW	No
Kitchen/Living	ALM-002-01 A	n/a	2400	2300	n/a	45	NW	No
Kitchen/Living	ALM-001-03 A	n/a	1200	950	n/a	90	NE	No
Bathroom	ALM-001-03 A	n/a	800	1200	n/a	90	NE	No
Bedroom 1	ALM-001-03 A	n/a	1200	1800	n/a	10	SW	No
Bedroom 2	ALM-002-03 A	n/a	600	1800	n/a	00	NW	No
Bedroom 2	ALM-001-03 A	n/a	1200	1800	n/a	10	SW	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
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No Data Available

Skylight schedule

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

External door schedule

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

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	4500	SW	100	YES
Kitchen/Living	EW-2	2700	3800	NW	2900	NO
Kitchen/Living	EW-1	2700	8095	NE	100	NO
Bathroom	EW-2	2700	3540	NE	200	NO
Bedroom 1	EW-1	2700	1400	NW	100	YES
Bedroom 1	EW-2	2700	3545	SW	200	NO
Bedroom 2	EW-2	2700	3495	NW	200	YES
Bedroom 2	EW-1	2700	3595	SW	100	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		51.00	No insulation

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-2 - Cavity brick, plasterboard		23.00	No Insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	30.40	None	No Insulation	Ceramic Tiles 8mm
Bathroom	Concrete Slab, Unit Below 150mm	7.70	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.30	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab, Unit Below 150mm	12.30	None	No Insulation	Carpet 10mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	6.10	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 R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900

Location	Quantity	Diameter (mm)
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium

Explanatory notes

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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).
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.
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Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
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Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915555

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 12, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 47.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 55.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

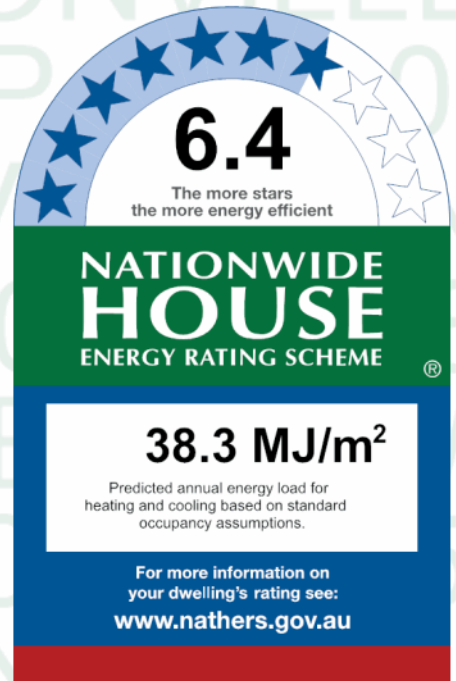
Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation
Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
3.8	34.6
MJ/m ²	MJ/m ²

About the rating

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Verification

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

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NE	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	10	SW	No
Bedroom 1	ALM-001-01 A	n/a	1200	1800	n/a	10	NE	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	SW	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

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

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No
EW-2	Cavity Brick	0.50	Medium	No insulation	No
EW-3	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	800	NW	100	YES
Kitchen/Living	EW-1	2700	3640	NE	3400	YES
Kitchen/Living	EW-1	2700	1300	SE	100	YES
Kitchen/Living	EW-1	2700	3700	SW	300	NO
Bedroom 1	EW-2	2700	1500	NW	6700	YES
Bedroom 1	EW-2	2700	3600	NE	100	NO
Bathroom	EW-3	2700	3595	SW	100	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1	Cavity brick, plasterboard	41.00	No Insulation
IW-2	Cavity wall, direct fix plasterboard, single gap	37.00	No insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	27.60	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	4.30	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.50	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	8.00	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 R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium



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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Disclaimer

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The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

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

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915563

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 13, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 47.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 55.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

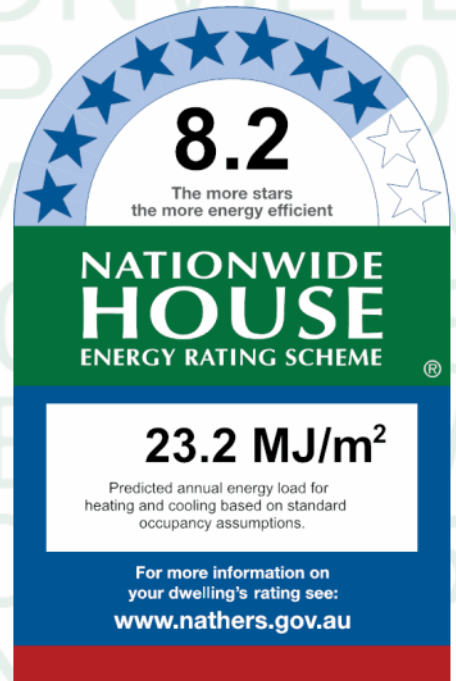
Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
5.2	18.0
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=fhkojgroU. When using either link, ensure you are visiting hstar.com.au



National Construction Code (NCC) requirements

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

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

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

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	45	SW	No
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NE	No
Bedroom 1	ALM-002-01 A	n/a	1800	1800	n/a	35	NE	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	SW	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

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

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3700	SW	300	NO
Kitchen/Living	EW-1	2700	1300	NW	0	YES
Kitchen/Living	EW-1	2700	3590	NE	3500	YES
Kitchen/Living	EW-1	2700	600	SE	3000	YES
Kitchen/Living	EW-1	2700	800	SE	3000	NO
Bedroom 1	EW-1	2700	3600	NE	0	NO
Bedroom 1	EW-1	2700	1500	SE	6700	YES
Bathroom	EW-1	2700	3545	SW	0	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		37.00	No insulation
IW-2 - Cavity brick, plasterboard		39.00	No Insulation

Floor type

Location	Construction	Area Sub-floor (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	27.60	None	No Insulation	Ceramic Tiles 8mm

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	4.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.50	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	8.00	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
Kitchen/Living	Concrete, Plasterboard	No insulation	No
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bathroom	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

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

Explanatory notes

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Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915613

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 14, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 67.0	Suburban
Unconditioned* 7.0	
Total 74.0	NatHERS climate zone
Garage 0.0	10



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

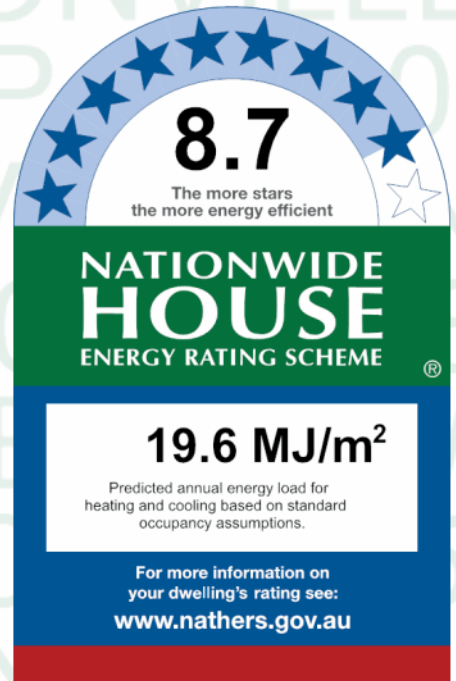
Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
7.9	11.7
MJ/m ²	MJ/m ²

About the rating

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Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NE	No
Kitchen/Living	ALM-001-01 A	n/a	1200	1800	n/a	45	SE	No
Bedroom 1	ALM-002-01 A	n/a	600	1800	n/a	00	SE	No
Bedroom 1	ALM-001-01 A	n/a	1800	1200	n/a	35	SW	No
Bedroom 2	ALM-001-01 A	n/a	1200	1800	n/a	45	SE	No
Bathroom	ALM-001-01 A	n/a	600	1200	n/a	90	SW	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
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	Foil Anti-glare one side and Reflective other of the Bulk Insulation R0.5	Yes

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	NE	3400	YES
Kitchen/Living	EW-1	2700	4490	SE	0	YES
Kitchen/Living	EW-1	2700	3100	NW	0	YES
Bedroom 1	EW-1	2700	1745	SW	0	NO
Bedroom 1	EW-1	2700	500	NE	4600	YES
Bedroom 1	EW-1	2700	4000	SE	0	NO
Bedroom 1	EW-1	2700	1800	SW	0	YES
Bedroom 1	EW-1	2700	1000	SE	0	YES
Bedroom 2	EW-1	2700	3345	NW	3800	YES
Bedroom 2	EW-1	2700	3600	NE	200	NO
Bedroom 2	EW-1	2700	3400	SE	0	NO
Bedroom 2	EW-1	2700	700	SW	4600	YES
Bathroom	EW-1	2700	3490	SW	0	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Single Skin Brick		49.00	No insulation
IW-2 - Cavity brick, plasterboard		18.00	No Insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	30.10	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	15.80	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.10	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	7.30	None	No Insulation	Ceramic Tiles 8mm
Entry/Hallway	Concrete Slab on Ground 100mm	9.20	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
Bedroom 1	Concrete, Plasterboard	No insulation	No
Bedroom 2	Concrete, Plasterboard	No insulation	No
Bathroom	Concrete, Plasterboard	No insulation	No
Entry/Hallway	Concrete, Plasterboard	No insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

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

Explanatory notes

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Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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Glossary

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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.
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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).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915621

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 15, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 47.0	Suburban
Unconditioned* 8.0	NatHERS climate zone
Total 56.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

Email dean@greenview.net.au

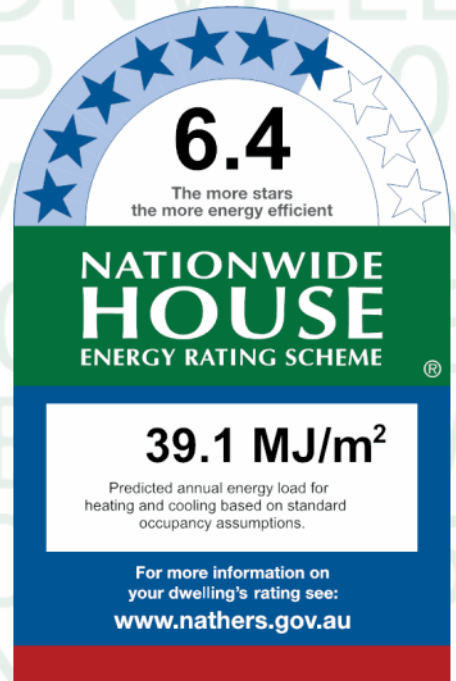
Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation

Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
4.2	34.9
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=EZTPIvLQa. When using either link, ensure you are visiting hstar.com.au



National Construction Code (NCC) requirements

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

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

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

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	n/a	1200	1450	n/a	10	SW	No
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NE	No
Bedroom 1	ALM-001-01 A	n/a	1200	1800	n/a	10	NE	No
Bathroom	ALM-001-01 A	n/a	800	1200	n/a	90	SW	No

Roof window type and performance

Default* roof windows

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

Custom* roof windows

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

Roof window schedule

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

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

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

External door schedule

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

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-3	Cavity Brick	0.50	Medium	No insulation	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3700	SW	300	NO
Kitchen/Living	EW-2	2700	1300	NW	0	YES
Kitchen/Living	EW-1	2700	3640	NE	3500	YES
Kitchen/Living	EW-2	2700	1400	SE	100	YES
Bedroom 1	EW-3	2700	3600	NE	100	NO
Bedroom 1	EW-3	2700	1500	SE	6700	YES
Bathroom	EW-2	2700	3595	SW	100	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1	Cavity wall, direct fix plasterboard, single gap	37.00	No insulation
IW-2	Cavity brick, plasterboard	39.00	No Insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	27.60	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	4.30	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.50	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	8.00	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 R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium



Explanatory notes

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Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008915654

Generated on 18 Sep 2023 using BERS Pro v4.4.1.5d (3.21)

Property

Address Unit 16, 3 Cooke Ave 1,3, 5 Deegan Drive,
Alstonville , NSW , 2477

Lot/DP 150-153/243997

NCC Class* 2

Type New Dwelling

Plans

Main plan Rev: A Date: 25/08/2023

Prepared by DTA ARCHITECTS

Construction and environment

Assessed floor area (m ²)*	Exposure type
Conditioned* 67.0	Suburban
Unconditioned* 7.0	NatHERS climate zone
Total 75.0	10
Garage 0.0	



Accredited assessor

Name Dean Gorman

Business name Greenview Consulting Pty Ltd

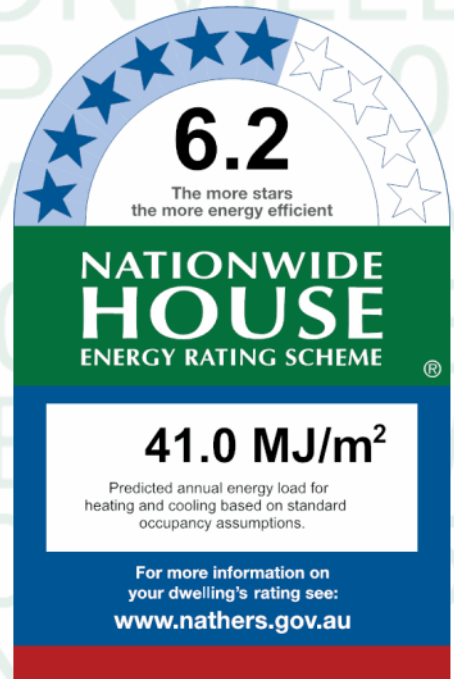
Email dean@greenview.net.au

Phone 8544 1683

Accreditation No. DMN/13/1645

Assessor Accrediting Organisation Design Matters National

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating	Cooling
7.9	33.1
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=RGNHIBefh. When using either link, ensure you are visiting hstar.com.au



National Construction Code (NCC) requirements

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

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

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

Certificate check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional notes

I have modeled the shading in accordance with NatHERS principles

Window and glazed door type and performance

Default* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	n/a	45	NE	Yes
Kitchen/Living	ALM-001-01 A	n/a	1200	1800	n/a	10	SE	No
Bedroom 1	ALM-002-01 A	n/a	600	1800	n/a	00	SE	No
Bedroom 1	ALM-001-01 A	n/a	1800	1200	n/a	10	SW	No
Bedroom 2	ALM-002-01 A	n/a	600	1800	n/a	00	NE	No
Bedroom 2	ALM-001-01 A	n/a	1200	1800	n/a	10	SE	No
Bathroom	ALM-001-01 A	n/a	600	1200	n/a	90	SW	No

Roof window *type and performance*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
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No Data Available

Skylight schedule

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

External door schedule

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

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Metal Clad Cavity Panel Direct Fix	0.32	Light	Anti-glare foil with bulk no gap R2.5	No
EW-2	Metal Clad Cavity Panel Direct Fix	0.46	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	3800	NE	3500	YES
Kitchen/Living	EW-1	2700	4590	SE	100	YES
Kitchen/Living	EW-2	2700	3100	NW	100	YES
Bedroom 1	EW-1	2700	1795	SW	100	NO
Bedroom 1	EW-2	2700	500	NE	100	YES
Bedroom 1	EW-1	2700	4000	SE	200	NO
Bedroom 1	EW-2	2700	1800	SW	100	YES
Bedroom 1	EW-1	2700	1000	SE	100	YES
Bedroom 2	EW-2	2700	3395	NW	3900	YES
Bedroom 2	EW-1	2700	3600	NE	200	NO
Bedroom 2	EW-2	2700	3400	SE	100	NO
Bedroom 2	EW-2	2700	700	SW	100	YES
Bathroom	EW-1	2700	3540	SW	100	YES

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		49.00	No insulation
IW-2 - Cavity brick, plasterboard		18.00	No Insulation

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	30.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	15.80	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab, Unit Below 150mm	12.10	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	7.30	None	No Insulation	Ceramic Tiles 8mm
Entry/Hallway	Concrete Slab, Unit Below 150mm	9.20	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 R4	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Entry/Hallway	Plasterboard	Bulk Insulation R4	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licenced assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

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

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Opening percentage	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).