Nationwide House Energy Rating Scheme[®] Class 2 Summary NatHERS[®] Certificate No. 0009059200

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP Lo NatHERS Climate Zone 28

17-19 Pank Parade, BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 28 Richmond



NameDean GormanBusiness nameGreenview Consulting Pty IEmaildean@greenview.net.auPhone8544 1683Accreditation No.DMN/13/1645Assessor Accrediting OrganisationDesign Matters National

Verification

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



National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at <u>www.abcb.gov.au.</u>

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating





R

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

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

NCC heating and cooling maximum loads (MJ/m²/p.a.)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled block average	51.8	6.1
Maximum block limit	N/A	N/A

Whole of Home performance rating

No Whole of Home performance rating conducted for this summary certificate or not completed for all dwellings

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m ² /p.a.]	Cooling load (load limit) [MJ/m ² /p.a.]	Total load [MJ/m ² /p.a.]	Star Rating	Whole of Home Rating
0009059080-01	1	60.6 (N/A)	2.1 (N/A)	62.7	6.9	0
<u>0009059114-01</u>	2	62.0 (N/A)	3.4 (N/A)	65.4	6.7	0

Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au

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Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m ² /p.a.]	Cooling load (load limit) [MJ/m ² /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
0009059155-01	3	34.9 (N/A)	3.1 (N/A)	38.0	8.2	0
<u>0009059171-01</u>	4	62.1 (N/A)	2.8 (N/A)	64.8	6.8	0
0009059197	5	69.0 (N/A)	2.7 (N/A)	71.7	6.4	0
0009059072-01	6	35.1 (N/A)	4.9 (N/A)	40.0	8.1	0
0009059106-01	7	38.3 (N/A)	5.1 (N/A)	43.5	7.9	0
0009059130-01	8	60.6 (N/A)	5.4 (N/A)	66.0	6.7	0
0009059163-01	9	66.6 (N/A)	10.4 (N/A)	77.0	6.1	0
0009059189-01	10	29.8 (N/A)	8.6 (N/A)	38.4	8.2	0
0009059064-01	11	60.9 (N/A)	5.2 (N/A)	66.1	6.7	0
0009059098	12	55.5 (N/A)	6.7 (N/A)	62.1	6.9	0
0009059122-01	13	43.8 (N/A)	14.4 (N/A)	58.2	7.1	0
0009059148-01	14	45.9 (N/A)	10.7 (N/A)	56.6	7.2	0

Explanatory notes

About this ratings

The thermal performance star rating in this Certificate is the average rating of all NCC Class 2 dwellings in an apartment block. Individual unit ratings are listed in the 'Summary of all dwellings' section of this Certificate.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads.

For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au



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, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions 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.

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Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059080-01

Unit 1, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 64.5 Unconditioned* 7.3 Total 71.8 Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

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Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

62.7 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling		
Modelled	60.6	2.1		
Load limits	N/A	N/A		

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
- ICC Climate Zone 1 of
 - Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



6.9 Star Rating as of 30 Nov 2023

			Constru	stion	HONWER
Certificate check	Approva	I Stage	Stage		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupai
Genuine certificate check		r	n		
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check		Т	1		
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



	Approva	al Stage	Constru Stage	ction	HOUSE	
Certificate check	lecked	:hority/ ecked	ked	hority ecked	Other	
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not inclu-	uded in t	he NatHE	RS asse	ssment)		
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asses	ssment is r	not conduc	ted)	
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements	1				1	

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	om Zone Type	
Kitchen/Living	Kitchen/Living	30.23
Bedroom 1	Bedroom	15
Bath	Unconditioned	7.27
Glazed Common Area	Glazed Common Area	19.63
Bedroom 2	Bedroom	14.41
Hall	Daytime	4.87

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC		Substitution to	lerance ranges
	Description U-value*		SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61

Custom windows*

Window ID	Window Maximum		SHGC*	Substitution tolerance ranges			
	Description	U-value*	3600	SHGC lower limit	SHGC upper limit		
No Data Availa	able						

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	W27	1400	1330	Awning	45	S	Yes
Kitchen/Living	ALM-001-03 A	W34	2400	1000	Awning	90	S	No
Kitchen/Living	ALM-001-03 A	W31	2400	600	Awning	45	Ν	Yes
Kitchen/Living	ALM-002-03 A	W32	2400	2400	Awning	45	Ν	No
Bedroom 1	ALM-001-03 A	W26	850	2650	Awning	90	E	No
Bedroom 1	ALM-001-03 A	W24	2100	850	Awning	30	S	No
Bedroom 1	ALM-001-03 A	W14	2100	850	Awning	45	S	No
Bath	ALM-001-03 A	W28	850	850	Awning	90	E	No
Glazed Common Area	ALM-001-01 A	W19	2400	1000	Awning	90	S	No

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6.9 Star Rating as of 30 Nov 2023



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Glazed Common Area	ALM-002-01 A	W20	2400	940	Awning	00	S	No
Glazed Common Area	ALM-001-01 A	W28	2400	1000	Awning	90	Ν	No
Glazed Common Area	ALM-002-01 A	W33	2400	940	Awning	00	Ν	No
Bedroom 2	ALM-001-03 A	W30	2100	850	Awning	45	Ν	No
Bedroom 2	ALM-001-03 A	W29	850	1750	Awning	90	E	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	01100+	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Avail	able					
Custom roof w	vindows*					
Custom roof w Window ID	vindows* Window	Maximum	SHGC*	Substitution to	lerance ranges	

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance	
No Data Available			

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser	
No Data Ava	ailable							
External door schedule								
Location		Height [mm]	Width [mn	1	Opening %	Orientati	on	

No Data Available



External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3990	S	3300	Yes
Kitchen/Living	EW-1	2700	3990	Ν	3500	Yes
Bedroom 1	EW-1	2700	3645	E	300	No
Bedroom 1	EW-1	2700	1900	S	300	Yes
Bedroom 1	EW-1	2700	200	E	2200	No
Bedroom 1	EW-1	2700	2100	S	300	No
Bedroom 1	EW-1	2700	2700	W	6950	No
Bath	EW-1	2700	3290	E	300	No
Glazed Common Area	EW-1	2700	2695	S	1900	Yes
Glazed Common Area	EW-1	2700	2695	Ν	1800	Yes
Bedroom 2	EW-1	2700	3945	Ν	300	Yes
Bedroom 2	EW-1	2700	3645	E	300	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Single Skin Brick	63.45	No insulation
IW-002	Cavity brick	0.00	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	30.23	Open	Bulk Insulation in Contact with Floor R1.5	ר Ceramic Tiles 8mm

* Refer to glossary. Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 1, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

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6.9 Star Rating as of 30 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Suspended Concrete Slab 200mm	15.00	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Bath	Suspended Concrete Slab 200mm	7.27	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Glazed Common Area	Suspended Concrete Slab 200mm	19.63	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	14.41	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Hall	Suspended Concrete Slab 200mm	4.87	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common Area	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Hall	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	13	Exhaust Fans	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed

* Refer to glossary. Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 1, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

0009059080-01	NatHERS	Certificate
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6.9 Star Rating as of 30 Nov 2023



Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Bedroom 2	6	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
None Present			

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				
Heating system				
Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

6.9 Star Rating as of 30 Nov 2023



Hot water system

Appliance/ system type	Hot Fuel type Water CER Zone		Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load
		CER Zone			lower limit	upper limit	[litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

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

Glossary

Annual energy load The predicted amount of energy required for healing and cooling, based on standard occupancy assumptions. Assessed floor area the floor area in the design documents. The predicted amount of energy required for healing, including downlights, vents, exhaust fans, range hocks, chimneys and flues. Exhaust fans, range hocks, chimneys and flues. Exhaust fans, tange hocks, chimneys and flues. Colling penetrations Eastures that require a penetration to the celling with shall holes through the celling for wiring, e.g. celling fans, pendant fights, and the celling with shall holes through the celling to wiring, e.g. celling fans, pendant fights, and celling inclusion and the activation and the celling with shall holes through the celling to wiring, e.g. celling fans, pendant fights, and the celling with a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances twill include garages. Custom windows windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input sour homes rating without solar or batteries. Entrance door The relicing the accelly including log tori fining to costs to the building user, the environment and energy networks (as Entrance door withis on celling to a specific type of divised units (e.g. activation thousing, heavity segurated bushland activation segurates and the specific specific costs to the building user, the environment and energy networks (as Entrance thore signt) wentitated corridor in a Class 2 building. <th>AFRC</th> <th>Australian Fenestration Rating Council</th>	AFRC	Australian Fenestration Rating Council
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Recommended capacity zone or zone's serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. 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 features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. 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. STCs Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER) are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks us a polystyrene insulation sheeting or plastic strips U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
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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). Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Thermal breaks	but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such
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). Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading		the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Window shading device Window shading device Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	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).
	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059114-01

Unit 2, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 48.1 Unconditioned* 0.0 Total 48.1 Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au



Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

65.4 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Coolin
Modelled	62.0	3.4
Load limits	N/A	N/A

Features determining load limits

Floor Type	N/A
(lowest conditioned area)	IN/P
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
- ICC Climate Zone 1 of
 - Yes No

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



6.7 Star Rating as of 30 Nov 2023

Certificate check	Approva	I Stage	Construe Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Conse	Builde	Conse	Occup
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



0000000 H4-01 NathElico Gertificate 0.7 Gtal Nating as 01 30 Nov 2023					HOUSE
	Approva	al Stage	Construction Stage		
Certificate check	ecked	hority/ scked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	essment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	26.97
Bedroom 1	Bedroom	13.84
Bath	Daytime	7.27
Glazed Common Area	Glazed Common Area	20.26

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WINdow ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

Window ID	Window	Maximum SHGC* –		Substitution tolerance ranges		
WIND	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
No Data Availa	able					

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	W24	2400	2400	Awning	45	S	No
Kitchen/Living	ALM-001-03 A	W25	2400	600	Awning	45	S	No
Bedroom 1	ALM-001-03 A	W30	2100	850	Awning	30	S	No
Glazed Common Area	ALM-001-01 A	W19	2400	1000	Awning	90	S	No
Glazed Common Area	ALM-002-01 A	W20	2400	940	Awning	00	S	No
Glazed Common Area	ALM-001-01 A	W28	2400	1000	Awning	90	Ν	No
Glazed Common Area	ALM-002-01 A	W29	2400	940	Awning	00	Ν	No

HOUSE

Roof window* type and performance value

Default roof windows*

Mindow ID Window Maximum SHGC * SHGC lower limit SHGC upper limit	Window ID	Window	Maximum	6 HCC*	Substitution tolerance ranges		
Custom roof windows* Window ID Window Maximum SHGC* Substitution tolerance ranges Description U-value* SHGC lower limit SHGC upper limi		Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
Window ID Window Maximum SHGC* Substitution tolerance ranges Description U-value* SHGC lower limit SHGC upper limi	No Data Avail	lable					
Window ID Description U-value* SHGC* SHGC lower limit SHGC upper limit	Custom roof v	vindows*					
Description U-value* SHGC lower limit SHGC upper limit	Window ID	Window	Maximum	81100*	Substitution to	lerance ranges	
No Data Available	window ID	Description U-value*		SHGC*	SHGC lower limit	SHGC upper limit	
	No Data Avail	lable					
		dow* schedule					

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance	
No Data Available			

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Avail	able					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1900	E	3000	No
Kitchen/Living	EW-1	2700	3645	S	3675	Yes
Bedroom 1	EW-1	2700	800	E	4000	No
Bedroom 1	EW-1	2700	1800	S	3100	No
Bedroom 1	EW-1	2700	300	W	1900	No
Bedroom 1	EW-1	2700	1600	S	300	Yes
Bedroom 1	EW-1	2700	4245	W	300	No
Bath	EW-1	2700	1145	W	300	No
Glazed Common Area	EW-1	2700	2745	S	1800	No
Glazed Common Area	EW-1	2700	3100	W	100	No
Glazed Common Area	EW-1	2700	2800	Ν	1800	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	34.83	No Insulation
IW-002	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-003	Single Skin Brick	18.36	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	26.97	Open	Bulk Insulation in Contact with Floor R1.5	n Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	13.84	Open	Bulk Insulation ir Contact with Floor R1.5	¹ Carpet+Rubber Underlay 18mm

0009059114-01 NatHERS Certificate

6.7 Star Rating as of 30 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Suspended Concrete Slab 200mm	7.27	Open	Bulk Insulation in Contact with Floor R1.5	n Ceramic Tiles 8mm
Glazed Common Area	Suspended Concrete Slab 200mm	20.26	Open	Bulk Insulation in Contact with Floor R1.5	n Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common Area	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]	
None Present				



Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	effi	nimum ciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	effi	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC -		ubstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimur efficienc performa	;y/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		



Battery Schedule

System Type

Size [Battery Storage Capacity]

No Data Available



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

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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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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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EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below.
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 – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
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Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
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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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059155-01

Unit 3, 17-19 Pank Parade.

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type BLACKTOWN , NSW , 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 47.2 Unconditioned* 0.0 Total 47.2 Garage 0.0 Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au



Accredited assessor

NameDeaBusiness nameGreeEmaildeaPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at <u>www.abcb.gov.au</u>.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

38.0 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	34.9	3.1
Load limits	N/A	N/A

Features determining load limits

Eleer Tures	
Floor Type N	I/A
(lowest conditioned area)	
NCC climate zone 1 or 2 N	lo
Outdoor living area N	lo
Outdoor living area ceiling fan N	lo

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 3, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
 - ICC Climate Zone 1 of
 - Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



8.2 Star Rating as of 30 Nov 2023

Certificate check	Approva	l Stage	Constru Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder checked	Consent Surveyo	Occupar
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



0009059155-01 NatHERS Certificate8.2 Star Rating as of 30 Nov 2023					HOUSE	
	Approva	al Stage	Constru Stage	ction		
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other	
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not inclu-	uded in t	he NatHE	ERS asse	essment)		
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is	not conduc	ted)	
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the	NatHERS	S assess	ment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check					-	
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						
Note: This Certificate only covers the energy efficiency requirements in the NCC Add	itional requi	rements the	at must also	he satisfied	include	

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	26.31
Bedroom 1	Bedroom	13.59
Bath	Daytime	7.3
Glazed Common Area	Glazed Common Area	20.26

Window and glazed door type and performance

Default windows*

Window ID	Window	indow Maximum SHGC* -		Substitution tolerance ranges		
WINDOW ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

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

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	W13	2400	2400	Awning	45	Ν	No
Kitchen/Living	ALM-001-03 A	W15	2400	600	Awning	45	Ν	Yes
Kitchen/Living	ALM-001-03 A	W18	850	850	Awning	90	E	No
Bedroom 1	ALM-001-03 A	W24	2100	850	Awning	45	Ν	No
Glazed Common Area	ALM-001-01 A	W19	2400	1000	Awning	90	S	No
Glazed Common Area	ALM-002-01 A	W20	2400	940	Awning	00	S	No
Glazed Common Area	ALM-001-01 A	W22	2400	1000	Awning	90	Ν	No
Glazed Common Area	ALM-002-01 A	W23	2400	940	Awning	00	Ν	No

Roof window* type and performance value

Default roof windows*

	Window	Maximum	Maximum SHGC*	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Availal	ble					
Custom roof wir	ndows*					
Window ID	Window	Maximum	0110.0+	Substitution to	lerance ranges	
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availat	ble					

Root window" schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance	
No Data Available			

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Available						

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3645	Ν	3900	Yes
Kitchen/Living	EW-1	2700	4200	E	300	No
Bedroom 1	EW-1	2700	1800	Ν	3200	Yes
Bedroom 1	EW-1	2700	700	E	4000	No
Bedroom 1	EW-1	2700	1800	W	200	No
Bedroom 1	EW-1	2700	1600	Ν	2900	No
Bedroom 1	EW-1	2700	300	E	5800	No
Glazed Common Area	EW-1	2700	2800	S	1800	Yes
Glazed Common Area	EW-1	2700	2745	Ν	1800	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IVV-001	Single Skin Brick	28.08	No insulation
IW-002	Cavity brick	60.75	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	26.31	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	13.59	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Bath	Suspended Concrete Slab 200mm	7.30	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm

0009059155-01 NatHERS Certificate

8.2 Star Rating as of 30 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
				Bulk	
Glazed Common Area	Suspended Concrete Slab			Insulation i	n
	200mm	20.26	Open	Contact	Ceramic Tiles 8mm
				with Floor	
				R1.5	

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common Area	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	11	Downlights - LED	150	Sealed
Kitchen/Living	11	Exhaust Fans	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]	
None Present				



Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	type Location Fuel type		uel type	Minimum efficiency/ performance		Recommended capacity	
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ubstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capad	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		



Battery Schedule

System Type

Size [Battery Storage Capacity]

No Data Available



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

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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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059171-01

Unit 4, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 59.8 Unconditioned* 7.5 Total 67.3 Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

64.8 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	62.1	2.8
Load limits	N/A	N/A

Features determining load limits

N/A
IN/P
No
No
No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 4, 17-19 Pank Parade, BLACKTOWN, NSW, 2148

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
 - ICC Climate Zone 1 of
 - Yes No

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



6.8 Star Rating as of 30 Nov 2023

Certificate check	Approva	l Stage	Construe Stage	ction			
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other		
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupai		
Genuine certificate check	1		ſı				
Does this Certificate match the one available at the web address or QR code verification link on the front page?							
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?							
Thermal performance check							
Windows and glazed doors							
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?							
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?							
External walls							
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?							
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?							
Floor							
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?							
Ceiling penetrations*							
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?							
Ceiling							
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?							
Roof							
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?							
Apartment entrance doors (NCC Class 2 assessments only)							
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".							
Heating and cooling load limits*							
Do the load limits settings (shown on page 1) match what is shown							



	Approva	al Stage	Construction Stage		HOUSE AND AND AND
Certificate check	necked	thority/ ecked	cked	thority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)	n	
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room Zone Type		Area [m ²]
Kitchen/Living	Kitchen/Living	28.48
Bedroom 1	Bedroom	13.48
Hall	Daytime	5.16
Bath	Unconditioned	7.47
Bedroom 2	Bedroom	12.7
Glazed Common Area	Glazed Common Area	20.74

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges				
	Description	U-value*	3600	SHGC lower limit	SHGC upper limit			
No Data Availa	able							

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-03 A	W8	2400	600	Awning	45	W	No
Kitchen/Living	ALM-002-03 A	W9	2400	2400	Awning	45	W	No
Bedroom 1	ALM-002-03 A	W3	2400	2400	Awning	45	S	No
Bedroom 1	ALM-001-03 A	W4	2400	600	Awning	45	S	No
Bath	ALM-001-03 A	W2	850	850	Awning	90	S	No
Bedroom 2	ALM-001-03 A	W1	2100	850	Awning	30	S	No
Bedroom 2	ALM-001-03 A	W7	2100	850	Awning	30	W	No
Glazed Common Area	ALM-001-01 A	W5	2400	1000	Awning	90	S	No
Glazed Common Area	ALM-002-01 A	W10	2400	940	Awning	00	S	No

0009059171-01 NatHERS Cert	ificate 6.8 Star	6.8 Star Rating as of 30 Nov 2023						
Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Glazed Common Area	ALM-001-01 A	W6	2400	1000	Awning	90	Ν	No
Glazed Common Area	ALM-002-01 A	W11	2400	500	Awning	00	Ν	No

Roof window* type and performance value

Default roof windows*

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

Custom roof windows*

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

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Available						
External door schedule						

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				



External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4045	W	4575	No
Bedroom 1	EW-1	2700	3600	Е	2900	No
Bedroom 1	EW-1	2700	3245	S	2300	Yes
Bath	EW-1	2700	3390	S	2300	Yes
Bedroom 2	EW-1	2700	2200	Ν	3700	No
Bedroom 2	EW-1	2700	3145	S	300	Yes
Bedroom 2	EW-1	2700	2000	W	300	Yes
Bedroom 2	EW-1	2700	200	S	2500	No
Bedroom 2	EW-1	2700	1900	W	2400	No
Glazed Common Area	EW-1	2700	2745	S	1900	Yes
Glazed Common Area	EW-1	2700	2800	Ν	1900	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	34.56	No Insulation
IW-002	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-003	Single Skin Brick	49.41	No insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	28.48	Open	Bulk Insulation i Contact with Floor R1.5	n Ceramic Tiles 8mm

0009059171-01 NatHERS Certificate

6.8 Star Rating as of 30 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Suspended Concrete Slab 200mm	13.48	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Hall	Suspended Concrete Slab 200mm	5.16	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.47	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	12.70	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Glazed Common Area	Suspended Concrete Slab 200mm	20.74	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Hall	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common Area	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed

* Refer to glossary. Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 4, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

0009059171-01	NatHERS	Certificate
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6.8 Star Rating as of 30 Nov 2023



Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Hall	1	Downlights - LED	150	Sealed	
Bath	3	Downlights - LED	150	Sealed	
Bath	3	Exhaust Fans	150	Sealed	
Bedroom 2	5	Downlights - LED	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]	
None Present				

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				
Heating system				
Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

6.8 Star Rating as of 30 Nov 2023



Hot water system

Appliance/ system type	Fuel type	Hot Fuel type Water	Minimum efficiency	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load
	CER Zo	CER Zone	/STC		lower limit	upper limit	[litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capad	
No Data Available							

Onsite Renewable Energy Schedule

System Type Orientation		System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below.
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 – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Skylight (also known as roof lights	b) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059197

Generated on 13 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class Floor/all Floors Type

Unit 5, 17-19 Pank Parade, BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 58.8 Unconditioned* 7.2 66.0 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National Declaration of interest**

NCC Requirements

NCC provisions Strate/Territory variation dean@greenview.net.au 8544 1683 DMN/13/1645

Declaration completed: no conflicts

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

Volume One

Yes

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.a

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

71.7 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	69.0	2.7
Load limits	N/A	N/A

Features determining load limits

Floor Type	N/A
(lowest conditioned area)	IN/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

SF – Suspended Floor (or a mixture of CSOG and SF) NA – Not Applicable

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



6.4 Star Rating as of 13 Nov 2023

-					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder o	Consent Surveyo	Occupar
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					

6.4 Star Rating as of 13 Nov 2023

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					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	ority/	ked	Jority)ther
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not include	uded in t	he NatHE	ERS asse	essment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Cartificate only source the energy officiency requirements in the NCC. Add	itional rami	romonto 4	t must al	he estisfied	include

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	om Zone Type	
Kitchen/Living	Kitchen/Living	27.19
Bedroom 1	Bedroom	12.65
Entry	Daytime	8.5
Bath	Unconditioned	7.21
Bedroom 2	Bedroom	10.46
Glazed Common Area	Glazed Common Area	21.55

Window and glazed door type and performance

Default windows*

Window ID	Window	SHGC*		Maximum SHCC* S		Substitution to	Substitution tolerance ranges		
	Description			SHGC lower limit	SHGC upper limit				
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54				
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62				

Custom windows*

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

Window and glazed door schedule

Window ID	Window no.	Height [mm]			Opening %	Orientation	Window shading device*
ALM-004-01 A	W12	2400	2400	Awning	45	Ν	Yes
ALM-003-01 A	W13	2400	600	Awning	45	Ν	Yes
ALM-003-01 A	W21	850	850	Awning	90	E	No
ALM-003-01 A	W16	2100	850	Awning	45	W	No
ALM-003-01 A	W17	2100	850	Awning	45	W	No
ALM-003-01 A	W20	850	850	Awning	90	Ν	No
ALM-004-01 A	W22	2400	460	Awning	00	W	No
ALM-003-01 A	W15	850	850	Awning	90	Ν	Yes
ALM-003-01 A	W18	2100	875	Awning	45	W	No
	ID ALM-004-01 A ALM-003-01 A ALM-003-01 A ALM-003-01 A ALM-003-01 A ALM-003-01 A ALM-004-01 A ALM-003-01 A	ID no. ALM-004-01 A W12 ALM-003-01 A W13 ALM-003-01 A W13 ALM-003-01 A W21 ALM-003-01 A W16 ALM-003-01 A W17 ALM-003-01 A W20 ALM-004-01 A W22 ALM-003-01 A W15	ID no. [mm] ALM-004-01 A W12 2400 ALM-003-01 A W13 2400 ALM-003-01 A W13 2400 ALM-003-01 A W13 2400 ALM-003-01 A W16 2100 ALM-003-01 A W17 2100 ALM-003-01 A W20 850 ALM-003-01 A W22 2400 ALM-003-01 A W15 850	ID no. [mm] [mm] ALM-004-01 A W12 2400 2400 ALM-003-01 A W13 2400 600 ALM-003-01 A W13 2400 600 ALM-003-01 A W21 850 850 ALM-003-01 A W16 2100 850 ALM-003-01 A W17 2100 850 ALM-003-01 A W20 850 850 ALM-003-01 A W20 850 850 ALM-003-01 A W20 850 850 ALM-003-01 A W17 2100 850 ALM-003-01 A W20 850 850 ALM-003-01 A W15 850 850	ID no. [mm] [mm] type ALM-004-01 A W12 2400 2400 Awning ALM-003-01 A W13 2400 600 Awning ALM-003-01 A W13 2400 600 Awning ALM-003-01 A W21 850 850 Awning ALM-003-01 A W16 2100 850 Awning ALM-003-01 A W17 2100 850 Awning ALM-003-01 A W17 2100 850 Awning ALM-003-01 A W20 850 850 Awning ALM-003-01 A W20 850 850 Awning ALM-003-01 A W22 2400 460 Awning ALM-004-01 A W15 850 850 Awning	ID no. [mm] [mm] type % ALM-004-01 A W12 2400 2400 Awning 45 ALM-003-01 A W13 2400 600 Awning 45 ALM-003-01 A W13 2400 600 Awning 90 ALM-003-01 A W21 850 850 Awning 90 ALM-003-01 A W16 2100 850 Awning 45 ALM-003-01 A W17 2100 850 Awning 90 ALM-003-01 A W17 2100 850 Awning 90 ALM-003-01 A W20 850 850 Awning 90 ALM-003-01 A W22 2400 460 Awning 00 ALM-003-01 A W15 850 850 Awning 90	ID no. [mm] [mm] type % Orientation ALM-004-01 A W12 2400 2400 Awning 45 N ALM-003-01 A W13 2400 600 Awning 45 N ALM-003-01 A W13 2400 600 Awning 45 N ALM-003-01 A W21 850 850 Awning 90 E ALM-003-01 A W21 850 850 Awning 45 W ALM-003-01 A W16 2100 850 Awning 45 W ALM-003-01 A W17 2100 850 Awning 90 N ALM-003-01 A W20 850 850 Awning 90 N ALM-003-01 A W22 2400 460 Awning 90 N ALM-003-01 A W15 850 850 Awning 90 N

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6.4 Star	Rating a	s of 13	Nov 2023
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Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	ALM-003-01 A	W19	2100	875	Awning	45	W	No
Glazed Common Area	ALM-001-01 A	W5	2400	1000	Awning	90	S	No
Glazed Common Area	ALM-002-01 A	W10	2400	940	Awning	00	S	No
Glazed Common Area	ALM-001-01 A	W24	2400	1000	Awning	90	Ν	No
Glazed Common Area	ALM-002-01 A	W23	2400	500	Awning	00	Ν	No

Roof window* type and performance value

Default roof windows*

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

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²]	Orientation	Outdoor shade	Diffuser
No Data Ava	ailable						
Externa	l door sche	edule					
Location		Height [mm]	Width [mm	1	Opening %	Orientat	ion

1000

90

W

Entry

* Refer to glossary. Generated on 13 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 5, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

2400



External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4145	Ν	3500	Yes
Kitchen/Living	EW-1	2700	3300	E	3000	No
Bedroom 1	EW-1	2700	1700	E	8000	No
Bedroom 1	EW-1	2700	2100	S	2200	No
Bedroom 1	EW-1	2700	3900	W	300	Yes
Bedroom 1	EW-1	2700	3700	Ν	300	Yes
Entry	EW-1	2700	1400	S	300	No
Entry	EW-1	2700	1845	W	2400	No
Bath	EW-1	2700	3390	Ν	3500	Yes
Bedroom 2	EW-1	2700	3145	W	600	Yes
Glazed Common Area	EW-1	2700	2900	S	2000	Yes
Glazed Common Area	EW-1	2700	2845	Ν	1800	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Cavity brick	45.63	No Insulation
IW-003	Single Skin Brick	40.77	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	27.19	Open	Bulk Insulation in Contact with Floor R1.5	n Ceramic Tiles 8mm

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6.4 Star Rating as of 13 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Suspended Concrete Slab 200mm	12.65	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Entry	Suspended Concrete Slab 200mm	8.50	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.21	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	10.46	Open	Bulk Insulation in Contact with Floor R1.5	Carpet+Rubber Underlay 18mm
Glazed Common Area	Suspended Concrete Slab 200mm	21.55	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Entry	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common Area	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed

* Refer to glossary. Generated on 13 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 5, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

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6.4 Star Rating as of 13 Nov 2023



Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Entry	3	Downlights - LED	150	Sealed	
Bath	3	Downlights - LED	150	Sealed	
Bath	3	Exhaust Fans	150	Sealed	
Bedroom 2	4	Downlights - LED	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]	
None Present				

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				
Heating system				
Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

6.4 Star Rating as of 13 Nov 2023



Hot water system

Appliance/ system type	Fuel type	Hot pe Water	Minimum efficiency	Zone 3	Zone 3 Substitution tolerance ranges		Assessed daily load
		CER Zone	/STC	STC	lower limit	upper limit	[litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

Innual 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. Celling penetrations Excludes fixtures attached to the celling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the celling with small holes through the celling for wiring, e.g. celling fans; pendant lights, and heating and cooling ducines. COP Coefficient of performance coefficient of performance is will michade 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: EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Energy value This is your homes rating without solar or batteries. Exposure category – open see exposure categories below. Exposure category – open terrain with how obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with how obstructions e.g.	AFRC	Australian Fenestration Rating Council
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. Celling penetrations features that require a penetration to the celling, including downights, vents, exhaust fans, range hoods, chimneys and flues. Excludes thures attached to the celling into simil holes through the celling for winds, e.g. celling fans; pendant flights, and the floor area in the design documents. Cop Coefficient of performance Coefficient of performance Custom windows Windows Ellisted 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. Erergy use This is your homes rating without solar or batteries. Energy value The net cost to society including. but not limited to, costs to the building user, the environment and energy networks (as defined in the ACB House Schard?). Exposure see exposure category batteries below. Exposure ellegory – protect terrain with no methods in the modelling software and must not be modelled as a door when opening to a minimally texposure category – source terrain with numerous, closely spaced obstructions pellow 10m (assigns a classification code, NatHERS software and with see signal with were batterious below. Exposure category – protecta <th< th=""><th></th><th></th></th<>		
Coop Coefficient of performance Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some dricumstances it will include garagets. Custom windows windows listed in NatTERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows windows listed in NatTERS software that are variable 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. ER Energy and Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity entition to asociety including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Pfovisions Standard). Entrance door 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 – protected terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial reas. Morizontal shading feature the CC groups buildings and attached C		the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
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. EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Energy use This is your homes rating without solar or batteries. Energy value The net cost to sociely including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Exposure see exposure category provisions Standard). these actions oscieling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building. cercan from the modelling software and must not be modelled as a door when opening to a minimally usefued category – open see exposure category category category - open category – open category – open category – open category – sobure a closely spaced obstructions so ver 10 m e.g. city and industrial areas. terrain with numerous, closely spaced obstructions or 0 m e.g. city and industrial areas. Noticotal shading feature provides shading to the building in the horizonial plane, e.g. eaves, verandahs, pergolas, carp	Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, 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.
Continuitie Circumstances it will include garages. Custom windows windows listed in NatHERS software that are available on the market in Australia and have a VERS (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. Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). 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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with numerous, closely spaced obstructions e.g. they alware alwa	COP	Coefficient of performance
Classical windows Scheme) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. EER Energy use Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). 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 no obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered proses theds, lightly vegetated bush blocks, elevaled units (e.g. above 3 floors). Exposure category – protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bush blocks, elevaled units (e.g. above 3 floors). Horizontal shading feature provisions Standard. Horizontal shading feature the OP and bling in the horizontal plane, e.g. eave, serandarb, p.ergolas, carports, or overhangs or balconies from upper levels. Net zero home	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.
Default windows methods. terrary Life EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Energy use This is your homes rating without solar or batteries. Entrance door The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Exposure see exposure categories below. 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 numerous, closely spaced obstructions below 10m e.g. city and industrial areas. Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies Net zero home a home that achieves a net zero energy value*. Opening percentage the documentality or spaced documentality. Recommended capacity rest degings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and tached Class 10a buildings. Net zero home a home that achieves a net zero energy value*.	Custom windows	
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are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes	STCs	
Thermal breaks but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips	Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.	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.	Unconditioned	
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)	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).
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059072-01

Unit 6, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 45.7 Unconditioned* 8.0 Total 53.7 Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au



Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

40.0 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	35.1	4.9
Load limits	N/A	N/A

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable

NCC Climate Zone 1 or 2:

Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



8.1 Star Rating as of 30 Nov 2023

····· · · · · · · · · · · · · · · · ·	_				HOUSE
Certificate check	Approva	I Stage	Constru Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupa
Genuine certificate check	0	1		0	<u> </u>
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check	0			0	<u> </u>
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



	Approval Stage			ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	nent)	· · · · · ·	
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements				l	

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	26.69
Entry	Daytime	5.9
Bath	Unconditioned	8
Bedroom 1	Bedroom	13.09

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC		Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

Window ID Window		Maximum	SHGC*	Substitution tolerance ranges			
WIND	Description	U-value* SHGC [*] SHGC lower limit S		SHGC upper limit			
No Data Availa	able						

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	W13	2400	2400	Awning	60	E	No
Kitchen/Living	ALM-001-03 A	W15	2400	600	Awning	45	E	No
Kitchen/Living	ALM-001-03 A	W25	2100	850	Awning	45	E	No
Kitchen/Living	ALM-001-03 A	W26	500	1720	Awning	45	S	No
Kitchen/Living	ALM-001-03 A	W32	850	1750	Awning	45	Ν	No
Bath	ALM-001-03 A	W31	850	850	Awning	90	S	No
Bedroom 1	ALM-001-03 A	W28	2100	850	Awning	45	Ν	No
Bedroom 1	ALM-001-03 A	W29	2100	850	Awning	45	Ν	No

HOUSE

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Availab	ble					
Custom roof win	idows*					
Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges	
	Description	U-value*	SHGC"	SHGC lower limit	SHGC upper limit	
No Data Availab	he					

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Avai	ilable							

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Availa	able					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living	2400	1000	90	S

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3400	Е	2525	No
Kitchen/Living	EW-1	2700	500	Ν	3800	No
Kitchen/Living	EW-1	2700	3800	E	300	Yes
Kitchen/Living	EW-1	2700	4345	S	1600	No
Kitchen/Living	EW-1	2700	3845	Ν	400	Yes
Bath	EW-1	2700	1300	E	2400	No
Bath	EW-1	2700	1900	S	300	No
Bath	EW-1	2700	200	W	3500	No
Bath	EW-1	2700	1500	S	300	Yes
Bath	EW-1	2700	400	W	2000	No
Bedroom 1	EW-1	2700	3345	Ν	400	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation	
IW-001	Single Skin Brick	34.83	No insulation	
IW-002	Cavity brick	16.74	No Insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	26.69	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	5.90	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	8.00	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm

0009059072-01 NatHERS Certificate

8.1 Star Rating as of 30 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation Covering [R-value]
Bedroom 1	Suspended Concrete Slab 200mm	13.09	Open	Bulk Insulation in Contact 18mm with Floor R1.5

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Entry	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	12	Downlights - LED	150	Sealed	
Kitchen/Living	12	Exhaust Fans	150	Sealed	
Entry	2	Downlights - LED	150	Sealed	
Bath	3	Downlights - LED	150	Sealed	
Bath	3	Exhaust Fans	150	Sealed	
Bedroom 1	6	Downlights - LED	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
None Present			



Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	eff	Minimum efficiency/ Recommer performance capacit			
No Data Available								
Heating system								
Appliance/ system type	Lo	cation F	uel type	Minimum efficiency/ performance			Recommended capacity	
No Data Available								
Hot water system								
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ubstitution e ranges upper limit	Assessed daily load [litres]	
No Data Available								
Pool/spa equipment								
Appliance/ system type	Fuel type		Minimum efficiency/ performance		Recommended capacity			
No Data Available								

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		



Battery Schedule

System Type

Size [Battery Storage Capacity]

No Data Available



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

Annual energy load the p Assessed floor area the floor Ceiling penetrations Excl COP Coeling	ralian Fenestration Rating Council predicted amount of energy required for heating and cooling, based on standard occupancy assumptions. loor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the area in the design documents. ures that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. udes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and ing and cooling ducts. ficient of performance
Assessed floor area the fi floor Ceiling penetrations Excl heati	loor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the area in the design documents. ures that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. udes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and ing and cooling ducts.
COP Coef	ing and cooling ducts.
2.30	fficient of performance
0.70	
Conditioned a 201 circu	ne within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some mstances it will include garages.
	ows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating eme) rating.
Default windows wind meth	ows that are representative of a specific type of window product and whose properties have been derived by statistical nods.
EER Ener	gy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity
<u>22</u>	is your homes rating without solar or batteries.
defin defin	net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as ed in the ABCB Housing Provisions Standard).
venti venti	e signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally lated corridor in a Class 2 building.
-	exposure categories below.
	in with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
scatt	in with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with ered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
	in with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
	in with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
from from	ides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies upper levels.
	NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC s 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
	me that achieves a net zero energy value*.
	ppenability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value a pro and o	ssumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, ovisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note can be found at www.nathers.gov.au
Recommended capacity this i person	is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified on.
Reflective wrap (also known as can b insul	be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides ative properties.
Roof window for N space	latHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic e, and generally does not have a diffuser.
	des neighbouring buildings, fences, and wing walls, but excludes eaves.
	latHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
(SHCC) subs	raction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and bequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar it transmits.
boug	Il-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be thand sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks but is	naterials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, s not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such olystyrene insulation sheeting or plastic strips
U-value the r	ate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned a zor	ne within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features proving	ides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes cy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
	ce fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading ires* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059106-01

Unit 7, 17-19 Pank Parade.

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 46.1 Unconditioned* 7.3 Total 53.4Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

43.5 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling		
Modelled	38.3	5.1		
Load limits	N/A	N/A		

Features determining load limits

N/A
No
No
No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
 - Yes
 - No

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



7.9 Star Rating as of 30 Nov 2023

ertificate check		Approval Stage		Construction Stage	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Conse	Builde	Conse Survey	Occup
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	lecked	thority/ ecked	ked	thority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	27.06
Entry	Daytime	5.7
Bath	Unconditioned	7.29
Bedroom 1	Bedroom	13.38

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
WINGOW ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

Window ID	Window	WindowMaximumDescriptionU-value*		Substitution tolerance ranges		
Window ID	Description			SHGC lower limit	SHGC upper limit	
No Data Avail	able					

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-03 A	W27	850	1750	Awning	45	Ν	No
Kitchen/Living	ALM-001-03 A	W20	500	1720	Awning	45	S	No
Kitchen/Living	ALM-001-03 A	W17	2100	850	Awning	45	W	No
Kitchen/Living	ALM-002-03 A	W8	2400	2400	Awning	60	W	No
Kitchen/Living	ALM-001-03 A	W24	2400	600	Awning	45	W	No
Bath	ALM-001-03 A	W30	850	850	Awning	90	S	No
Bedroom 1	ALM-001-03 A	W25	2100	850	Awning	45	Ν	No
Bedroom 1	ALM-001-03 A	W26	2100	850	Awning	45	Ν	No

HOUSE

Roof window* type and performance value

Default roof windows*

Window ID Window		Maximum	SHGC*	Substitution tolerance ranges			
window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit		
No Data Avai	able						
Custom roof v	vindows*						
	Window	Maximum	01100+	Substitution to	lerance ranges		
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit		
	Description	o valuo					

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	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Availa	able					

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living	2400	1000	90	S

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3845	Ν	400	Yes
Kitchen/Living	EW-1	2700	4345	S	1300	No
Kitchen/Living	EW-1	2700	3800	W	300	Yes
Kitchen/Living	EW-1	2700	500	Ν	3900	No
Kitchen/Living	EW-1	2700	3500	W	3475	No
Bath	EW-1	2700	400	E	2000	No
Bath	EW-1	2700	3400	S	400	Yes
Bath	EW-1	2700	1100	W	2400	No
Bedroom 1	EW-1	2700	3345	Ν	400	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IVV-001	Single Skin Brick	25.92	No insulation
IW-002	Cavity brick	17.28	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	27.06	Open	Bulk Insulation in Contact with Floor R1.5	n Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	5.70	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.29	Open	Bulk Insulation in Contact with Floor R1.5	Ceramic Tiles 8mm

7.9 Star Rating as of 30 Nov 2023



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering	
				Bulk Insulation i	n	
Bedroom 1	Suspended Concrete Slab 200mm	13.38	Open	Contact with Floor R1.5	Ceramic Tiles 8mm	

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Entry	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	12	Downlights - LED	150	Sealed	
Kitchen/Living	12	Exhaust Fans	150	Sealed	
Entry	2	Downlights - LED	150	Sealed	
Bath	3	Downlights - LED	150	Sealed	
Bath	3	Exhaust Fans	150	Sealed	
Bedroom 1	6	Downlights - LED	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
None Present			



Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	;y/	Recomm capad	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		



Battery Schedule

System Type

Size [Battery Storage Capacity]

No Data Available



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below.
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 – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059130-01

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type BLACKTOWN , NSW , 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Unit 8, 17-19 Pank Parade.

Plans

Main plan Prepared by BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 64.5 Unconditioned* 7.3 Total 71.8 Garage 0.0 Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

CCREDIPR Teseso

Accredited assessor

NameDealBusiness nameGreeEmaildealPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at <u>www.abcb.gov.au</u>.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

66.0 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	60.6	5.4
Load limits	N/A	N/A

Features determining load limits

N/A
No
No
No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
- ICC Climate Zone 1 of
 - Yes No

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



6.7 Star Rating as of 30 Nov 2023

Certificate check	Approva	l Stage	Construe Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder checked	Consent Surveyo	Occupan
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



0.7 Star Rating as 01 50 Nov 2025					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	30.23
Bedroom 1	Bedroom	15
Bath	Unconditioned	7.27
Glazed Common Area	Glazed Common Area	20.02
Bedroom 2	Bedroom	14.41
Hall	Daytime	4.87

Window and glazed door type and performance

Default windows*

Window ID	Window	dow Maximum SHGC*		Substitution to	lerance ranges
	Description	U-value*	3666	SHGC lower limit	SHGC upper limit
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WINGOW ID	Description	U-value*	3600	SHGC lower limit	SHGC upper limit	
No Data Availa	able					

Window and glazed door schedule

Window ID	Window no.	Height [mm]			Opening %	Orientation	Window shading device*
ALM-002-03 A	W27	1400	1330	Awning	45	S	Yes
ALM-001-03 A	W34	2400	1000	Awning	90	S	No
ALM-001-03 A	W31	2400	600	Awning	10	Ν	No
ALM-002-03 A	W32	2400	2400	Awning	45	Ν	No
ALM-001-03 A	W26	2100	850	Awning	10	E	No
ALM-001-03 A	W35	2100	850	Awning	10	E	No
ALM-001-03 A	W24	2100	850	Awning	30	S	No
ALM-001-03 A	W14	2100	850	Awning	10	S	No
ALM-001-03 A	W28	850	850	Awning	10	E	No
	ID ALM-002-03 A ALM-001-03 A ALM-001-03 A ALM-001-03 A ALM-001-03 A ALM-001-03 A ALM-001-03 A	ID no. ALM-002-03 A W27 ALM-001-03 A W34 ALM-001-03 A W31 ALM-002-03 A W32 ALM-001-03 A W32 ALM-001-03 A W32 ALM-001-03 A W26 ALM-001-03 A W35 ALM-001-03 A W24 ALM-001-03 A W14	ID no. [mm] ALM-002-03 A W27 1400 ALM-001-03 A W34 2400 ALM-001-03 A W31 2400 ALM-001-03 A W32 2400 ALM-001-03 A W32 2400 ALM-001-03 A W32 2400 ALM-001-03 A W32 2100 ALM-001-03 A W35 2100 ALM-001-03 A W24 2100 ALM-001-03 A W14 2100	ID no. [mm] [mm] ALM-002-03 A W27 1400 1330 ALM-001-03 A W34 2400 1000 ALM-001-03 A W31 2400 600 ALM-002-03 A W32 2400 2400 ALM-001-03 A W32 2400 850 ALM-001-03 A W26 2100 850 ALM-001-03 A W24 2100 850 ALM-001-03 A W24 2100 850	ID no. [mm] [mm] type ALM-002-03 A W27 1400 1330 Awning ALM-001-03 A W34 2400 1000 Awning ALM-001-03 A W34 2400 600 Awning ALM-001-03 A W31 2400 600 Awning ALM-001-03 A W32 2400 2400 Awning ALM-001-03 A W32 2400 850 Awning ALM-001-03 A W26 2100 850 Awning ALM-001-03 A W35 2100 850 Awning ALM-001-03 A W24 2100 850 Awning ALM-001-03 A W24 2100 850 Awning	ID no. [mm] [mm] type % ALM-002-03 A W27 1400 1330 Awning 45 ALM-001-03 A W34 2400 1000 Awning 90 ALM-001-03 A W34 2400 600 Awning 10 ALM-001-03 A W31 2400 600 Awning 10 ALM-001-03 A W32 2400 2400 Awning 45 ALM-001-03 A W26 2100 850 Awning 10 ALM-001-03 A W25 2100 850 Awning 10 ALM-001-03 A W24 2100 850 Awning 30 ALM-001-03 A W24 2100 850 Awning 10	ID no. [mm] [mm] type % Orientation ALM-002-03 A W27 1400 1330 Awning 45 S ALM-001-03 A W34 2400 1000 Awning 90 S ALM-001-03 A W34 2400 600 Awning 90 S ALM-001-03 A W31 2400 600 Awning 10 N ALM-001-03 A W32 2400 2400 Awning 45 N ALM-001-03 A W32 2400 850 Awning 10 E ALM-001-03 A W26 2100 850 Awning 10 E ALM-001-03 A W35 2100 850 Awning 30 S ALM-001-03 A W24 2100 850 Awning 10 S

0009059130-01 NatHERS Certificate 6.7 Star Rating as of 30 Nov 2023 Window Height Width Window Window Window Opening Orientation Location shading ID [mm] [mm] type % no. device* S **Glazed Common Area** ALM-001-01 A W19 2100 1940 Awning 45 No **Glazed Common Area** ALM-001-01 A W28 2100 1940 Awning 45 Ν No Bedroom 2 ALM-001-03 A W30 2100 850 Awning 45 Ν No Bedroom 2 ALM-001-03 A W29 2100 850 Awning 10 Е No

Roof window* type and performance value

Default roof windows*

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

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser		
No Data Ava	ilable								
External door schedule									
Location		Height [mm]	Width [mm]		Opening %	Orientati	ion		

No Data Available



External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3990	S	3300	No
Kitchen/Living	EW-1	2700	3990	Ν	3600	Yes
Bedroom 1	EW-1	2700	3645	E	150	No
Bedroom 1	EW-1	2700	1900	S	300	Yes
Bedroom 1	EW-1	2700	200	E	2050	No
Bedroom 1	EW-1	2700	2100	S	300	No
Bedroom 1	EW-1	2700	2700	W	4500	No
Bath	EW-1	2700	3290	E	150	No
Glazed Common Area	EW-1	2700	2745	S	400	Yes
Glazed Common Area	EW-1	2700	2745	Ν	500	Yes
Bedroom 2	EW-1	2700	3945	Ν	300	Yes
Bedroom 2	EW-1	2700	3645	E	150	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Single Skin Brick	63.45	No insulation
IW-002	Cavity brick	0.00	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	30.23	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	15.00	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.27	None	No Insulation	Ceramic Tiles 8mm

0009059130-01 NatHERS Certificate



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Glazed Common Area	Concrete Slab, Unit Below 200mm	20.02	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	14.41	None	No Insulation	Carpet+Rubber Underlay 18mm
Hall	Concrete Slab, Unit Below 200mm	4.87	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R2.5	
Hall	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	13	Exhaust Fans	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Bedroom 2	6	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200



Roof type

Construction	Added insulation [R-value]	Solar absorpta	nce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Hot water system						
No Data Available						
Appliance/ system type	Loo	cation F	Fuel type	effi	nimum ciency/ ormance	 mended acity
Heating system						
No Data Available						
Appliance/ system type	Lo	cation F	⁻ uel type	effi	nimum ciency/ ormance	 mended acity

No Data Available

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			



Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below.
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 – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059163-01

Unit 9, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 48.1 Unconditioned* 0.0 Total 48.1 Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

77.1 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	66.6	10.4
Load limits	N/A	N/A

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 9, 17-19 Pank Parade, BLACKTOWN, NSW, 2148

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable

NCC Climate Zone 1 or 2:

Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



6.1 Star Rating as of 30 Nov 2	2023
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Certificate check	Approva	I Stage	Constru Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupar
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



	Approva	I Stage	Constru Stage	ction	
Certificate check	checked	wthority/ checked	ecked	wthority checked	y/Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements	R	R	ñ		

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	26.97
Bedroom 1	Bedroom	13.84
Bath	Daytime	7.27
Glazed Common Area	Glazed Common Area	20.26

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
WIND	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
No Data Availa	able				

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	W24	2400	2400	Awning	45	S	No
Kitchen/Living	ALM-001-03 A	W25	2400	600	Awning	45	S	No
Bedroom 1	ALM-001-03 A	W30	2100	850	Awning	30	S	No
Glazed Common Area	ALM-001-01 A	W19	2400	1000	Awning	90	S	No
Glazed Common Area	ALM-002-01 A	W20	2400	940	Awning	00	S	No
Glazed Common Area	ALM-001-01 A	W28	2400	1000	Awning	90	Ν	No
Glazed Common Area	ALM-002-01 A	W29	2400	940	Awning	00	Ν	No

HOUSE

Roof window* type and performance value

Default roof windows*

	Window	Maximum	SUCC *	Substitution to	lerance ranges
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Avail	able				
Custom roof w	vindows*				
	vindows* Window	Maximum	0110.0*	Substitution to	lerance ranges
Custom roof w Window ID		Maximum U-value*	SHGC*	Substitution to SHGC lower limit	lerance ranges SHGC upper limit

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
Bath	GEN-04-006a	S5	50	0.10 W	None	No

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1900	Е	3000	No
Kitchen/Living	EW-1	2700	3645	S	3775	Yes
Bedroom 1	EW-1	2700	800	E	4000	No
Bedroom 1	EW-1	2700	1800	S	3200	No
Bedroom 1	EW-1	2700	300	W	1800	No
Bedroom 1	EW-1	2700	1600	S	300	Yes
Bedroom 1	EW-1	2700	4245	W	200	No
Bath	EW-1	2700	1145	W	200	No
Glazed Common Area	EW-1	2700	2745	S	1800	No
Glazed Common Area	EW-1	2700	3100	W	100	No
Glazed Common Area	EW-1	2700	2800	Ν	1800	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	34.83	No Insulation
IW-002	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-003	Single Skin Brick	18.36	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	26.97	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.84	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.27	None	No Insulation	Ceramic Tiles 8mm
Glazed Common Area	Concrete Slab, Unit Below 200mm	20.26	None	No Insulation	Ceramic Tiles 8mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance Roof shade[colour]		
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light	

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

0009059163-01 NatHERS Certificate 6.1 Star Rating as of 30 Nov 2023

Cooling system

Appliance/ system type	Lo	cation	Fuel type	Minimum efficiency/ performance		Recommended capacity	
No Data Available							
Heating system							
Appliance/ system type	Lo	cation	Fuel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		ubstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	;y/	Recomm capad	
No Data Available							

No Data Available

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained 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 modelied in the software for the NaIHERS assessment. Note, this may not be consistent with the floor area in the design documents. Ceiling penetrations Excludes futures attached to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes futures attached to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Code Coefficient of performance Coefficient of performance Custom windows windows listed in NaHERS 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 fleargy use. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure category – exposed The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure category – exposed The net cost to society including, but not limited to, costs the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure category – exposed	AFRC	Australian Fenestration Rating Council
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Notice 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. Net zero home a home that achieves a net zero energy value*. Opening percentage the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value of 'meduium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au Recommended capacity can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Reflective wrap (also known as foil) 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 features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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.	Exposure category – suburban	
Net zero home a home that achieves a net zero energy value*. 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 Recommended capacity this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. Reflective wrap (also known as for) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. 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. Store Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER) Resolution and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) And the fraction of incident solar radiation admitted through a window, beth directly transmitted as well as absorbed and subsequen		from upper levels.
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Vortical chading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Vertical shading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes	Unconditioned	
privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).	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).
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059189-01

Unit 10, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

47.5

0.0

Assessed floor area [m2]* Conditioned* 47.5 Unconditioned* 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond



Total

Garage

Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

38.4 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	29.8	8.6
Load limits	N/A	N/A

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 10, 17-19 Pank Parade, BLACKTOWN, NSW, 2148

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
 - Yes
 - No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



8.2 Star Rating as of 30 Nov 2023

Certificate check	Approva	I Stage	Construe Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder checked	Consent Surveyo	Occupar
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



0009059189-01 NatHERS Certificate8.2 Star Rating as of 30 Nov 2023					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	scked	iority/ cked	bey	iority cked	ther
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not include	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add	itional requi	rements the	nt must also	be satisfied	include

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	26.31
Bedroom 1	Bedroom	13.86
Bath	Daytime	7.3
Glazed Common Area	Glazed Common Area	20.26

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC		Substitution to	lerance ranges
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
WIND	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
No Data Availa	able				

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	W13	2400	2400	Awning	45	Ν	No
Kitchen/Living	ALM-001-03 A	W15	2400	600	Awning	10	Ν	No
Kitchen/Living	ALM-001-03 A	W18	2100	850	Awning	10	E	No
Bedroom 1	ALM-001-03 A	W23	2100	850	Awning	10	Ν	No
Glazed Common Area	ALM-001-01 A	W19	2100	1940	Awning	45	S	No
Glazed Common Area	ALM-001-01 A	W22	2100	1940	Awning	45	Ν	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

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

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	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
Bath	GEN-04-006a	S1	50	0.10 W	None	No

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3645	Ν	3800	Yes
Kitchen/Living	EW-1	2700	4200	E	300	No
Bedroom 1	EW-1	2700	1200	Ν	3000	No
Bedroom 1	EW-1	2700	800	E	4000	No

0009059189-01 NatHERS Certificate

8.2 Star Rating as of 30 Nov 2023



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 1	EW-1	2700	1800	W	200	No
Bedroom 1	EW-1	2700	2200	Ν	2800	No
Bedroom 1	EW-1	2700	200	Е	5200	No
Glazed Common Area	EW-1	2700	2800	S	400	Yes
Glazed Common Area	EW-1	2700	2745	Ν	500	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Cavity brick	60.75	No Insulation
IW-003	Single Skin Brick	18.90	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	26.31	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.86	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.30	None	No Insulation	Ceramic Tiles 8mm
Glazed Common Area	Concrete Slab, Unit Below 200mm	20.26	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	11	Downlights - LED	150	Sealed

0009059189-01 NatHERS Certificate		8.2 Star Rating as of 30 Nov 2023			HOUSE
Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	11	Exhaust Fans	150	Sealed	
Bedroom 1	6	Downlights - LED	150	Sealed	
Bath	3	Downlights - LED	150	Sealed	
Bath	3	Exhaust Fans	150	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction Added insulation [R-value]		Solar absorptance	e Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]

No Data Available

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Minimum Location Fuel type efficiency/ performance		Recommended capacity
No Data Available				
Heating system				
Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

8.2 Star Rating as of 30 Nov 2023



Hot water system

Appliance/ system type	Fuel type	Hot Fuel type Water	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load
	CER Zone	CER Zone			lower limit	upper limit	[litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficient performa	cy/	Recomm capad	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

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The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Assessed floor area	floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below.
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 - protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
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).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059064-01

Unit 11, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type BLACKTOWN , NSW , 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 60.0 Unconditioned* 7.3 Total 67.3 Garage 0.0 Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

CCREDIFR V

Accredited assessor

NameDeaBusiness nameGreeEmaildeaPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at <u>www.abcb.gov.au</u>.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

66.1 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling		
Modelled	60.9	5.2		
Load limits	N/A	N/A		

Features determining load limits

I/A
lo
lo
lo

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:
- ICC Climate Zone 1 of 2
 - Yes No

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost





6.7 Star Rating as of 30 Nov 2023

Certificate check	Approva	I Stage	Construe Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Surveyo	Builder	Consen Surveyo	Occupa
Genuine certificate check		л	л		
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



0003033004-01 Nathens Certificate 0.7 Star Rating as 01 30 100 2023					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room Zone Type		Area [m ²]
Kitchen/Living	Kitchen/Living	28.48
Bedroom 1	Bedroom	13.68
Hall	Daytime	5.16
Bath	Unconditioned	7.31
Bedroom 2	Bedroom	12.7
Glazed Common Area	Glazed Common Area	19.7

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WINDOW ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-03 A	W8	2400	600	Awning	45	W	No
Kitchen/Living	ALM-002-03 A	W9	2400	2400	Awning	45	W	No
Bedroom 1	ALM-002-03 A	W3	2400	2400	Awning	45	S	No
Bedroom 1	ALM-001-03 A	W4	2400	600	Awning	45	S	Yes
Bath	ALM-001-03 A	W2	850	850	Awning	10	S	No
Bedroom 2	ALM-001-03 A	W1	2100	850	Awning	10	S	No
Bedroom 2	ALM-001-03 A	W7	2100	850	Awning	10	W	No
Glazed Common Area	ALM-001-01 A	W5	2100	1940	Awning	30	S	No
Glazed Common Area	ALM-001-01 A	W6	2100	1940	Awning	30	Ν	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	CUCC*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availa	able					
Custom roof w	/indows*					
Window ID	Window	Maximum	01100*	Substitution to	lerance ranges	
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availa						

Root window" schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
No Data Avail	able					

External door schedule

Location	Height [mm] Width [mm]		Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4045	W	4600	No
Bedroom 1	EW-1	2700	3600	E	400	No
Bedroom 1	EW-1	2700	3345	S	2200	Yes
Bath	EW-1	2700	3290	S	2200	No
Bedroom 2	EW-1	2700	2200	Ν	4100	No
Bedroom 2	EW-1	2700	3145	S	300	Yes
Bedroom 2	EW-1	2700	2000	W	400	Yes
Bedroom 2	EW-1	2700	200	S	2600	No
Bedroom 2	EW-1	2700	1900	W	2400	No
Glazed Common Area	EW-1	2700	2645	S	300	Yes
Glazed Common Area	EW-1	2700	2700	Ν	150	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	34.02	No Insulation
IW-002	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-003	Single Skin Brick	49.14	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	28.48	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.68	None	No Insulation	Carpet+Rubber Underlay 18mm
Hall	Concrete Slab, Unit Below 200mm	5.16	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.31	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	12.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Glazed Common Area	Concrete Slab, Unit Below 200mm	19.70	None	No Insulation	Ceramic Tiles 8mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Hall	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Hall	1	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptan	ce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				



Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		Ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	;y/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]	
No Data Available		



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The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

	Australian Fenestration Rating Council
	he predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area th	or area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the oor area in the design documents.
Ceiling penetrations	eatures that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and leating and cooling ducts.
	Coefficient of performance
conditioned ci	zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some ircumstances it will include garages.
	vindows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
	vindows that are representative of a specific type of window product and whose properties have been derived by statistical nethods.
	nergy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity
	his is your homes rating without solar or batteries.
Lileigy value de	he net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as efined in the ABCB Housing Provisions Standard).
	hese signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally entilated corridor in a Class 2 building.
	ee exposure categories below.
	errain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
	errain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with cattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
	errain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
	errain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizonial shaung leature	rovides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies rom upper levels.
	he 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.
	home that achieves a net zero energy value*.
	he openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value a	In assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note ind can be found at www.nathers.gov.au
Recommended capacity zo	nis is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the one or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified erson.
Reflective wrap (also known as ca foil)	an be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides nsulative properties.
Roof window fo	or 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 pace, and generally does not have a diffuser.
Shading features in	ncludes neighbouring buildings, fences, and wing walls, but excludes eaves.
	or NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
(SHGC)	ne fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and ubsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar leat it transmits.
STCs S	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be ought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks by	re materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, ut is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such is polystyrene insulation sheeting or plastic strips
U-value th	ne rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
	zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	rovides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes rivacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device defe	levice fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading eatures* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059098

Generated on 13 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class Floor/all Floors Type

Unit 12, 17-19 Pank Parade, BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 58.8 Unconditioned* 7.2 66.0 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond



Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

Dean Gorman

8544 1683

DMN/13/1645

Volume One Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.a

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

62.2 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	55.5	6.7
Load limits	N/A	N/A

Features determining load limits

Floor Type	N/A
(lowest conditioned area)	
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF)
- NA Not Applicable

NCC Climate Zone 1 or 2:

Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



6.9 Star Rating as of 13 Nov 2023

-					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder o	Consent Surveyo	Occupar
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					

0009059098 NatHERS Certificate 6.9 Star Rating as of 13 Nov 2023					HOUSE
	Approva	Il Stage	Constru Stage	ction	
Certificate check	ecked	hority/ scked	ked	hority ecked)ther
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	nent)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	27.19
Bedroom 1	Bedroom	12.65
Entry	Daytime	8.5
Bath	Unconditioned	7.21
Bedroom 2	Bedroom	10.46
Glazed Common Area	Glazed Common Area	21.55

Window and glazed door type and performance

Default windows*

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

Custom windows*

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

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	W12	2400	2400	Awning	45	Ν	Yes
Kitchen/Living	ALM-001-03 A	W13	2400	600	Awning	45	Ν	Yes
Kitchen/Living	ALM-002-03 A	W21	850	1485	Awning	00	E	No
Bedroom 1	ALM-001-03 A	W16	2100	850	Awning	45	W	No
Bedroom 1	ALM-001-03 A	W17	2100	850	Awning	45	W	No
Bedroom 1	ALM-001-03 A	W20	850	850	Awning	90	Ν	No
Entry	ALM-001-03 A	W22	2100	850	Awning	10	W	No
Bath	ALM-001-03 A	W15	850	850	Awning	90	Ν	Yes
Bedroom 2	ALM-001-03 A	W18	2100	875	Awning	45	W	No

0009059098 NatHERS Certificate		6.9 Star F	5.9 Star Rating as of 13 Nov 2023						
Location	Window ID		Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 2	ALM-001	-03 A	W19	2100	875	Awning	45	W	No
Glazed Common Area	ALM-001	-01 A	W5	2400	1000	Awning	90	S	No
Glazed Common Area	ALM-002	2-01 A	W10	2400	940	Awning	00	S	No
Glazed Common Area	ALM-001	-01 A	W24	2100	1940	Awning	90	Ν	No

Roof window* type and performance value

Default roof windows*

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

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Avai	ilable							

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser
No Data Ava	ailable						
External	door sche	edule					
Location		Height [mm]	Width [mm]	Opening %	Orientatio	on

No Data Available

-



External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4145	Ν	3500	Yes
Kitchen/Living	EW-1	2700	3300	E	3000	No
Bedroom 1	EW-1	2700	1700	E	7825	No
Bedroom 1	EW-1	2700	2100	S	100	No
Bedroom 1	EW-1	2700	3900	W	125	Yes
Bedroom 1	EW-1	2700	3700	Ν	150	Yes
Entry	EW-1	2700	1400	S	150	No
Entry	EW-1	2700	1845	W	150	No
Bath	EW-1	2700	3390	Ν	3500	Yes
Bedroom 2	EW-1	2700	3145	W	600	Yes
Glazed Common Area	EW-1	2700	2900	S	2000	Yes
Glazed Common Area	EW-1	2700	2845	Ν	1800	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Cavity brick	45.63	No Insulation
IW-003	Single Skin Brick	40.77	No insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below	27.19	None	No	Ceramic Tiles 8mm
Kitchen/Living	200mm	27.19		Insulation	
Podroom 1	Concrete Slab, Unit Below	12.65	None	No	Carpet+Rubber Underlay
Bedroom 1	200mm	12.05	NOTE	Insulation	18mm
Entry	Concrete Slab, Unit Below	8.50	None	No	Ceramic Tiles 8mm
Entry	200mm	6.50	NOTE	Insulation	

0009059098 NatHERS Certificate



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Concrete Slab, Unit Below 200mm	7.21	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	10.46	None	No Insulation	Carpet+Rubber Underlay 18mm
Glazed Common Area	Concrete Slab, Unit Below 200mm	21.55	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Entry	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Entry	3	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200
Bedroom 2	1	1200



Roof type

Construction	Added insulation [R-value]	Solar absorptance Roof shade[colour]		
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light	

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Lo	cation I	Fuel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation I	Fuel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water	Minimum efficiency	Zone 3 STC	tolerance	e ranges	Assesse daily loa

Pool/spa equipment

No Data Available

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

/STC

lower limit

upper limit

[litres]

CER Zone



Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

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Glossary

AFRC Australian Fenestration Rating Council 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 floor area in the design documents. Ceiling penetrations features that require a penetration to the ceiling including downlights, vents, exhaust fans, range hoods, chimneys and fluores that in a dowlling that is expected to require heating and cooling ducts. COP Coefficient of performance Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In soi circumstances it will include garages. Custom windows windows lated in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) fraing. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistica methods. Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ASCE Housing Provisions Standard). Exposure category – exposed terrain with no obstructions e.g. Juilding, e.g. abwes, elevandaris, pergolas, carpo	
Assessed floor area the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with floor area in the design documents. Ceiling penetrations features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flu Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, an heading and cooling ducts. COP Coefficient of performance Coefficient of performance Coefficient of performance Custom windows windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) rating. Default windows indices it will include garages. Default windows windows inter are representative of a specific type of window product and whose properties have been derived by statistic and methods. EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Energy value The society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Exposure see exposure categories below. Exposure category – popen terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected <therean nor="" obstr<="" obstructions="" see="" th="" with=""><th></th></therean>	
Instant and cooling ducts. COP Coefficient of performance Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In sor 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 Rati Scheme) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistica windows. EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Energy use This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Exposure see exposure categories below. 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 – popen terrain with numerous, closely spaced obstructions over 10 m e.g. subtrahan housing, heavily vegetated bushland areas. Exposure category – protected terrain with numerous, closely spaced obstructions over 310 m e.g. caves, verandahs, pergolas, carports, or overhangs or balcor from upper levels.	the
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Recommended capacity this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably gualifiered to the desired comfort.	ote
person.	
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 space, and generally does not have a diffuser.	ittic
Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves.	
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.	
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 the still transmits.	olar
STCs Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)	
Thermal breaks are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This inclu but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks su as polystyrene insulation sheeting or plastic strips	les, ch
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. Incluing privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage tree)	ies es).
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009059122-01

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type BLACKTOWN , NSW , 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Unit 13, 17-19 Pank Parade,

Plans

Main plan Prepared by BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 53.5 Unconditioned* 0.0 Total 53.5 Garage 0.0 Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

CCREDINA TSSESSON

Accredited assessor

NameDeaBusiness nameGreeEmaildeaPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at <u>www.abcb.gov.au</u>.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

58.2 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	43.8	14.4
Load limits	N/A	N/A

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 13, 17-19 Pank Parade , BLACKTOWN , NSW , 2148

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF)
- NA Not Applicable

NCC Climate Zone 1 or 2:

- Yes
- No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



7.1 \$	Star	Rating	as	of	30	Nov	2023
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Certificate check	Approval Stage		Construe Stage	ction		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupar	
Genuine certificate check						
Does this Certificate match the one available at the web address or QR code verification link on the front page?						
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?						
Thermal performance check						
Windows and glazed doors						
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?						
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?						
External walls						
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?						
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?						
Floor						
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?						
Ceiling penetrations*						
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?						
Ceiling						
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?						
Roof						
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?						
Apartment entrance doors (NCC Class 2 assessments only)						
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".						
Heating and cooling load limits*						
Do the load limits settings (shown on page 1) match what is shown						



	Approva	l Stage	Construe Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in tl	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessi	nent)	· · · · · · ·	
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements	ñ	ñ		A	

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Glazed Common Area	Glazed Common Area	11.63
Kitchen/Living	Kitchen/Living	26.99
Entry	Daytime	6.09
Bath	Daytime	6.88
Bedroom 1	Bedroom	13.53

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges			
willdow iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit		
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51		
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61		

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Glazed Common Area	ALM-001-01 A	W11	2100	1400	Awning	30	S	No
Glazed Common Area	ALM-001-01 A	W20	2100	1400	Awning	30	Ν	No
Kitchen/Living	ALM-001-03 A	W23	2100	850	Awning	10	Ν	No
Kitchen/Living	ALM-001-03 A	W24	2100	850	Awning	10	Ν	No
Kitchen/Living	ALM-001-03 A	W14	500	1720	Awning	10	S	No
Kitchen/Living	ALM-001-03 A	W13	2100	850	Awning	10	W	No
Kitchen/Living	ALM-002-03 A	W12	2400	2400	Awning	45	W	No
Kitchen/Living	ALM-001-03 A	W21	2400	600	Awning	10	W	No
Bedroom 1	ALM-001-03 A	W16	2100	850	Awning	10	S	No
Bedroom 1	ALM-001-03 A	W25	2100	850	Awning	10	W	No

HOUSE

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SUCC*	Substitution tolerance ranges		
window ID	Description	cription U-value*		SHGC lower limit	SHGC upper limit	
No Data Avail	able					
Custom roof v	vindows*					
Window		Maximum	SHGC*	Substitution tolerance ranges		
			SHGUP			
Window ID	Description	U-value*	onee	SHGC lower limit	SHGC upper limit	

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientati	ion Outdoor shade	Diffuser
Bath	GEN-04-006a	S1	50	0.10 W	None	No

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
EW-1	2700	1745	S	150	Yes
EW-1	2700	1745	Ν	150	No
EW-1	2700	3845	Ν	150	Yes
EW-1	2700	4445	S	100	No
EW-1	2700	3700	W	100	Yes
EW-1	2700	600	Ν	3650	No
EW-1	2700	3500	W	3600	No
EW-1	2700	3290	Ν	150	No
EW-1	2700	450	E	100	No
EW-1	2700	1601	S	375	No
EW-1	2700	200	E	1700	No
EW-1	2700	1800	S	200	No
EW-1	2700	1200	W	100	No
	ID EW-1 EW-1 EW-1 EW-1 EW-1 EW-1 EW-1 EW-1	ID [mm] EW-1 2700 EW-1 2700	ID [mm] [mm] EW-1 2700 1745 EW-1 2700 1745 EW-1 2700 3845 EW-1 2700 3845 EW-1 2700 3700 EW-1 2700 3700 EW-1 2700 300 EW-1 2700 300 EW-1 2700 3290 EW-1 2700 450 EW-1 2700 450 EW-1 2700 3290 EW-1 2700 450 EW-1 2700 1601 EW-1 2700 1601 EW-1 2700 1800	ID [mm] [mm] Orientation EW-1 2700 1745 S EW-1 2700 1745 N EW-1 2700 1745 N EW-1 2700 3845 N EW-1 2700 4445 S EW-1 2700 3700 W EW-1 2700 600 N EW-1 2700 3500 W EW-1 2700 3290 N EW-1 2700 450 E EW-1 2700 1601 S EW-1 2700 1800 S	Wall ID Height [mm] Width [mm] Orientation feature* maximum projection [mm] EW-1 2700 1745 S 150 EW-1 2700 1745 N 150 EW-1 2700 1745 N 150 EW-1 2700 3845 N 150 EW-1 2700 4445 S 100 EW-1 2700 3700 W 100 EW-1 2700 600 N 3650 EW-1 2700 3500 W 3600 EW-1 2700 3290 N 150 EW-1 2700 450 E 100 EW-1 2700 450 E 100 EW-1 2700 1601 S 375 EW-1 2700 1800 S 200

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	10.53	No insulation
IW-002	Cavity brick	0.00	No Insulation
IW-003	Single Skin Brick	33.08	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Glazed Common Area	Concrete Slab, Unit Below 200mm	11.63	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	26.99	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	6.09	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	6.88	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.53	None	No Insulation	Carpet+Rubber Underlay 18mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Entry	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Entry	2	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Construction Added insulation [R-value]		e Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.



Cooling system

ppliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
lo Data Available							
eating system							
ppliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance		mended acity
lo Data Available							
ot water system							
ppliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		Ibstitution e ranges upper limit	Assessed daily load [litres]
lo Data Available							
ool/spa equipment							
ppliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capad	
lo Data Available							

 System Type
 Orientation
 System Size Or Generation Capacity

 No Data Available
 Image: Comparison of Capacity
 Image: Comparison of Capacity

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

Annual energy load the inerate of animal drama visual visualized for heating and cooling, based on standard occupancy assumptions. Assessed floor area Assessed floor area in the design documents. Colling penetrations Confidence of the design documents. Colling penetrations Confidence of the design documents. Colling penetrations Confidence of the design documents. Confidence of the design document document document document document document documents. Confidence of the design document documen	AFRC	Australian Fenestration Rating Council
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. Geiling penetrations Earlures that require a penetration to the coiling, including downlights, verts, exhaust fans, range hoods, chimneys and flues. Conditional Constraint in the design documents. Constraint in the design documents. Conditional Constraint is expected to require heating and cooling based on standard occupancy assumptions. In some drown indows Windows listen is expected to require heating and cooling based on standard occupancy assumptions. In some drown indows Default windows Windows listen in NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows This is your homes rating without solar or batteries. Energy value The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Exposure category – open terrain with no costructions e.g. flig razing land, occan-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – open terrain with numerous, closely spaced obstructions sore 10 me g. euky with a lowing lang. Cell work highly were the floor and and social soci as tha software heating and and social soci asonod floors). </th <th></th> <th></th>		
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Culture Control 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 input. EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input. Energy use This is your homes rating without solar or batteries. Energy use The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard). Exposure category - exposed Errain with no obstructions e.g. Ital grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category - protected terrain with numerous, closely spaced obstructions below flom e.g. suburban tousing, heavily vegetated bushland areas. Provisional Construction Code (NCC) Class 1. the NCC groups building in the horizontal plane, e.g. avasubran tousing, heavily vegetated bushland areas. Provisional value the nergy efficiency mather math with mumerous, closely spaced obstructions below flom e.g. suburban tousing, heavily vegetated bushland areas. Regorement category - protected terrain with numerous, closely spaced obstructions and sensificatin cord. NatHERS software models NCC Class 1. 2 or 4 buildings and	COP	Coefficient of performance
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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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors). Exposure category – protected terrain with numerous, closely spaced obstructions over 10 m e.g. suburban housing, heavily vegetated bushland areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. Motizonal Construction Code the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and tatched Class 10 ab buildings. Definitions can be found at www.abcb.gova.u. Net zero home a home that achieves a net zero energy value*. Openning percentage the openability percentage or operable (moves) and acue. For example, if the wall colour is unspecified in the documentation, a provisional value Recommended capacity rsi a buildings. flores, and wing walls, but exclude by NatHERS to achieve the desired confort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. Reflective wrap (also known as roof lights) for NatHERS this is typically an operable (moves). can be oppleid to walls, roofs and ceilings. When combined with an appropriate airgap		ventilated córridor in a Class 2 building.
Exposure category - open terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with Exposure category - protected terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bush blocks, elevated units (e.g. above 3 floors). National Construction Code the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies Net zero home a home that achieves a net zero energy value*. Opening percentage the openability percentage or operable (moveabel) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the outentation, a provisional value at meediam' mest be modelled. Acceptable provisional values are cultimed in the NatHERS Technical Note and can be found at www.nathers.gov.au Reflective wrap (also known as icoll) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides in the factore of indives. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. Solar heat gain coefficient (SHGC) specifical and and melling in the horizer eaves of a diffuser. Reflective wrap (also known as roof lights) for NatHERS this is typically a mouled unit with fiexible ref	Exposure	
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Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	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).
	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS® Certificate No. 0009059148-01

Unit 14, 17-19 Pank Parade,

Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type

BLACKTOWN, NSW, 2148 Lot 197-9 DP 32163 2 G of 1 floors New Home

Plans

Main plan Prepared by

BGYPY Stanton Dahl

Construction and environment

Assessed floor area [m2]*

Conditioned* 54.0 Unconditioned* 0.0 Total 54.0Garage 0.0

Exposure type Suburban NatHERS climate zone 28 Richmond

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au



Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National**

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

56.6 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	45.9	10.7
Load limits	N/A	N/A

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 30 Nov 2023 using BERS Pro v5.1.5 (3.22) for Unit 14, 17-19 Pank Parade, BLACKTOWN, NSW, 2148

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard 2022: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting Options:

Floor Type:

- CSOG Concrete Slab on Ground
- SF Suspended Floor (or a mixture of CSOG and SF)
- NA Not Applicable

NCC Climate Zone 1 or 2:

Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



7.2 Star Rating as of 30 Nov 2023

Certificate check	Approva	I Stage	Construe Stage	ction	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked. Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
	Ă	Ŭ Ø	Ö	Ο̈́Ω	0
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



	Approval Stage		Construction Stage		HOUSE	
Certificate check	checked	uthority/ hecked	ecked	uthority hecked	//Other	
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)		
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asses	ssment is r	not conduc	ted)	
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the	NatHERS	s assessi	ment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes



Room schedule

Room	m Zone Type	
Glazed Common Area	Glazed Common Area	11.65
Kitchen/Living	Kitchen/Living	27.37
Entry	Daytime	6.12
Bath	Daytime	7.3
Bedroom 1	Bedroom	13.21

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum U-value* SHGC* –		Substitution tolerance ranges		
window iD	Description			SHGC lower limit	SHGC upper limit	
ALM-001-03 A	Aluminium A SG High Solar Gain Low-E	5.4	0.49	0.47	0.51	
ALM-002-03 A	Aluminium B SG High Solar Gain Low-E	5.4	0.58	0.55	0.61	

Custom windows*

Window ID	Window	Window Maximum	SHGC*	lerance ranges	
	Description	U-value*	SHGC -	SHGC lower limit	SHGC upper limit
No Data Availa	able				

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Glazed Common Area	ALM-001-01 A	W18	2100	1400	Awning	45	Ν	No
Glazed Common Area	ALM-001-01 A	W17	2100	1400	Awning	30	S	No
Kitchen/Living	ALM-002-03 A	n/a	2400	2400	Awning	45	E	No
Kitchen/Living	ALM-001-03 A	W26	2400	600	Awning	10	E	No
Kitchen/Living	ALM-001-03 A	W24	2100	850	Awning	10	E	No
Kitchen/Living	ALM-001-03 A	W3	500	1720	Awning	10	S	No
Kitchen/Living	ALM-001-03 A	W28	2100	850	Awning	10	Ν	No
Kitchen/Living	ALM-001-03 A	W29	2100	850	Awning	10	Ν	No
Bedroom 1	ALM-001-03 A	W23	2100	850	Awning	10	S	No
Bedroom 1	ALM-001-03 A	W22	2100	850	Awning	10	S	No

HOUSE

Roof window* type and performance value

Default roof windows*

Window ID Window		Maximum	SHGC*	Substitution tolerance ranges		
	Description U-value*	SHGC lower limit	SHGC upper limit			
No Data Availa	able					
Custom roof w	indows*					
Window ID	Window	Maximum	01100*	Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame	0.5

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²] Orientation	Outdoor shade	Diffuser
Bath	GEN-04-006a	S1	50	0.10 W	None	No

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
No Data Available				

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	[colour]	[R-value]	wall wrap*
EW-1	Cavity Brick	0		Bulk Insulation R0.7	No



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Glazed Common Area	EW-1	2700	1745	Ν	300	No
Glazed Common Area	EW-1	2700	1745	S	300	Yes
Kitchen/Living	EW-1	2700	3400	E	2625	No
Kitchen/Living	EW-1	2700	500	Ν	3700	No
Kitchen/Living	EW-1	2700	3800	E	300	Yes
Kitchen/Living	EW-1	2700	4445	S	300	No
Kitchen/Living	EW-1	2700	3945	Ν	300	Yes
Entry	EW-1	2700	3290	Ν	300	No
Bedroom 1	EW-1	2700	1300	E	400	No
Bedroom 1	EW-1	2700	1800	S	300	No
Bedroom 1	EW-1	2700	200	W	1800	No
Bedroom 1	EW-1	2700	1600	S	300	Yes
Bedroom 1	EW-1	2700	500	W	2000	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	0.00	No Insulation
IW-002	TimberStud Frame, Brick Veneer	16.20	No insulation
IW-003	Single Skin Brick	29.43	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Glazed Common Area	Concrete Slab, Unit Below 200mm	11.65	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	27.37	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	6.12	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.30	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.21	None	No Insulation	Carpet+Rubber Underlay 18mm



Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Glazed Common Area	Plasterboard on Timber	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Entry	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	12	Downlights - LED	150	Sealed
Kitchen/Living	12	Exhaust Fans	150	Sealed
Entry	2	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance Roof shade[colour]		
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light	

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m² is used for lighting, therefore lighting is not included in the appliance schedule.



Cooling system

Appliance/ system type	Lo	cation I	Fuel type	effi	nimum ciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation I	Fuel type	effi	nimum ciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC -		ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimur efficienc performar	y/	Recomm capad	
No Data Available							
Onsite Renewable	e Energy Sch	edule					
System Type	Orientation		Syst	tem Size Or	Generation	Capacity	

No Data Available

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value^{*}.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

Annual energy load the pr Assessed floor area the flo floor a	alian Fenestration Rating Council redicted amount of energy required for heating and cooling, based on standard occupancy assumptions. For area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Assessed floor area the flo floor a	
Assessed floor area floor a	
	area in the design documents.
Ceiling penetrations Exclu- heating	es that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. des fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and g and cooling ducts.
	icient of performance
Conditioned a zon circum	e within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some nstances it will include garages.
	ws listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating me) rating.
Default windows windo metho	wes that are representative of a specific type of window product and whose properties have been derived by statistical ods.
EER Energy input	gy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity
Energy use This is	s your homes rating without solar or batteries.
Energy value The n define	et cost to society including, but not limited to, costs to the building user, the environment and energy networks (as ad in the ABCB Housing Provisions Standard).
Entrance door these ventila	signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ated corridor in a Class 2 building.
Exposure see e	xposure categories below.
	n with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open terrain scatter	n with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with ered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – protected terrain	n with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban terrain	n with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature provid	des shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies upper levels.
National Construction Code the Net (NCC) Class Class	CC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home a hom	ne that achieves a net zero energy value*.
Opening percentage the op	penability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value a prov	sumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, visional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note an be found at www.nathers.gov.au
Recommended capacity this is zone perso	the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified n.
foil) insula	e applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides tive properties.
Roof window for Na space	atHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic e, and generally does not have a diffuser.
	les neighbouring buildings, fences, and wing walls, but excludes eaves.
	atHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
subse	action of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and equently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar t transmits.
bough	-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be nt and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Thermal breaks are m but is as po	aterials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such lystyrene insulation sheeting or plastic strips
U-value the ra	te of heat transfer through a window. The lower the U-value, the better the insulating ability.
	e within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features provid privac	des shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes by screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device device	e fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading es* (eg eaves and balconies)