Nationwide House Energy Rating Scheme[®] Class 2 Summary NatHERS[®] Certificate No. 0009323080

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NatHERS Climate Zone

96-98 Brenan Street, Smithfield, NSW, 2164 Lot 27-28 DP 35591 28 Richmond



NameDean GormanBusiness nameGreenview Consulting Pty LtdEmaildean@greenview.net.auPhone8544 1683Accreditation No.DMN/13/1645Assessor Accrediting Organisation

Design Matters National

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate? p=RxENfEBik . 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	34.7	5.8
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

number and link		(load limit) [MJ/m²/p.a.]	(load limit) [MJ/m ² /p.a.]	[MJ/m ² /p.a.]		Rating
<u>0009323064</u> 1	1	39.8 (N/A)	1.3 (N/A)	41.2	7.9	0
<u>0009323049</u> 2	2	6.0 (N/A)	0.7 (N/A)	6.7	10	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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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
0009323031	3	27.3 (N/A)	2.3 (N/A)	29.6	8.7	0
0009323072	4	68.1 (N/A)	1.1 (N/A)	69.2	6.5	0
0009323056	5	66.2 (N/A)	1.3 (N/A)	67.5	6.6	0
0009323023	6	21.4 (N/A)	9.8 (N/A)	31.2	8.6	0
0009323007	7	5.5 (N/A)	8.1 (N/A)	13.6	9.6	0
0009322983	8	15.2 (N/A)	11.5 (N/A)	26.7	8.8	0
0009323015	9	63.9 (N/A)	8.0 (N/A)	71.9	6.4	0
0009322991	10	33.5 (N/A)	13.9 (N/A)	47.4	7.7	0

Summary of all dwellings (continued)

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

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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. 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.

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Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009323064

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Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 1, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 66.6 Unconditioned* 0.0 Total 66.6 Garage 0.0 Exposure type Suburban

NatHERS climate zone 28 Richmond



Accredited assessor

NameDean GormanBusiness nameGreenview Consulting Pty LtdEmaildean@greenview.net.auPhone8544 1683Accreditation No.DMN/13/1645Assessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDeclaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

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Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

41.2 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	39.8	1.3
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	N/A
	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=uUMrPfIHJ . When using either link, ensure you are visiting hstar.com.au





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 22 Mar 2024

Certificate check	Approval Stage Stage			ction	KALIDOWNER KALIDOWNER KALIDOWNER
	_	- -	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			A		
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

0009323064 NatHERS Certificate 7.9 Star Rating as of 22 Mar 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
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 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				λ	
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add but are not limited to: condensation, structural and fire safety requirements and any st requirements.					

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Kitchen/Living	Kitchen/Living	27.68
Bedroom 1	Bedroom	14.38
Bedroom 2	Bedroom	11.04
Bath	Daytime	7.56
Entry	Daytime	5.92
Glazed Common A	Glazed Common Area	9.65

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution to	tolerance ranges	
	Description	U-value*	3660	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	dow Maximum در ا		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-003-01 A	W2	620	1810	Awning	90	Ν	No
Kitchen/Living	ALM-004-01 A	W9	2400	2400	Awning	45	W	No
Bedroom 1	ALM-004-01 A	W10	1450	2050	Awning	45	W	No
Bedroom 2	ALM-003-01 A	W6	1000	1000	Awning	90	Ν	No
Bedroom 2	ALM-004-01 A	W8	2400	2400	Awning	45	W	No
Glazed Common A	ALM-001-01 A	W5	2700	1900	Awning	40	Ν	No



Roof window* type and performance value

Default roof windows*

Window ID	Description	U-value*	SHGC*		
		0-value		SHGC lower limit	SHGC upper limit
No Data Availab	le				
Custom roof win	dows*				
Minday ID	Window	Maximum	01100*	Substitution to	lerance ranges
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

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	3700	Ν	3400	No
Kitchen/Living	EW-1	2700	600	Ν	100	No
Kitchen/Living	EW-1	2700	2800	E	2400	No
Kitchen/Living	EW-1	2700	4045	W	3500	No
Bedroom 1	EW-1	2700	500	S	100	No
Bedroom 1	EW-1	2700	3445	W	100	Yes
Bedroom 2	EW-1	1410	1300	Ν	0	Yes
Bedroom 2	EW-1	1290	1300	Ν	100	No
Bedroom 2	EW-1	2700	2500	Ν	100	No
Bedroom 2	EW-1	2700	3245	E	100	No
Bedroom 2	EW-1	2700	3245	W	3850	No
Glazed Common A	EW-1	2700	2245	Ν	2500	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Single Skin Brick	55.08	No insulation
IW-002	Cavity brick, plasterboard	28.35	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	27.68	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	14.38	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	11.04	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab on Ground 100mm	7.56	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab on Ground 100mm	5.92	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab on Ground 100mm	9.65	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	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Entry	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common A	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
Bedroom 2	5	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Entry	2	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				



Recommended

capacity

Recommended

capacity

Accored

Appliance schedule

Cooling system

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

Minimum

efficiencv/

performance

Minimum

efficiency/

performance

Zone 3 Substitution

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

Appliance/ system type Location Fuel type No Data Available Heating system Heating system Location Fuel type Appliance/ system type Location Fuel type No Data Available Hot water system Minimum efficiency

Appliance/ system type	Fuel type	type Water efficiency		Zone 3 STC -	tolerance ranges		daily load	
		CER Zone	/STC	310	lower limit	upper limit	[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.

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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

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 flexible futures attached to the ceiling with small holes through the ceiling for wirring, e.g. ceiling fans; pendant lights, a heating and cooling ducts. COP Coefficient of performance Caustom windows windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Ra Scheme) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistic methods. EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electrici input Interace door The net cost to asciety cluding, but not limited to costs to the building user, the environment and energy networks (as the field in the ABCE Housing Privisions Stindard). Exposure category – exposed terrain with no obstructions a.g. (aling razing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – popen terrain wi	
Assessed floor area the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent will 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 flexibudes fixtures attached to the ceiling with small holes through the ceiling for wining, e.g. ceiling fans; pendant lights, a 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 so 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 Ra Scheme) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistic methods. EER 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 see exposure categories below. Exposure sea provides shading to the building in the hodite g. above 3 floors). Exposure category – protected	
COP Coefficient of performance Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In sections that composition is the inducted parages. Custom windows windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Ra Scherne) rating. Default windows windows that are representative of a specific type of window product and whose properties have been derived by statistic methods. EER Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electrici 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 vertilation benefits in the modelling software and must not be modelled as a door when opening to a minim. Ventilated corridor in a Class 2 building. Exposure ese 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) cast a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors). Exposure category – suburban terrain w	the
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	e d
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.	attic
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 heat it transmits.	solar
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 include the but is not limited to, materials such as timber battenes greater than or equal to 20mm thick or continuous thermal breaks as polystyrene insulation sheeting or plastic strips	des, ich
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. Incl privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage to	des es).
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shadin features* (eg eaves and balconies)]

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0009323049

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 2, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 52.3 Unconditioned* 0.0 Total 52.3 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

NameDean GormanBusiness nameGreenview Consulting Pty LtdEmaildean@greenview.net.auPhone8544 1683Accreditation No.DMN/13/1645Assessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDeclaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

NATIONWIDE HOUSE

The more stars

the more energy efficient

6.7 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
Adelled	6.0	0.7
oad limits	N/A	N/A

Features determining load limits

N/A
DV/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=KupmVCqjs . When using either link, ensure you are visiting hstar.com.au





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



10 Star Rating as of 22 Mar 2024

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	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 Survey	Occupa
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		0			
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					

10 Star Rating as of 22 Mar 2024

HOUSE

	Approv	al Stage	Construction Stage			
Certificate check Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not	t included in t	the NatHL	ERS asse	essment)	ñ	
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						

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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?	
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Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)

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]
Bedroom 1	Bedroom	12.22
Kitchen/Living	Kitchen/Living	26.15
Bath	Daytime	7.8
Entry	Daytime	6.12

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62

Custom windows*

Window ID	Window			Substitution tolerance ranges		
WINGOW ID	Description			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*
Bedroom 1	ALM-004-01 A	W15	1460	2050	Awning	45	Ν	No
Kitchen/Living	ALM-004-01 A	n/a	600	1200	Awning	45	W	No
Kitchen/Living	ALM-004-01 A	W17	2400	2410	Awning	45	Ν	No

Roof window* type and performance value

Default roof windows*

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

10 Star Rating as of 22 Mar 2024



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 [m²]	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]
Bedroom 1	EW-1	2700	600	W	3900	No
Bedroom 1	EW-1	2700	3400	Ν	150	Yes
Kitchen/Living	EW-1	2700	5800	W	100	No
Kitchen/Living	EW-1	880	3745	Ν	0	Yes
Kitchen/Living	EW-1	1820	3745	Ν	2900	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick, plasterboard	36.45	No Insulation

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Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-002	Single Skin Brick	30.24	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab on Ground	12.22	None	No	Carpet+Rubber Underlay
	100mm	12.22	NONE	Insulation	18mm
Kitchen/Living	Concrete Slab on Ground	26.15	None	No	Ceramic Tiles 8mm
Richen/Living	100mm	20.15	NUTE	Insulation	
Bath	Concrete Slab on Ground	7.80	None	No	Ceramic Tiles 8mm
Daui	100mm	7.80	NOTE	Insulation	
Entry	Concrete Slab on Ground	6.12	None	No	Ceramic Tiles 8mm
Enuy	100mm	0.12	NULLE	Insulation	

Ceiling type

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

Ceiling penetrations*

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

Ceiling fans

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



Roof type

	Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]	
None Present	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 Minimum Recommended Location Appliance/ system type Fuel type efficiency/ capacity performance No Data Available Heating system Minimum Recommended Appliance/ system type Location Fuel type efficiency/ capacity performance No Data Available Hot water system Hot **Zone 3 Substitution** Assessed Minimum Zone 3 Water tolerance ranges daily load Appliance/ system type Fuel type efficiency STC upper limit [litres] **CER Zone** /STC lower limit No Data Available Pool/spa equipment Minimum Recommended Appliance/ system type **Fuel type** efficiency/ capacity performance

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. 0009323031

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 3, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 53.2 Unconditioned* 0.0 Total 53.2 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

 Declaration of interest
 Declaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

29.6 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
lodelled	27.3	2.3
oad limits	N/A	N/A

Features determining load limits

г

Floor Type (lowest conditioned area)	N/A
	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=NHAbqPpdp . When using either link, ensure you are visiting hstar.com.au





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



8.7 Star Rating as of 22 Mar 2024

Certificate check	Approva	I Stage	Construe	ction	KALIDOWNER KALIDOWNER KALIDOWNER
	_	- -	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			A		
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					

0009323031 NatHERS Certificate 8.7 Star Rating as of 22 Mar 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	checked	uthority/ checked	ecked	uthority 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	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 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	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. Addi	tional requi	rements tha	t must also	be satisfied	include

INDIG: I RIS 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 A	Glazed Common Area	20.06
Bedroom 1	Bedroom	12.21
Kitchen/Living	Kitchen/Living	27.02
Bath	Daytime	7.81
Entry	Daytime	6.14

Window and glazed door type and performance

Default windows*

Window ID	Window	SHGC*		Substitution tolerance ranges		
window iD	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	Window Maximum		Substitution tolerance ranges		
willdow iD	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 A	ALM-001-01 A	W7	2700	1800	Awning	40	E	No
Bedroom 1	ALM-004-01 A	W14	1460	2050	Awning	45	Ν	No
Kitchen/Living	ALM-004-01 A	W13	2400	2410	Awning	45	Ν	No
Kitchen/Living	ALM-004-01 A	W12	1450	2410	Awning	45	E	No
Kitchen/Living	ALM-003-01 A	W11	1440	1200	Awning	90	E	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges SHGC lower limit SHGC upper lim	
	Description	U-value*	SHGC* -		
No Data Avai	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
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]
Glazed Common A	EW-1	2700	2845	E	1900	Yes
Bedroom 1	EW-1	2700	3400	Ν	150	Yes
Bedroom 1	EW-1	2700	600	E	4100	No
Kitchen/Living	EW-1	2700	3945	Ν	3000	Yes

0009323031 NatHERS Certificate

8.7 Star Rating as of 22 Mar 2024



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3700	E	75	Yes
Kitchen/Living	EW-1	2700	200	S	4200	No
Kitchen/Living	EW-1	2700	2300	E	275	No
Kitchen/Living	EW-1	880	1300	E	0	Yes
Kitchen/Living	EW-1	1820	1300	E	250	No
Kitchen/Living	EW-1	2700	500	E	250	No
Kitchen/Living	EW-1	2700	3100	S	3300	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick, plasterboard	28.35	No Insulation
IW-002	TimberStud Frame, Brick Veneer	1.89	No insulation
IW-003	Cavity brick, plasterboard	8.37	Bulk Insulation in the centre R0.7
IW-004	Single Skin Brick	29.97	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Glazed Common A	Concrete Slab on Ground 100mm	20.06	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	12.21	None	No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Concrete Slab on Ground 100mm	27.02	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	7.81	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab on Ground 100mm	6.14	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]
Glazed Common A	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	

0009323031 NatHERS	Certificate	8.7 Star Rating as of 22 Mar 2024		HOUSE
Location	Construction material/type		Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bath	Concrete, Plast	erboard with Timber Frame	No insulation	
Entry	Concrete, Plast	erboard with Timber Frame	No insulation	

Ceiling penetrations*

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

Ceiling fans

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

0009323031 NatHERS Certificate	8.7 Star	r Rating as of 2	22 Mar 2024				HOUSE
Cooling system							
Appliance/ system type	Lo	cation	Fuel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Loe	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		ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							
Onsite Renewable E	nergy Sch	edule					
System Type Orie	ntation		Syst	em Size O	r Generation	Capacity	

Battery Schedule

No Data Available

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

	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. 0009323072

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class' Floor/all Floors Type

Unit 4, 96-98 Brenan Street, Smithfield, NSW, 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 65.5 Unconditioned* 0.0 65.5 Total Garage 0.0

Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

Dean Gorman Name **Business name** Greenview Consulting Pty Ltd Email dean@greenview.net.au Phone 8544 1683 Accreditation No. DMN/13/1645 Assessor Accrediting Organisation **Design Matters National Declaration of interest**

Declaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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.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

69.2 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
lodelled	68.1	1.1
oad limits	N/A	N/A

Features determining load limits

м

L

Floor Type (lowest conditioned area)	N/A
	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=jfEbyITJm . When using either link, ensure you are visiting hstar.com.au



* Refer to glossary Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22) for Unit 4, 96-98 Brenan Street , Smithfield , NSW , 2164



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:
- NCC 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

No Whole of Home performance assessment conducted for this certificate

Cost



6.5 Star Rating as of 22 Mar 2024

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. Note: The boxes indicate when and by whom each item should be checked. It is not	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
mandatory to complete this checklist.	Asse	Cons Surve	Build	Cons Surve	Occu
Genuine certificate check		ſı	<u>6</u>	,r	
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 5 Star Rati f 22 Mar 2024

0009323072 NathERS Certificate	6.5 Star Rating as of 22 Mar 2024					HOUSE
		Approva	al Stage	Constru Stage	ction	
Certificate check		ecked	:hority/ ecked	ked	hority scked	Other
Continued		Assessor ch	Consent Auth Surveyor che	Builder chec	Consent Auth Surveyor che	Occupancy/C

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

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	cted)
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)	0	0
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	27.99
Bedroom 1	Bedroom	12.41
Bedroom 2	Bedroom	10.17
Bath	Daytime	7.76
Entry	Daytime	7.2
Glazed Common A	Glazed Common Area	20.06

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-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 to	lerance ranges
window iD	Description	U-value*	SHOC	SHGC lower limit	SHGC upper limit
No Data Avail	able				

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width Window [mm] type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-01 A	W7	1470	2400 Awning	45	E	No
Kitchen/Living	ALM-004-01 A	W10	2400	2400 Awning	45	S	No
Bedroom 1	ALM-004-01 A	W5	1470	2000 Awning	45	S	No
Bedroom 2	ALM-004-01 A	W4	1470	1800 Awning	45	S	No
Glazed Common A	ALM-001-01 A	W9	2700	1800 Awning	40	E	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
No Data Avail	lable				



Custom roof windows*

Window ID	Window	Maximum	SUCC*	Substitution to	erance ranges
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Avai	lable				

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
 Volume
 Volum
 Volume
 Volume

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²]	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	3300	Ν	3050	No
Kitchen/Living	EW-1	2700	700	E	150	No
Kitchen/Living	EW-1	900	2400	E	0	Yes
Kitchen/Living	EW-1	1800	2400	Е	125	No

0009323072 NatHERS Certificate

6.5 Star Rating as of 22 Mar 2024



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1000	Е	125	No
Kitchen/Living	EW-1	2700	5400	S	3000	Yes
Bedroom 1	EW-1	2700	4245	E	5500	No
Bedroom 1	EW-1	2700	600	S	50	No
Bedroom 1	EW-1	2700	2000	S	75	Yes
Bedroom 1	EW-1	2700	700	S	100	No
Bedroom 1	EW-1	2700	1900	W	100	No
Bedroom 2	EW-1	2700	745	S	150	No
Bedroom 2	EW-1	2700	1800	S	175	Yes
Bedroom 2	EW-1	2700	600	S	200	No
Bedroom 2	EW-1	2700	3000	W	100	No
Glazed Common A	EW-1	2700	1900	E	2100	Yes
Glazed Common A	EW-1	2700	945	E	4000	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Single Skin Brick	53.46	No insulation
IW-003	Cavity brick, plasterboard	9.99	Bulk Insulation in the centre R0.7
IW-004	Cavity brick	0.00	No Insulation
IW-005	Cavity brick, plasterboard	0.00	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	27.99	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	12.41	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	10.17	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab on Ground 100mm	7.76	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab on Ground 100mm	7.20	None	No Insulation	Ceramic Tiles 8mm

0009323072 NatHERS Certificate



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Glazed Common A	Concrete Slab on Ground	20.06	None	No	Ceramic Tiles 8mm
Glazed Common A	100mm	20.00	NULLE	Insulation	

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	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Entry	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common A	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
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Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Entry	2	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	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 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 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

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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

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	
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Provisional value a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical N 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 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. 0009323056

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 5, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 67.7 Unconditioned* 0.0 Total 67.7 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

NameDean GormanBusiness nameGreenview Consulting Pty LtdEmaildean@greenview.net.auPhone8544 1683Accreditation No.DMN/13/1645Assessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDeclaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

6.6 The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

67.5 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
Adelled	66.2	1.3
oad limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	N/A
	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=NPsVEjIeM . 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



6.6 Star Rating as of 22 Mar 2024

					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	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					

6.6 Star Rating as of 22 Mar 2024

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H	DU:	SE

					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ scked	ked	hority scked	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	29.58
Bedroom 1	Bedroom	12.8
Bedroom 2	Bedroom	10.11
Bath	Daytime	7.56
Entry	Daytime	7.61
Glazed Common A	Glazed Common Area	21.04

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-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		
	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-004-01 A	W8	2400	2400	Awning	45	Ν	Yes
Kitchen/Living	ALM-003-01 A	W2	1470	1200	Awning	90	S	No
Kitchen/Living	ALM-004-01 A	W5	1500	2400	Awning	45	S	No
Kitchen/Living	ALM-004-01 A	W6	600	1800	Awning	00	W	No
Bedroom 1	ALM-004-01 A	W7	1470	2000	Awning	45	W	No
Bedroom 2	ALM-004-01 A	W4	1470	1800	Awning	45	S	No
Glazed Common A	ALM-001-01 A	W9	2700	2050	Awning	40	S	No



Roof window* type and performance value

Default roof windows*

Description U-value* SHGC lower limit SHGC uppe No Data Available Custom roof windows* Window ID Window Maximum		Window	Window Maximum	SHGC*	Substitution tolerance ranges		
Custom roof windows* Window ID Window Maximum SHGC* Substitution tolerance ranges		Description	U-value*	SHGC	SHGC lower limit	SHGC upper limi	
Window ID Window Maximum SHGC* Substitution tolerance ranges	Data Availa	ble					
Window ID SHGC*	stom roof wii	ndows*					
Description U-value* SHGC SHGC lower limit SHGC uppe		Window	Maximum	0U00*	Substitution to	lerance ranges	
	Idow ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limi	
No Data Available	Data Availa	ble					

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 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	3600	Ν	4550	No
Kitchen/Living	EW-1	2700	945	W	3700	No
Kitchen/Living	EW-1	2700	4045	S	100	Yes
Kitchen/Living	EW-1	2700	1000	E	100	No
Kitchen/Living	EW-1	2700	1100	S	100	No
Kitchen/Living	EW-1	900	2500	S	0	Yes
Kitchen/Living	EW-1	1800	2500	S	300	No
Kitchen/Living	EW-1	2700	500	S	75	No
Kitchen/Living	EW-1	2700	4000	W	100	No
Bedroom 1	EW-1	2700	3345	W	3700	Yes
Bedroom 2	EW-1	2700	2200	E	2650	No
Bedroom 2	EW-1	2700	600	S	100	No
Bedroom 2	EW-1	900	1800	S	0	Yes
Bedroom 2	EW-1	1800	1800	S	300	No
Bedroom 2	EW-1	2700	700	S	150	No
Bedroom 2	EW-1	2700	1000	W	100	No
Glazed Common A	EW-1	2700	2400	S	100	No
Glazed Common A	EW-1	2700	2900	Е	75	No
Glazed Common A	EW-1	2700	2545	S	1850	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Single Skin Brick	54.36	No insulation
IW-002	Cavity brick, plasterboard	22.68	No Insulation
IW-003	Cavity brick	0.00	Bulk Insulation in the centre R0.7

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	29.58	None	No Insulation	Ceramic Tiles 8mm

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6.6 Star Rating as of 22 Mar 2024



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab on Ground 100mm	10.11	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab on Ground 100mm	7.56	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab on Ground 100mm	7.61	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab on Ground 100mm	21.04	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	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Bath	Concrete, Plasterboard with Timber Frame	No insulation	
Entry	Concrete, Plasterboard with Timber Frame	No insulation	
Glazed Common A	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	5	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Entry	2	Downlights - LED	150	Sealed

Ceiling fans

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

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Location	Quantity	Diameter [mm]	
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	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							
² ool/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	



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 foor area modelied in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the foor area in the design documents. Ceiling penetrations Exertise the require a penetration to the ceiling with shall holes through the ceiling for wiring, e.g. ceiling fans, pendari tights, and GOP Conficient of performance 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 tisted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Swindows Italia in the 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 icronitoment for a single kWh of electricity input with the design of window Rating. But not limited to, cools to the building user, the environment and energy networks (as Entrance door Exposure category – exposed Errain with no obstructions e.g. flat grazing land, ocean-fontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – protected terrain with muerous, closely spaced obstructions below Hom e.g. substrain housing, heavily vegetated bushind areas. Exposure category – protected terrain with muerous, closely spaced obstructions over in on	AFRC	Australian Fenestration Rating Council
Assessed floor area the floor area modelled in the software for the purpose of the NatHERS assessment. Noie, this may not be consistent with the floor area in the design documents. Ceiling penetrations Excludes fibures that require a penetration to the ceiling (including downlights, vens, exhaust fans, range hoods, chimneys and flues. Excludes fibures statistical to the ceiling with all locis through the ceiling (including downlights, vens, exhaust fans, range hoods, chimneys and flues. Conditioned 2 arone within a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some drownling, scheme jrating. Scheme jrating. Default windows windows listentiaties. Emergy Rating Scheme jrating. Scheme jrating. Default windows Encry Efficiency Ratin, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input Emergy value The 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 – exposed The net cost to society including user, the environment and energy networks (as thereas standard). Exposure category – open terrain with no obstructions os g. fat grazing land, cocant-frontage, desert, exposed high-rise unit (usually above 10 floors). Terrain with fibe obstructions os g. fat grazing land, cocant-frontage, desert, exposed high-rise unit (usually above 10 fl		M. A Contract of the second seco
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Conditioned a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages. Custom windows windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows windows 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. ERR Energy Lificiancy Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity in the AGC Housing Provisions Standard). Energy value Their sout to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the AGC Housing Provisions Standard). Exposure category – exposed terrain with no obstructions at a similar height e.g. grasslands with ewell scattered obstructions below 10m, farmland with scattered obstructions at a similar height e.g. grasslands with ewell scattered obstructions below 10m, farmland with scattered obstructions at a similar height e.g. grasslands with ewell scattered obstructions below 10m, farmland with scattered obstructions are obstructions and energy value? Exposure category – protected terrain with numerous, closely spaced obstructions can be found at www.ace, acports, or ownhangs or balconies from upper levels. National Construction	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.
Current stances it will include garages. Current stances it will include garages. Custom windows windows tleted 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 individes. EER 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 category = exposed Exposure categories below. Exposure category = opsoed terrain with no costructions e.g. Ital grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category = protected terrain with no costructions e.g. at grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category = protected terrain with numerous, closely spaced obstructions below Tom, termain with numerous, closely spaced obstructions below tom, termain with numerous, closely spaced obstructions and the seglification code. NatHERS software models NCC (C) class 1. Code the Oceaniting in the Anoreal plane, e.g. eaves, verandahe, pergolas, carports, or overhangs or balconies throw the state that achievers a net zero energy value ⁴ . Provisional value a home that achievers or opergrel (moveshe) area	COP	Coefficient of performance
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Exposure category – open terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with 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 foors). National Construction Code terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. 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 and attached Class 10 ab fullidings. Definitions can be found at www.abcd.gov.au. Net zero home a home that achieves a net zero energy value ² . 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 documentation, a pusicion value of medium maths encommended by NatHERS to achieve the desired comfort conditions in the Zone or canes serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified spresor. Reflective wrap (also known as roof light) of NatHERS this is typically a noperable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does in other and itfuser. Storing features includes neighbouring buildings, fences, and wing walis, but excludes eaves.		
Scattered sheas, lignty vegetated buls blocks, elevated units (e.g. above 3 floors). Exposure category – rotected terrain with numerous, closely spaced obstructions below 10m e.g. subtrain housing, heavily vegetated bushland areas. Exposure category – suburban terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. National Construction Code Class NCCC (Class terrain vith numerous, closely spaced obstructions, periodics, carports, or overhangs or balconies Net zero home a home that achieves a net zero energy value*. Opening percentage the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Not zero home a home that achieves a net zero energy value*. Provisional value a nome that achieves a net zero energy value*. 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 numetars gov.au Recommended capacity croups serviced. This is recommendation and the final selection sizing should be confirmed by a suitably qualified person. Reflective wrap (also known as conf generally does not have a diffuser. 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 n	Exposure category – exposed	
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 building). 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 modelied. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.abters. Recommended capacity zero esviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. Reflective wrap (also known as foll) 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	Exposure category – open	scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
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Window shading devices 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	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. 0009323023

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 6, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 69.9 Unconditioned* 0.0 Total 69.9 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

 Declaration of interest
 Declaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

31.2 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
lodelled	21.4	9.8
oad limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	N/A
	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=PjziMBNLF. When using either link, ensure you are visiting hstar.com.au





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



8.6 Star Rating as of 22 Mar 2024

					HOUSE
Certificate check	Approval 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	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					

<u>.</u>

0009323023 NatHERS Certificate8.6 Star Rating as of 22 Mar 2024					HOUSE
	Approva	I Stage	Constru Stage	ction	
Certificate check	scked	ority/ cked	çed	ority cked	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	28.64
Bedroom 1	Bedroom	15.48
Bedroom 2	Bedroom	11.74
Bath	Daytime	7.63
Entry	Daytime	6.46
Glazed Common A	Glazed Common Area	9.42

Window and glazed door type and performance

Default windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width Wind [mm] type	low Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-01 A	W2	2400	2400 Awni	ng 45	Ν	No
Kitchen/Living	ALM-004-01 A	W4	1380	1200 Awni	ng 10	E	No
Bedroom 1	ALM-004-01 A	n/a	1440	2050 Awni	ng 10	W	No
Bedroom 2	ALM-003-01 A	W6	1300	1090 Awni	ng 10	Ν	No
Glazed Common A	ALM-002-01 A	W5	1470	1900 Awni	ng 10	Ν	No



Roof window* type and performance value

Default roof windows*

Description U-value* SHGC lower limit SHGC upper No Data Available Custom roof windows* Window ID Window Maximum	Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
Custom roof windows* Window ID Window Maximum SHGC* Substitution tolerance ranges		Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
Window ID Window Maximum SHGC* Substitution tolerance ranges	No Data Availa	able					
Window ID SHGC*	Custom roof w	/indows*					
Description U-value* SHGC SHGC lower limit SHGC upp	Min days ID	Window	Maximum	01100*	Substitution tolerance ranges		
	window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Available							

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	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	3700	Ν	3500	Yes
Kitchen/Living	EW-1	2700	600	Ν	3500	No
Kitchen/Living	EW-1	2700	2800	E	100	No
Kitchen/Living	EW-1	2700	4095	W	100	No
Bedroom 1	EW-1	2700	500	S	100	No
Bedroom 1	EW-1	2700	3495	W	300	Yes
Bedroom 2	EW-1	2700	1300	Ν	400	Yes
Bedroom 2	EW-1	2700	2500	Ν	200	No
Bedroom 2	EW-1	2700	3295	E	700	No
Bedroom 2	EW-1	2700	3295	W	3800	No
Glazed Common A	EW-1	2700	2145	Ν	100	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	55.89	No insulation
IW-002	Cavity brick, plasterboard	28.08	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	28.64	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	15.48	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 200mm	11.74	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.63	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	6.46	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab, Unit Below 200mm	9.42	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	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Entry	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common A	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
Bedroom 2	5	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Entry	2	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 absorptar	ce Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	50	Medium

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		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.

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)	
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. 0009323007

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 7, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 54.9 Unconditioned* 0.0 Total 54.9 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

 Design Matters National
 Declaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

9.6 The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

13.6 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
Adelled	5.5	8.1
oad limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	N/A
	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=uDyZtWtBB . When using either link, ensure you are visiting hstar.com.au





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



9.6 Star Rating as of 22 Mar 2024

Certificate check	Approva	I Stage	Construe	ction	KALIDOWNER KALIDOWNER KALIDOWNER
	_	- -	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			A		
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					

0009323007 NatHERS Certificate9.6 Star Rating as of 22 Mar 2024					HOUVE
	Approva	I Stage	Constru Stage	ction	
Certificate check	hecked	ithority/ necked	cked	Ithority	/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

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]
Bedroom 1	Bedroom	13.07
Kitchen/Living	Kitchen/Living	28.18
Bath	Daytime	7.91
Entry	Daytime	5.7

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-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62	

Custom windows*

Window ID	Nindow Maximum		SHGC*	Substitution tolerance ranges		
Window ID	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*
Bedroom 1	ALM-004-01 A	W15	1460	2050	Awning	10	Ν	No
Kitchen/Living	ALM-004-01 A	n/a	600	1200	Awning	10	W	No
Kitchen/Living	ALM-004-01 A	W17	2400	2410	Awning	45	Ν	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	ximum SHGC* Substitution tolerance rang		lerance ranges
	Description U-value*		SHGC lower limit	SHGC upper limit	
No Data Avail	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 Ava	ailable							

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 Availa	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]
Bedroom 1	EW-1	2700	600	W	3900	No
Bedroom 1	EW-1	2700	3400	Ν	100	Yes
Kitchen/Living	EW-1	2700	5800	W	100	No
Kitchen/Living	EW-1	880	3795	Ν	0	Yes
Kitchen/Living	EW-1	1820	3795	Ν	2900	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick, plasterboard	36.45	No Insulation

Wall ID	Wall type	Area [m ²]	Bulk insulation	DERTEMASTER (
IW-002	Timber Stud Frame, Direct Fix Plasterboard	30.24	No insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab, Unit Below	13.07	None	No	Carpet+Rubber Underlay
	200mm	15.07	NONE	Insulation	18mm
Kitchen/Living	Concrete Slab, Unit Below	28.18	None	No	Ceramic Tiles 8mm
Kitchen/Eiving	200mm	20.10	NONE	Insulation	Ceramic mes omm
Bath	Concrete Slab, Unit Below	7.91	None	No	Ceramic Tiles 8mm
Dau	200mm	7.91	NONE	Insulation	Ceramic mes omm
Entry	Concrete Slab, Unit Below	5.70	None	No	Ceramic Tiles 8mm
	200mm	5.70	NULLE	Insulation	

Ceiling type

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

Ceiling penetrations*

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

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	1200
Kitchen/Living	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	50	Medium

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	Fuel type	eff	inimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation	Fuel type	eff	inimum iciency/ ^c ormance		mended acity
No Data Available				-			
Hot water system							
		Hot	Minimum	Zone 3	Zone 3 Su	ubstitution	Assessed

No Data Available

Pool/spa equipment

Appliance/ system type	Fuel type	efficiency/	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 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. cut yand industrial areas. Provisional value The refurct as spacing to the functional bading for the noticing, and alcohed Class '04 buildings and alcohed Class '04 buildings.		
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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 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 that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au Reflective wrap (also known as foil) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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 subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar the fraction of incident solar radiation admitted fruogy scheme operated by the Clean 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 bactene speciated by the Clean Energy Regulator (CER		
National Construction Code (NCC) Class 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 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 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 foll) 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, fonces, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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, fonces, 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 wel	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 Reflective wrap (also known as concerved. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. Roof window 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. Solar heat gain coefficient (SHGC) 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) 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)		from upper levels.
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Window chading device Optimized 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. 0009322983

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 8, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 55.6 Unconditioned* 0.0 Total 55.6 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

 Declaration of interest
 Declaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

B.B The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

26.7 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
Adelled	15.2	11.5
oad limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	N/A
	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=tMFtKANeX . When using either link, ensure you are visiting hstar.com.au





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



8.8 Star Rating as of 22 Mar 2024

					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	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					

<u>.</u>

				HOUSE
Approva	I Stage	Constru Stage	ction	
scked	iority/ cked	bey	lority cked	ther
Assessor che	Consent Auth Surveyor che	Builder check	Consent Auth Surveyor che	Occupancy/Other
uded in ti	he NatHE	RS asse	ssment)	
e performa	ance asses	ssment is r	not conduc	ted)
NatHERS	assessi	nent)		
	e performa	uded in the NatHE uded	Approval Stage Stage pay j, pay uded in the NatHERS asse uded in the NatHERS asse	Stage Stage All of the state <

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]
Glazed Common A	Glazed Common Area	20.96
Bedroom 1	Bedroom	13.07
Kitchen/Living	Kitchen/Living	28.89
Bath	Daytime	7.91
Entry	Daytime	5.75

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description		3660	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 to	lerance ranges
willdow iD	Description	U-value*	3660	SHGC lower limit SHGC uppe	
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 A	ALM-002-01 A	W7	1450	2200	Awning	45	E	No
Bedroom 1	ALM-004-01 A	W15	1460	2050	Awning	10	Ν	No
Kitchen/Living	ALM-004-01 A	W13	2400	2410	Awning	45	Ν	No
Kitchen/Living	ALM-004-01 A	W12	1450	2410	Awning	45	E	No
Kitchen/Living	ALM-003-01 A	W11	1440	1200	Awning	90	E	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window	Maximum	mum SHGC*	Substitution tolerance ranges		
	Description	Description U-value*		SHGC lower limit	SHGC upper limit	
No Data Avai	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
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]
Glazed Common A	EW-1	2700	2845	E	0	Yes
Bedroom 1	EW-1	2700	500	Ν	0	No
Bedroom 1	EW-1	2700	2100	Ν	0	Yes
Bedroom 1	EW-1	2700	800	Ν	0	No

0009322983 NatHERS Certificate

8.8 Star Rating as of 22 Mar 2024



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 1	EW-1	2700	600	E	0	No
Kitchen/Living	EW-1	2700	3995	Ν	0	Yes
Kitchen/Living	EW-1	2700	3700	E	0	Yes
Kitchen/Living	EW-1	2700	200	S	0	No
Kitchen/Living	EW-1	2700	2300	E	0	No
Kitchen/Living	EW-1	2700	1300	E	0	Yes
Kitchen/Living	EW-1	2700	500	E	0	No
Kitchen/Living	EW-1	2700	3100	S	0	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick, plasterboard	53.73	No Insulation
IW-002	TimberStud Frame, Brick Veneer	1.89	No insulation
IW-003	Timber Stud Frame, Direct Fix Plasterboard	29.97	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Glazed Common A	Concrete Slab, Unit Below 200mm	20.96	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.07	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	28.89	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.91	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	5.75	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]
Glazed Common A	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	

* Refer to glossary. Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22) for Unit 8, 96-98 Brenan Street , Smithfield , NSW , 2164

0009322983 NatHERS Ce	ertificate	8.8 Star Rating a	s of 22 Mar 2024	HOUSE
Location	ation Construction material/type		Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bath	Plasterb	oard on Timber	Bulk Insulation R2.5	
Entry	Plasterb	oard on Timber	Bulk Insulation R2.5	

Ceiling penetrations*

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

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	1200
Kitchen/Living	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	50	Medium

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.

0009322983 NatHERS Certificate	8.8 Sta	r Rating as of	22 Mar 2024				HOUSE
Cooling system							
Appliance/ system type	Lo	cation	Fuel type	eff	nimum iciency/ ormance		mended acity
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		ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							
Onsite Renewable E	nergy Sch	edule					
System Type Orie	ntation		Syst	tem Size O	r Generation	Capacity	

Battery Schedule

No Data Available

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. cut yand industrial areas. Provisional value The refurct as spacing to the functional bading for the noticing, and alcohed Class '04 buildings and alcohed Class '04 buildings.		
Assessed hold area floor area in the design documents. Calling penetrations features that require a penetration to the celling, including downlights, wents, exhaust fans, range hoods, chimneys and flues. Excludes fittures attached to the celling, including downlights, wents, exhaust fans, range hoods, chimneys and flues. COP Coefficient of performance a core within a dwelling that is expected to require healing 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. Energy use The is our homes rating without solar or batteries. Energy use The is our homes rating without solar or batteries. Energy use The is our homes rating without solar or batteries. Energy use The is our 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 ACE Housing Provisions Standard). Exposure category – exposed Enrain with numerous, closely spaced obstructions over 10 me g, city and inductarial areas. Exposure category – exposed Enrain w		
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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 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 that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au Reflective wrap (also known as foil) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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 subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar the fraction of incident solar radiation admitted fruogy scheme operated by the Clean 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 limitled to, materials such as timber battens greater than or equal to 20mm thick or cont		
National Construction Code (NCC) Class 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 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 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 foll) 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, fonces, and wing walls, but excludes eaves. Skylight (also known as roof lights) 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, fonces, 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 wel	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 Reflective wrap (also known as concerved. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. Roof window 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. Solar heat gain coefficient (SHGC) 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) 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)		from upper levels.
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 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 foll) 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. Solar heat gain coefficient (SHGC) the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and wue as part of the 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 Unaonditioned a zone within a dwelling that is assu		
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Window chading device Optimized 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. 0009323015

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 9, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 67.9 Unconditioned* 0.0 Total 67.9 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

NameDean GormanBusiness nameGreenview Consulting Pty LtdEmaildean@greenview.net.auPhone8544 1683Accreditation No.DMN/13/1645Assessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDeclaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

6.4 The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

71.9 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
Adelled	63.9	8.0
oad 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=UbpEiukEd . When using either link, ensure you are visiting hstar.com.au





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



6.4 Star Rating as of 22 Mar 2024

					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	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					

<u>.</u>

Approval Stage Construction Stage	
Certificate check	
Continued Assessor checked Assessor checked Ooccupancy/Other Builder checked Assessor checked	
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)	
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 Home performance assessment is not conducted)	
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 assessment)	
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	29.64
Bedroom 1	Bedroom	13.31
Bedroom 2	Bedroom	10.77
Bath	Daytime	7.93
Entry	Daytime	6.29
Glazed Common A	Glazed Common Area	21.12

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-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*		SHOC	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-004-01 A	W7	1500	2400	Awning	45	E	No
Kitchen/Living	ALM-004-01 A	W8	2400	2400	Awning	45	S	No
Bedroom 1	ALM-004-01 A	W3	1380	2050	Awning	10	S	No
Bedroom 2	ALM-004-01 A	W5	1380	1800	Awning	10	S	No
Glazed Common A	ALM-002-01 A	W1	1490	2200	Awning	10	E	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

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

Roof window* schedule

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

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m ²]	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	3300	Ν	300	No
Kitchen/Living	EW-1	2700	800	E	200	No
Kitchen/Living	EW-1	2700	2400	E	200	Yes
Kitchen/Living	EW-1	2700	900	Е	200	No

0009323015 NatHERS Certificate

6.4 Star Rating as of 22 Mar 2024



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	5400	S	3200	No
Bedroom 1	EW-1	2700	4295	E	5600	No
Bedroom 1	EW-1	2700	3300	S	500	Yes
Bedroom 1	EW-1	2700	1900	W	200	No
Bedroom 2	EW-1	2700	795	S	700	No
Bedroom 2	EW-1	2700	1800	S	700	Yes
Bedroom 2	EW-1	2700	600	S	700	No
Bedroom 2	EW-1	2700	3150	W	200	No
Glazed Common A	EW-1	2700	2845	E	400	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	Timber Stud Frame, Direct Fix Plasterboard	53.46	No insulation
IW-003	Cavity brick, plasterboard	38.88	No Insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	29.64	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.31	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 200mm	10.77	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.93	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	6.29	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab, Unit Below 200mm	21.12	None	No Insulation	Ceramic Tiles 8mm

Ceiling type

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

0009323015 NatHERS C	ertificate	6.4 Star Rating as	s of 22 Mar 2024	HOUSE
Location	Constru materia		Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bedroom 1	Plasterb	oard on Timber	Bulk Insulation R2.5	
Bedroom 2	Plasterb	oard on Timber	Bulk Insulation R2.5	
Bath	Plasterb	oard on Timber	Bulk Insulation R2.5	
Entry	Plasterb	oard on Timber	Bulk Insulation R2.5	
Glazed Common A	Plasterb	oard 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
Bedroom 2	4	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Entry	2	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	50	Medium

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	inimum iciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	eff	inimum 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	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

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
Assessed noor 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	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. 0009322991

Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 10, 96-98 Brenan Street, Smithfield , NSW , 2164 Lot 27-28 DP 35591 2 G of 1 floors New Home

Plans

Main plan Prepared by BGWYN SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 71.6 Unconditioned* 0.0 Total 71.6 Garage 0.0 Exposure type Suburban NatHERS climate zone

28 Richmond



Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

 Declaration of interest
 Declaration completed: no conflicts

NCC Requirements

NCC provisions Strate/Territory variation 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 <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

47.4 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
Nodelled	33.5	13.9
oad limits	N/A	N/A

Features determining load limits

Floor Type	N/A
(lowest conditioned area)	19/0
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=bRKpSmNfV . When using either link, ensure you are visiting hstar.com.au





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:

ACC 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

No Whole of Home performance assessment conducted for this certificate

Cost



7.7 Star Rating as of 22 Mar 2024

Cartificate check	Approva	I Stage	Constru	ction	HIDOWERS STATE
Certificate check			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	Occupa
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		Т	ſı	, 	
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					

0009322991 NatHERS Certificate 7.7 Star Rating as of 22 Mar 2024								
	Approva	I Stage	Constru Stage	ction				
Certificate check	checked	uthority/ hecked	scked	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		1		1				
Has the insulation been installed according to the NCC requirements?								
Building sealing		1		1				
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	n	n	Ĩ	ñ	<u> </u>			

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	32.01
Bedroom 1	Bedroom	14.05
Bedroom 2	Bedroom	10.66
Bath	Daytime	7.63
Entry	Daytime	7.24
Glazed Common A	Glazed Common Area	22.11

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*		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	Maximum SHGC*	Substitution tolerance ranges		
WINDOW ID	Description	U-value* SHG		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-004-01 A	W8	2400	2400	Awning	45	Ν	Yes
Kitchen/Living	ALM-003-01 A	W2	1470	1200	Awning	90	S	No
Kitchen/Living	ALM-004-01 A	W5	1500	2400	Awning	45	S	No
Kitchen/Living	ALM-004-01 A	W10	600	1800	Awning	00	W	No
Bedroom 1	ALM-004-01 A	W7	2400	2050	Awning	45	W	Yes
Bedroom 2	ALM-004-01 A	W4	1470	1800	Awning	10	S	No
Glazed Common A	ALM-002-01 A	W11	920	1330	Awning	00	S	No
Glazed Common A	ALM-002-01 A	W9	1470	1690	Awning	45	S	No



Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHCC*	Substitution to	lerance ranges
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Avail	able				
Custom roof v	vindows*				
	Window	Maximum	01100*	Substitution to	lerance ranges
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Avail	able				
	dow* 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	3600	Ν	4500	Yes
Kitchen/Living	EW-1	2700	995	W	3500	No
Kitchen/Living	EW-1	2700	4095	S	200	Yes
Kitchen/Living	EW-1	2700	1000	E	200	No
Kitchen/Living	EW-1	2700	1100	S	100	No
Kitchen/Living	EW-1	2700	2500	S	300	Yes
Kitchen/Living	EW-1	2700	600	S	100	No
Kitchen/Living	EW-1	2700	900	W	100	No
Kitchen/Living	EW-1	2700	1900	W	100	Yes
Kitchen/Living	EW-1	2700	1200	W	100	No
Bedroom 1	EW-1	2700	3395	W	3500	Yes
Bedroom 2	EW-1	2700	2200	E	200	No
Bedroom 2	EW-1	2700	600	S	200	No
Bedroom 2	EW-1	2700	1800	S	300	Yes
Bedroom 2	EW-1	2700	700	S	200	No
Bedroom 2	EW-1	2700	1000	W	100	No
Glazed Common A	EW-1	2700	2400	S	200	Yes
Glazed Common A	EW-1	2700	2900	E	200	No
Glazed Common A	EW-1	2700	2545	S	200	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	54.36	No insulation
IW-002	Cavity brick, plasterboard	31.59	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	32.01	None	No Insulation	Ceramic Tiles 8mm

0009322991 NatHERS Certificate

7.7 Star Rating as of 22 Mar 2024



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab, Unit Below 200mm	14.05	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 200mm	10.66	None	No Insulation	Carpet+Rubber Underlay 18mm
Bath	Concrete Slab, Unit Below 200mm	7.63	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	7.24	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab, Unit Below 200mm	22.11	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	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R2.5	
Bath	Plasterboard on Timber	Bulk Insulation R2.5	
Entry	Plasterboard on Timber	Bulk Insulation R2.5	
Glazed Common A	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
Bedroom 2	4	Downlights - LED	150	Sealed
Bath	3	Downlights - LED	150	Sealed
Bath	3	Exhaust Fans	150	Sealed
Entry	2	Downlights - LED	150	Sealed

Ceiling fans

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

* Refer to glossary. Generated on 22 Mar 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 96-98 Brenan Street , Smithfield , NSW , 2164

0009322991 NatHERS Certificate	7.7 Star Rating as of 22 Mar 2024		ATIONWIDE HOUSE
Location	Quantity	Diameter [mm]	
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	50	Medium	

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	ency/ Recomment	
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	eff	nimum iciency/ ormance	Recommended capacity	
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		bstitution 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

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)	

NatHERS Thermal Performance Specification - Smithfield					
		External Walls			
Wall Type	Insulation	Colour	Comments		
Cavity Brick	R0.7	Light - SA < 0.475, Dark - SA > 0.70	As per elevations		
FC cladding over Cavity Brick	R0.7	Dark - SA > 0.70	As per elevations		
	S	SA - Solar Absorptance			
		Internal Walls			
Wall Type	Insulation	Comments			
Single skin brick	None		GF: Internally inside units		
Plasterboard stud	None		L1: Internally inside units		
Cavity Brick	None		Party walls between units		
Cavity Brick	None	Shared walls with lobby/stairs/lift, except as below			
Cavity Brick	R0.7	Unit 4, Shared walls with lobby/stairs/lift			
		Floors			
Floor Type	Insulation	Comments			
Concrete slab	None	All units on ground			
Concrete	None	All u	nits with adjoining unit below		
		Ceilings			
Ceiling Type	Insulation	Comments			
Plasterboard	None	Unit above			
Plasterboard	R2.5		Roof/air above		
Insulation loss due to downlights has	been modelled in this assessmer	nt. A sealed exhaust fan has been incl	luded in every kitchen, bathroom, laundry and ensuite.		
		Roof			
Roof Type	Insulation	Colour	Comments		
Metal	R1.3 foil-faced blanket	Med - SA 0.475 - 0.70	Throughout (unventilated roof space)		
SA - Solar Absorptance					
	-	Glazing	1		
Opening type	U-Value	SHGC	Glazing & Frame Type		
Sliding + Fixed (Throughout)	4.8	0.59	e.g. Single glazed low-E clear Aluminium frame		
Awning (Throughout)	4.8	0.51	e.g. Single glazed low-E clear Aluminium frame		
U and SHGC values are based on the AFRC Default Windows Set. Glazing systems to be installed must have an equal or lower U value and a SHGC value ± 10% of the above specified values.					
		Ceiling fan			
Size		Location	Comments		
1200mm in diameter Living and bedrooms Throughout			Throughout		

Certificate Prepared by		
Reenview	Greenview Consulting Pty Ltd ABN: 32600067338	
CONSULTING	Email: dean@greenview.net.au Phone: 0404 649 762	