Nationwide House Energy Rating Scheme[®] Class 2 Summary NatHERS[®] Certificate No. 0011746560

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NatHERS Climate Zone

12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 56 Mascot (Sydney Airport)

Accredited assessor

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=fdCqCsnpQ . 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 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





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	8	4.4
Maximum block limit	N/A	N/A

Whole of Home performance rating

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

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m ² /p.a.]	Cooling load (load limit) [MJ/m ² /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
<u>0011746401</u>		18.1 (N/A)	3.4 (N/A)	21.5	7.9	0
0011746450	2	5.6 (N/A)	2.9 (N/A)	8.5	9.6	0

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

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Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m ² /p.a.]	Cooling load (load limit) [MJ/m ² /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
<u>0011746484</u>	3	1.5 (N/A)	8.7 (N/A)	10.2	9.3	0
0011746518	4	6.2 (N/A)	2.8 (N/A)	9.0	9.5	0
0011746534	5	0.5 (N/A)	3.4 (N/A)	3.9	10	0
0011746559	6	0.6 (N/A)	4.0 (N/A)	4.7	10	0
0011746419	7	7.6 (N/A)	3.4 (N/A)	11.0	9.2	0
0011746443	8	11.6 (N/A)	4.4 (N/A)	16.1	8.4	0
0011746476	9	20.0 (N/A)	4.2 (N/A)	24.2	7.6	0
0011746500	10	13.8 (N/A)	2.9 (N/A)	16.7	8.4	0
0011746526	11	3.0 (N/A)	8.4 (N/A)	11.4	9.1	0
0011746542	12	6.5 (N/A)	4.2 (N/A)	10.7	9.2	0
0011746427	13	2.7 (N/A)	4.6 (N/A)	7.3	9.8	0
0011746435	14	5.1 (N/A)	4.1 (N/A)	9.1	9.4	0
0011746468	15	11.5 (N/A)	4.0 (N/A)	15.5	8.6	0
0011746492	16	12.8 (N/A)	5.0 (N/A)	17.8	8.3	0

Explanatory notes

About this ratings

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

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

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

Accredited Assessors

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

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

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

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

Disclaimer

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

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on

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

0011746560 NatHERS Certificate

9.0 Star Rating as of 24 Feb 2025



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 while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

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Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746401

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class Floor/all Floors Type

Unit 1, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by RGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 72.6 Unconditioned* 0.0 Total 72.6 Garage 0.0

Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

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

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

the more energy efficient NATIONWIDE

The more stars

21.6 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	18.1	3.4
Load limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

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

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



7.9 Star Rating as of 24 Feb 2025

Certificate check	Approva	oproval Stage Construction Stage			HOOUSE Controlling 2000
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		Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder checked	Consent Surveyo	Occupan
Genuine certificate check		л	1	<u>6</u>	
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
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>

7.9 Star Rating as of 24 Feb 2025

	Approva	l Stage	Construe Stage	ction	
Certificate check Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other

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 asse	ssment is i	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	
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					

Other NCC requirements

'Additional notes' table below?

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]
Bath	Daytime	6.12
Hall	Daytime	6.91
Bedroom 1	Bedroom	11.54
Kitchen/Living	Kitchen/Living	25.03
Entry	Daytime	11.5
Glazed Common	Glazed Common Area	15.2
Bedroom 2	Bedroom	11.54

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum U-value* SHGC*		Substitution tolerance ranges			
	Description			SHGC lower limit	SHGC upper limit		
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56		
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54		

Custom windows*

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

Window and glazed door schedule

Window ID	Window no.	Height [mm]			Opening %	Orientation	Window shading device*
ALM-004-03 A	W28	1500	1800	Sliding	45	SE	No
ALM-003-01 A	W31	1450	900	Awning	90	SW	No
ALM-004-03 A	W27	2400	2410	Sliding	45	SE	Yes
ALM-001-01 A	W29	2400	1050	Casement	90	SE	No
ALM-002-01 A	W30	2400	850	Fixed	00	SE	No
ALM-002-01 A	W34	2400	250	Fixed	00	SE	No
ALM-003-01 A	W32	1500	610	Awning	90	SE	No
ALM-003-01 A	W33	1500	1100	Awning	90	SW	No
	ID ALM-004-03 A ALM-003-01 A ALM-004-03 A ALM-001-01 A ALM-002-01 A ALM-002-01 A ALM-003-01 A	ID no. ALM-004-03 A W28 ALM-003-01 A W31 ALM-004-03 A W27 ALM-001-01 A W29 ALM-002-01 A W30 ALM-002-01 A W34 ALM-003-01 A W32	ID no. [mm] ALM-004-03 A W28 1500 ALM-003-01 A W31 1450 ALM-004-03 A W27 2400 ALM-004-03 A W27 2400 ALM-001-01 A W29 2400 ALM-002-01 A W30 2400 ALM-002-01 A W34 2400 ALM-003-01 A W32 1500	ID no. [mm] [mm] ALM-004-03 A W28 1500 1800 ALM-003-01 A W31 1450 900 ALM-004-03 A W27 2400 2410 ALM-001-01 A W29 2400 1050 ALM-002-01 A W30 2400 850 ALM-002-01 A W34 2400 250 ALM-003-01 A W32 1500 610	ID no. [mm] [mm] type ALM-004-03 A W28 1500 1800 Sliding ALM-003-01 A W31 1450 900 Awning ALM-004-03 A W27 2400 2410 Sliding ALM-004-03 A W27 2400 2410 Sliding ALM-001-01 A W29 2400 1050 Casement ALM-002-01 A W30 2400 850 Fixed ALM-002-01 A W34 2400 250 Fixed ALM-003-01 A W32 1500 610 Awning	ID no. [mm] [mm] type % ALM-004-03 A W28 1500 1800 Sliding 45 ALM-003-01 A W31 1450 900 Awning 90 ALM-004-03 A W27 2400 2410 Sliding 45 ALM-004-03 A W27 2400 1050 Casement 90 ALM-001-01 A W29 2400 1050 Casement 90 ALM-002-01 A W30 2400 850 Fixed 00 ALM-002-01 A W34 2400 250 Fixed 90 ALM-003-01 A W32 1500 610 Awning 90	ID no. [mm] [mm] type % Orientation ALM-004-03 A W28 1500 1800 Sliding 45 SE ALM-003-01 A W31 1450 900 Awning 90 SW ALM-004-03 A W27 2400 2410 Sliding 45 SE ALM-004-03 A W27 2400 2410 Sliding 45 SE ALM-001-01 A W29 2400 1050 Casement 90 SE ALM-002-01 A W30 2400 850 Fixed 00 SE ALM-002-01 A W34 2400 250 Fixed 00 SE ALM-003-01 A W32 1500 610 Awning 90 SE



Roof window* type and performance value

Default roof windows*

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

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 ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.50		Bulk Insulation R0.7	No
EW-2	Cavity Brick	0.30		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-3	Cavity Brick	0.85		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-4	Cavity Brick	0.50		Foil reflective both sides of the Bulk Insulation R4	Yes

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 1, 12-16 Stuart Street , Warrawong , NSW , 2502



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Hall	EW-1	2700	990	SW	0	No
Bedroom 1	EW-2	2700	2300	NE	4200	No
Bedroom 1	EW-2	2700	3300	SE	0	Yes
Bedroom 1	EW-3	2700	3545	SW	0	Yes
Kitchen/Living	EW-2	2700	4145	SE	3700	Yes
Glazed Common	EW-4	2700	2900	SE	0	Yes
Bedroom 2	EW-3	2700	2800	SE	0	Yes
Bedroom 2	EW-3	2700	3700	SW	0	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	113.67	No Insulation
IW-002	Single Skin Brick	42.66	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Suspended Concrete Slab 200mm	6.12	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Hall	Suspended Concrete Slab 200mm	6.91	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	11.54	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	25.04	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm

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7.9 Star Rating as of 24 Feb 2025



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Suspended Concrete Slab 200mm	11.50	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Glazed Common	Suspended Concrete Slab 200mm	15.20	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	11.54	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm

Ceiling type

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

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed
Hall	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	900
Kitchen/Living	1	900
Bedroom 2	1	900

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 1, 12-16 Stuart Street , Warrawong , NSW , 2502



Roof type

Construction [R-value]		Solar absorptance	Roof shade [colour]
None Present		0.00	

Thermal bridging schedule for steel frame elements

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

Appliance schedule

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

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

Cooling system

Appliance/ system type	Lo	cation F	uel type	eff	Minimum efficiency/ performance		Recommended capacity	
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	;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

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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 (susally 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
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Recommended capacity zone or zone's serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person. Reflective wrap (also known as foil) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties. Roof window for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser. Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves. Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. Solar heat gain coefficient (SHGC) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level. 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 ure aterials 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 abilit	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
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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 dovice device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	U-value	
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. 0011746450

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 2, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*81.2Unconditioned*0.0Total81.2Garage0.0

Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

IOUSE ERGY RATING SCHEME

The more stars

the more energy efficient

NATIONWIDE

8.5 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	5.6	2.9			
oad limits	N/A	N/A			

Features determining load limits

Floor Type	NUA
(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=rKHnJIBaZ . 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

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 24 Feb 2025

Certificate check	Cate check		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.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupai	
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>

9.6 Star Rating as of 24 Feb 2025

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-		Il Stage	Construction Stage			
Certificate check	scked	iority/ cked	ted	lority 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	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 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	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 Cortificate only asvers the operate officiancy requirements in the NCC. Add	itional rage:	romonto H	t munt als -	he entiofic -	include	

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Entry	Daytime	15.7
Kitchen/Living	Kitchen/Living	37.53
Bath	Daytime	4.4
Bedroom 1	Bedroom	11.72
Bedroom 2	Bedroom	11.84

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window iD	DescriptionU-vaAAluminium B DG Air Fill High Solar Gain low-E -4	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-004-03 A		4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W34	2400	2410	Sliding	45	SW	No
Kitchen/Living	ALM-003-01 A	W36	1500	2000	Awning	70	NW	No
Bedroom 1	ALM-003-01 A	W35	1500	1810	Awning	70	NW	No
Bedroom 2	ALM-003-01 A	W32	1500	1100	Awning	90	SW	No

Roof window* type and performance value

Default roof windows*

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

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 2, 12-16 Stuart Street , Warrawong , NSW , 2502



Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
Window ID	Description			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 Avai	lable							

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 ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.50		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-2	Cavity Brick	0.30		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-3	Cavity Brick	0.85		Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4045	SW	2700	No
Kitchen/Living	EW-2	2700	4145	NW	0	Yes

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 2, 12-16 Stuart Street , Warrawong , NSW , 2502 0011746450 NatHERS Certificate

9.6 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	
Bedroom 1	EW-2	2700	1100	SW	4200	No	
Bedroom 1	EW-3	2700	3200	NW	0	Yes	
Bedroom 2	EW-3	2700	3800	SW	0	Yes	
Bedroom 2	EW-3	2700	2700	NW	4800	No	

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation	
IW-001	Single Skin Brick	41.58	No insulation	
IW-002	Cavity brick	88.02	No Insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Suspended Concrete Slab 200mm	15.70	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	37.53	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	4.40	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	11.72	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	11.84	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm



Ceiling type

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

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Entry	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

Appliance schedule

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

Note: A flat assumption of $5W/m^2$ is used for lighting, therefore lighting is not included in the appliance schedule.

0011746450 NatHERS Certificate	9.6 Sta	r Rating as of	24 Feb 2025				
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		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 E	nergy Sch	edule					
System Type Orie	entation		Syst	em Size O	r 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 floor area modelied in the software for the purpose of the NAHERS assessment. Note, this may note consistent with the floor area in the design documents. Colling penetrations Eleatures that requires a penetration to the celling, including downlights, wents, exhaust fans, range hoods, chimneys and flues. The celling with small holes through the celling of wiring, e.g. celling fans, pendan lights, and beating and cooling based on standard occupancy assumptions. In some circumstances it will include gardges. Continuoned a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include gardges. Custom windows windows that are representative of a specific type of window product and whose properties have been derived by statistical methods. ER Energy Efficiency Ratio, measure of how much cooling can be achived by an air conditioner for a single KWh of electricity input. Energy walue These signify williation benefits in the modeling software and must not be modelied as a door when opening to a minimally wentilated corridor in a Class 2 building. Exposure category – exposed terrain with numerous, closely spaced obstructions bedwy time well scattered bigh-rise unit (susally above 10 floors). Exposure category – pontected terrain with numerous, closely spaced obstructions over 10 m og, cult and industing aces.	AFRC	Australian Fenestration Rating Council
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Provisional value 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. Stores 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 a welling that is assumed to not require heating and cooling based on standard occupancy assumptions. U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability. Unconditioned	Opening percentage	
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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	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Window shading device Optimized fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (e.g. 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. 0011746484

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 3, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*48.8Unconditioned*7.5Total56.3Garage0.0

Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreeEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDec

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

NATIONWIDE HOUSE

The more stars

the more energy efficient

10.3 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	
Aodelled	1.5	8.7	
oad limits	N/A	N/A	

Features determining load limits

Floor Type	NVA.
(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=CgMCuEbox . 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



9.3 Star Rating as of 24 Feb 2025

Certificate check	Approva	l Stage	Constru Stage	Control of the second s	
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	Consent Surveyo	Occupa
Genuine certificate check		0	0		
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					

9.3 Star Rating as of 24 Feb 2025

	Approva	al Stage	Construction Stage		
Certificate check	acked	uthority/ checked	pey	vuthority checked)ther
Continued	Assessor chr	Consent Autl Surveyor che	Builder checked	Consent Autl Surveyor che	Occupancy/C
Additional NCC requirements for thermal perform	nance (not included in t	he NatHE	ERS asse	essment)	A

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]
Kitchen/Living	Kitchen/Living	28.54
Entry	Daytime	8.59
Bath	Unconditioned	7.49
Bedroom 1	Bedroom	11.72

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges			
WINDOW ID	Description	U-value*	3666	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-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56		

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	W27	1500	2050	Awning	70	NW	No
Kitchen/Living	ALM-004-03 A	W23	2400	2410	Sliding	45	NE	No
Bath	ALM-004-03 A	W28	600	900	Sliding	45	NW	No
Bedroom 1	ALM-003-01 A	W24	1450	1100	Awning	90	NW	No

Roof window* type and performance value

Default roof windows*

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



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 Avai	lable				

Roof window* schedule

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

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

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 ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.85		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-2	Cavity Brick	0.50		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-3	Cavity Brick	0.30		Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3900	NW	0	Yes
Kitchen/Living	EW-1	2700	3100	NE	4500	No

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 3, 12-16 Stuart Street , Warrawong , NSW , 2502 0011746484 NatHERS Certificate

9.3 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-2	2700	300	SW	0	No
Bath	EW-3	2700	2790	NW	3100	No
Bedroom 1	EW-3	2700	3200	NW	100	Yes
Bedroom 1	EW-3	2700	2000	NE	100	No
Bedroom 1	EW-3	2700	1000	SW	6800	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation	
IW-001	Single Skin Brick	28.08	No insulation	
IW-002	Cavity brick	44.55	No Insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Suspended Concrete Slab 200mm	28.54	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	8.59	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.49	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	11.72	Enclosed	Foil in Contact with Floor, Reflective Side Down	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 Steel Frame	No insulation	
Entry	Concrete, Plasterboard with Steel Frame	No insulation	

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 3, 12-16 Stuart Street , Warrawong , NSW , 2502

0011746484 NatH	IERS Certificate	9.3 Star Rating as of 24 Fe	b 2025	HOUSE
Location	Construction material/type		Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Bath	Concrete, Plasterboard with Steel Frame		No insulation	
Bedroom 1	Concrete, Plasterbo	ard with Steel Frame	No insulation	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Entry	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

Appliance schedule

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

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

Cooling system

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

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

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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Glossary

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
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U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746518

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 4, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*68.1Unconditioned*0.0Total68.1Garage0.0

Exposure type Suburban NatHERS climate zone

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

56 Mascot (Sydney Airport)



Accredited assessor

NameDeaBusiness nameGreEmaildeaPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

J.J. The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

9.1 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	6.2	2.8
Load limits	N/A	N/A

Features determining load limits

Floor Type	
(lowest conditioned area)	N/A
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No
Outdoor living area celling lan	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=AbyJVXXVy . When using either link, ensure you are visiting hstar.com.au



* Refer to glossary Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 4, 12-16 Stuart Street , Warrawong , NSW , 2502

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

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

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



9.5 Star Rating as of 24 Feb 2025

-	1		Constru		HOUSE
Certificate check	Approva	I Stage	Constru Stage	cuon	
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>

9.5 Star Rating as of 24 Feb 2025

	Approva	l Stage	Construe Stage	ction	HOUD
Certificate check Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other

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	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]
Bedroom 1	Bedroom	11.72
Entry	Daytime	6.48
Kitchen/Living	Kitchen/Living	30.16
Bath	Daytime	7.73
Bedroom 2	Bedroom	12.01

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
Window ID	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance 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*
Bedroom 1	ALM-004-03 A	W27	800	1810	Sliding	45	SW	No
Kitchen/Living	ALM-004-03 A	W28	1500	1200	Sliding	45	SW	No
Kitchen/Living	ALM-004-03 A	W28	1500	2050	Sliding	45	NW	No
Kitchen/Living	ALM-004-03 A	W31	2400	2410	Sliding	45	NE	No
Bedroom 2	ALM-004-03 A	W25	1500	1810	Sliding	45	NW	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
WINGOW ID	Description	U-value*	3160	SHGC lower limit	SHGC upper limit
No Data Available					



Custom roof windows*

Window ID Window	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 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] Orientation	Outdoor shade	Diffuser
No Data Ava	ilable					

External door schedule

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

External wall type

Wall	Wall	Solar	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

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	3345	SW	0	No
Bedroom 1	EW-1	2700	3545	SE	0	No
Kitchen/Living	EW-1	2700	2945	SW	0	Yes
Kitchen/Living	EW-1	2700	700	NW	4000	No

0011746518 NatHERS Certificate

9.5 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	
Kitchen/Living	EW-1	2700	4000	SW	700	No	
Kitchen/Living	EW-1	2700	4100	NW	0	Yes	
Kitchen/Living	EW-1	2700	3200	NE	3300	No	
Bedroom 2	EW-1	2700	3245	NW	4300	Yes	

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Single Skin Brick	40.77	No insulation
IW-002	Cavity brick	25.92	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Suspended Concrete Slab 200mm	11.72	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	6.48	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	30.16	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.73	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	12.01	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm



Ceiling type

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

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	900
Kitchen/Living	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

Appliance schedule

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

Note: A flat assumption of $5W/m^2$ is used for lighting, therefore lighting is not included in the appliance schedule.

0011746518 NatHERS Certificate	9.5 Sta	r Rating as of	24 Feb 2025				HIDOWNE
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		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 E	nergy Sch	edule					
System Type Orie	entation		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.

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U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746534

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 5, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 75.9 Unconditioned* 0.0 Total 75.9 Garage 0.0 Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreeEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDec

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars

the more energy efficient

NATIONWIDE

3.9 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	0.5	3.4
oad limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



* Refer to glossary Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 5, 12-16 Stuart Street , Warrawong , NSW , 2502



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 24 Feb 2025

Certificate check	rtificate check Approval Stage		Constru Stage	ction	HUUUSE	
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 Survey	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						
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 24 Feb 2025

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	Арргоу	Approval Stage		Construction Stage	
Certificate check	ecked	uthority/ checked	ked	uthority checked	Other
Continued	Assessor ch	Consent Auth Surveyor che	Builder chec	Consent Aut Surveyor ch	Occupancy/
Additional NCC requirements for thermal new	formance (not included in	the NetH		acmont	ō

Т

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	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 [m²]	
Entry	Daytime	12.42	
Bedroom 1	Bedroom	11.57	
Kitchen/Living	Kitchen/Living	33.19	
Bath	Daytime	7.19	
Bedroom 2	Bedroom	11.57	

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC* - U-value*		Substitution tolerance ranges		
willdow iD	Description			SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

Window ID	Window ID SHGC* -		Substitution tolerance ranges		
willdow 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*
Bedroom 1	ALM-004-03 A	W41	1500	1810	Sliding	45	NE	No
Kitchen/Living	ALM-004-03 A	W39	2400	2410	Sliding	45	NW	No
Kitchen/Living	ALM-004-03 A	W40	1500	2050	Sliding	50	NE	No
Kitchen/Living	ALM-003-01 A	W42	1200	1100	Awning	90	NE	No
Bedroom 2	ALM-004-03 A	W32	1500	1810	Sliding	45	NW	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window Maximum Description U-value*	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3160	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 Availa	able					

External door schedule

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

External wall type

Wall	Wall	Solar	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

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	3045	NE	300	Yes
Bedroom 1	EW-1	2700	700	SE	0	No
Kitchen/Living	EW-1	2700	1200	SW	3100	No
Kitchen/Living	EW-1	2700	4300	NW	2800	No

0011746534 NatHERS Certificate

10 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	7345	NE	0	Yes
Bedroom 2	EW-1	2700	3045	NW	4000	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation	
IW-001	Cavity brick	51.30	No Insulation	
IW-002	Single Skin Brick	51.57	No insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Suspended Concrete Slab 200mm	12.42	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	11.57	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	33.19	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.19	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 2	Suspended Concrete Slab 200mm	11.57	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm

Ceiling type

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

0011746534 NatHERS Certificate 10 Star Rating as of 24 Feb 2025 **Bulk insulation R-value** Reflective Construction Location (may include edge batt values) material/type wrap* [yes/no] Bedroom 1 Concrete, Plasterboard with Steel Frame No insulation Kitchen/Living Concrete, Plasterboard with Steel Frame No insulation Bath Concrete, Plasterboard with Steel Frame No insulation Bedroom 2 Concrete, Plasterboard with Steel Frame No insulation

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	900
Kitchen/Living	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

Appliance schedule

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

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

Cooling system

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

* Refer to glossary.

0011746534 NatHERS Certificate	10 Star	Rating as of 24	Feb 2025				HIGH
Heating system							
Appliance/ system type	Loo	cation Fu	uel type	effi	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC -		ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	;y/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



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. 0011746559

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 6, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*52.8Unconditioned*0.0Total52.8Garage0.0

Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDeaBusiness nameGreEmaildeaPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDec

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars

the more energy efficient

NATIONWIDE

4.7 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	0.6	4.0
oad limits	N/A	N/A

Features determining load limits

Floor Type	N/A
(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=cmuYWMpEa . 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 24 Feb 2025

Certificate check	Approva	I Stage	e Construction Stage		HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consen	Builder	Consent	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					
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 24 Feb 2025

Η	ΰù	ISE	

	Approv	Approval Stage		Construction Stage	
Certificate check	checked	uthority/ hecked	ked	uthority hecked	/Other
Continued	Assessor ch	Consent Auf Surveyor ch	Builder checked	Consent Auf Surveyor ch	Occupancy/
Additional NCC requirements for thermal perfor	mance (not included in a	the NatH	ERS ass	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 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]
Bath	Daytime	7.34
Kitchen/Living	Kitchen/Living	30.62
Entry	Daytime	3.94
Bedroom 1	Bedroom	10.94

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-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	W24	1500	2400	Awning	90	NE	No
Kitchen/Living	ALM-004-03 A	W33	2400	2410	Sliding	45	SE	No
Bedroom 1	ALM-004-03 A	n/a	850	1810	Sliding	45	NE	Yes

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	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] 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 \	Bulk insulation	Reflective
ID	type	absorptance [[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3800	NE	400	Yes
Kitchen/Living	EW-1	2700	3800	SE	0	No
Kitchen/Living	EW-1	2700	945	NE	0	No
Bedroom 1	EW-1	2700	3145	NE	0	Yes

0011746559 NatHERS Certificate 10 Star Rating as of 24 Feb 2025

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	HOUSE CONTRACTOR
Bedroom 1	EW-1	2700	1600	SE	0	No	

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation	
IW-001	Cavity brick	53.19	No Insulation	
IW-002	Single Skin Brick	20.79	No insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Suspended Concrete Slab 200mm	7.34	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	30.62	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	3.94	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	10.94	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm

Ceiling type

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



Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

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

0011746559 NatHERS Certificate

10 Star Rating as of 24 Feb 2025



Hot water system

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

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

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

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

4500	
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. 0011746419

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 7, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*56.0Unconditioned*0.0Total56.0Garage0.0

Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

9.2 The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

11.0 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	7.6	3.4
oad limits	N/A	N/A

Features determining load limits

L

Floor Type	NUA
(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=tinXXayaX . When using either link, ensure you are visiting hstar.com.au



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

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

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



9.2 Star Rating as of 24 Feb 2025

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

<u>.</u>

9.2 Star Rating as of 24 Feb 2025

	Approva	Approval Stage		Construction Stage	
Certificate check	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance	(not included 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 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			Ст	

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]
Entry	Daytime	4.83
Kitchen/Living	Kitchen/Living	31.01
Bath	Daytime	7.39
Bedroom 1	Bedroom	12.77

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-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W41	2400	2410	Sliding	45	NE	No
Kitchen/Living	ALM-003-01 A	W40	1500	900	Awning	90	SE	No
Kitchen/Living	ALM-003-01 A	W42	1500	900	Awning	90	SE	No
Kitchen/Living	ALM-003-01 A	W39	1500	900	Awning	90	SE	No
Bedroom 1	ALM-004-03 A	W38	1500	1810	Sliding	45	SE	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window	Maximum	SUCC*	Substitution to	Substitution tolerance 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 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] Orientation	Outdoor shade	Diffuser
No Data Ava	ilable					

External door schedule

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

External wall type

Wall	Wall	Solar	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Entry	EW-1	2700	1690	NW	0	No
Kitchen/Living	EW-1	2700	845	NW	0	No
Kitchen/Living	EW-1	2700	3700	NE	2800	Yes
Kitchen/Living	EW-1	2700	3800	SE	0	Yes

0011746419 NatHERS Certificate

9.2 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	800	SW	2400	No
Kitchen/Living	EW-1	2700	2345	SE	300	Yes
Bath	EW-1	2700	1045	SW	0	No
Bath	EW-1	2700	1900	SW	0	No
Bath	EW-1	2700	2545	NW	0	No
Bedroom 1	EW-1	2700	700	NE	2400	No
Bedroom 1	EW-1	2700	3400	SE	300	Yes
Bedroom 1	EW-1	2700	3845	SW	0	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation	
IW-001	Single Skin Brick	28.62	No insulation	
IW-002	Cavity brick	14.58	No Insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Suspended Concrete Slab 200mm	4.83	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	31.01	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.39	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	12.77	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm



Ceiling type

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

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

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.

0011746419 NatHERS Certificate	9.2 Sta	r Rating as of	24 Feb 2025				HOUSE
Cooling system							
Appliance/ system type	Lo	cation	Fuel type	eff	nimum iciency/ ormance		mended acity
No Data Available				·			
Heating system							
.ppliance/ system type L		Location Fuel type		Minimum efficiency/ performance		Recommended capacity	
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC		Ibstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type	pe Fuel type			Minimu efficienc performa	cy/	Recomm capac	
No Data Available							
Onsite Renewable E	nergy Sch	edule					
System Type Orie	entation		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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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

	Australian Fenestration Rating Council
	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assassed 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	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 neating and cooling ducts.
СОР С	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.
	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 Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity nput
	This is your homes rating without solar or batteries.
d d	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).
	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.
	see exposure categories below.
	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
s	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).
	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.
	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
	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.
	a home that achieves a net zero energy value*.
	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value a	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 z	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the cone 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 c foil) ir	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides nsulative properties.
Roof window for s	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.
	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.
(SUGC) S	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 neat it transmits.
bits	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 b	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, out 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 th	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned a	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features p	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).
	device 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. 0011746443

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 8, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*48.3Unconditioned*0.0Total48.3Garage0.0

Exposure type Suburban NatHERS climate zone

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

8.4 The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

16.1 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Aodelled	11.6	4.4
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=aqzkkceKI . 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 N

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



8.4 Star Rating as of 24 Feb 2025

					HOUSE	
Certificate check	Approva	I Stage	Constru Stage	ction		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Survey	Builder	Consen 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						
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						

8.4 Star Rating as of 24 Feb 2025

HOUSE

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

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Entry	Daytime	2.68
Kitchen/Living	Kitchen/Living	26.81
Bath	Daytime	7.05
Bedroom 1	Bedroom	11.8

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3666	SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W34	2400	2410	Sliding	45	SE	No
Kitchen/Living	ALM-003-01 A	W40	1500	900	Awning	90	SE	No
Bedroom 1	ALM-004-03 A	W38	1500	1810	Sliding	45	SE	No

Roof window* type and performance value

Default roof windows*

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



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 Avai	lable							

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] Orientation	Outdoor shade	Diffuser
No Data Ava	ilable					

External door schedule

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

External wall type

Wall	Wall	Solar	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Entry	EW-1	2700	1345	NE	0	No
Entry	EW-1	2700	2045	NW	0	No
Kitchen/Living	EW-1	2700	3045	NE	0	No
Kitchen/Living	EW-1	2700	4000	SE	2700	No

0011746443 NatHERS Certificate

8.4 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	
Kitchen/Living	EW-1	2700	500	SW	900	No	
Kitchen/Living	EW-1	2700	2545	SE	300	Yes	
Kitchen/Living	EW-1	2700	945	NW	0	No	
Bedroom 1	EW-1	2700	3000	NE	2600	No	
Bedroom 1	EW-1	2700	3100	SE	300	Yes	
Bedroom 1	EW-1	2700	2500	SW	0	No	

Internal wall type

Wall ID	Wall type	Area [m²]	Bulk insulation	
IW-001	Single Skin Brick	26.19	No insulation	
IW-002	Cavity brick	20.25	No Insulation	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Suspended Concrete Slab 200mm	2.68	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 200mm	26.81	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bath	Suspended Concrete Slab 200mm	7.05	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm
Bedroom 1	Suspended Concrete Slab 200mm	11.80	Enclosed	Foil in Contact with Floor, Reflective Side Down	Ceramic Tiles 8mm

Ceiling type

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

0011746443 NatHERS Certificate 8.4 Star Rating as of 24 Feb 2025 Construction **Bulk insulation R-value** Reflective Location (may include edge batt values) material/type wrap* [yes/no] Kitchen/Living Concrete, Plasterboard with Steel Frame No insulation Bath Concrete, Plasterboard with Steel Frame No insulation Bedroom 1 Concrete, Plasterboard with Steel Frame No insulation

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
None Present		0.00	

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]
Ceiling		900	0.75	No

Appliance schedule

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

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

Cooling system

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

Appliance/ system type	Lo	cation Fu	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 capac	
No Data Available							

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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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

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Provisional value 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) uneatified thanewable en	Opening percentage	
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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	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
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. 0011746476

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 9, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 74.5 Unconditioned* 0.0 Total 74.5 Garage 0.0 Exposure type Suburban NatHERS climate zone

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

RGY RATING SCHEM

The more stars

the more energy efficient

NATIONWIDE

24.2 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		
Aodelled	20.0	4.2		
oad limits	N/A	N/A		

Features determining load limits

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



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

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

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



7.6 Star Rating as of 24 Feb 2025

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

7.6 Star Rating as of 24 Feb 2025

HOUSE

	Approva	l Stage	Construe Stage	ction	
Certificate check	Jecked	thority/ lecked	cked	thority lecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in tl	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is r	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	assessr	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]
Bath	Daytime	6.45
Hall	Daytime	7.38
Bedroom 1	Bedroom	11.74
Kitchen/Living	Kitchen/Living	25.39
Entry	Daytime	11.8
Glazed Common	Glazed Common Area	15.42
Bedroom 2	Bedroom	11.72

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum U-value* SHGC*		Substitution tolerance ranges		
window iD	Description			SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

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

Window and glazed door schedule

Window ID	Window no.	Height [mm]			Opening %	Orientation	Window shading device*
ALM-004-03 A	W28	1500	1800	Sliding	45	SE	No
ALM-003-01 A	W31	1450	900	Awning	90	SW	No
ALM-004-03 A	W27	2400	2410	Sliding	45	SE	Yes
ALM-001-01 A	W29	2400	1050	Casement	90	SE	No
ALM-002-01 A	W30	2400	850	Fixed	00	SE	No
ALM-002-01 A	W34	2400	250	Fixed	00	SE	No
ALM-003-01 A	W32	1500	610	Awning	90	SE	No
ALM-003-01 A	W33	1500	1100	Awning	90	SW	No
	ID ALM-004-03 A ALM-003-01 A ALM-004-03 A ALM-001-01 A ALM-002-01 A ALM-002-01 A ALM-003-01 A	ID no. ALM-004-03 A W28 ALM-003-01 A W31 ALM-004-03 A W27 ALM-001-01 A W29 ALM-002-01 A W30 ALM-002-01 A W34 ALM-003-01 A W32	ID no. [mm] ALM-004-03 A W28 1500 ALM-003-01 A W31 1450 ALM-004-03 A W27 2400 ALM-004-03 A W27 2400 ALM-001-01 A W29 2400 ALM-002-01 A W30 2400 ALM-002-01 A W34 2400 ALM-003-01 A W32 1500	ID no. [mm] [mm] ALM-004-03 A W28 1500 1800 ALM-003-01 A W31 1450 900 ALM-004-03 A W27 2400 2410 ALM-001-01 A W29 2400 1050 ALM-002-01 A W30 2400 850 ALM-002-01 A W34 2400 250 ALM-003-01 A W32 1500 610	ID no. [mm] [mm] type ALM-004-03 A W28 1500 1800 Sliding ALM-003-01 A W31 1450 900 Awning ALM-004-03 A W27 2400 2410 Sliding ALM-004-03 A W27 2400 2410 Sliding ALM-001-01 A W29 2400 1050 Casement ALM-002-01 A W30 2400 850 Fixed ALM-002-01 A W34 2400 250 Fixed ALM-003-01 A W32 1500 610 Awning	ID no. [mm] [mm] type % ALM-004-03 A W28 1500 1800 Sliding 45 ALM-003-01 A W31 1450 900 Awning 90 ALM-004-03 A W27 2400 2410 Sliding 45 ALM-004-03 A W27 2400 1050 Casement 90 ALM-001-01 A W29 2400 1050 Casement 90 ALM-002-01 A W30 2400 850 Fixed 00 ALM-002-01 A W34 2400 250 Fixed 90 ALM-003-01 A W32 1500 610 Awning 90	ID no. [mm] [mm] type % Orientation ALM-004-03 A W28 1500 1800 Sliding 45 SE ALM-003-01 A W31 1450 900 Awning 90 SW ALM-004-03 A W27 2400 2410 Sliding 45 SE ALM-004-03 A W27 2400 2410 Sliding 45 SE ALM-001-01 A W29 2400 1050 Casement 90 SE ALM-002-01 A W30 2400 850 Fixed 00 SE ALM-002-01 A W34 2400 250 Fixed 00 SE ALM-003-01 A W32 1500 610 Awning 90 SE



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 ID Substitution tolerance ranges	Window ID	Window	Maximum	SUCC*	Substitution to	Substitution tolerance ranges		
Custom roof windows* Window ID Window Maximum SHGC* SUbstitution tolerance ranges Description U-value* SHGC lower limit SHGC upper	window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit		
Window ID Window Maximum SHGC* Substitution tolerance ranges Description U-value* SHGC lower limit SHGC upper	No Data Avail	lable						
Window ID Description U-value* SHGC* SHGC lower limit SHGC upper	Custom roof v	vindows*						
Description U-value* SHGC lower limit SHGC upper					Substitution to	lerance ranges		
No Data Available	Window ID	Window	Maximum	01100*	ousofilation to			
	Window ID			SHGC*		SHGC upper limit		
	Window ID	Description		SHGC*		SHGC upper limit		

Roof window* schedule

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

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
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 ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.85		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-2	Cavity Brick	0.30		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-3	Cavity Brick	0.50		Foil reflective both sides of the Bulk Insulation R4	Yes

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 9, 12-16 Stuart Street , Warrawong , NSW , 2502



External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Hall	EW-1	2700	1090	SW	0	No
Bedroom 1	EW-2	2700	2300	NE	4200	No
Bedroom 1	EW-2	2700	3300	SE	600	Yes
Bedroom 1	EW-1	2700	3595	SW	0	Yes
Kitchen/Living	EW-2	2700	4195	SE	2900	Yes
Glazed Common	EW-3	2700	2900	SE	0	Yes
Bedroom 2	EW-1	2700	2800	SE	0	Yes
Bedroom 2	EW-1	2700	3700	SW	0	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	109.08	No Insulation
IW-002	Steel Stud Frame, Direct Fix Plasterboard	47.25	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Concrete Slab, Unit Below 200mm	6.45	None	No Insulation	Ceramic Tiles 8mm
Hall	Concrete Slab, Unit Below 200mm	7.38	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	11.74	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	25.39	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	11.80	None	No Insulation	Ceramic Tiles 8mm
Glazed Common	Concrete Slab, Unit Below 200mm	15.42	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	11.72	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]
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Hall	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Glazed Common	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed
Hall	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	900
Kitchen/Living	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

* Refer to glossary. Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 9, 12-16 Stuart Street , Warrawong , NSW , 2502



Appliance schedule

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

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

Cooling system

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

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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Glossary

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

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746500

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class Floor/all Floors Type

Unit 10, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by RGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 82.7 Unconditioned* 0.0 82.7 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 56 Mascot (Sydney Airport)



Accredited assessor

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

dean@greenview.net.au 8544 1683 DMN/13/1645

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

Assessor Accrediting Organisation

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE

16.7 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
Nodelled	13.8	2.9
oad limits	N/A	N/A

Features determining load limits

Floor Type	NUA.
(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=gZyfdWHZy When using either link, ensure you are visiting hstar.com.au



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

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

NCC Climate Zone 1 or 2:

Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



8.4 Star Rating as of 24 Feb 2025

······································					HOUSE
Certificate check	Approva	I Stage	Constru Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Survey	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					
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					

8.4 Star Rating as of 24 Feb 2025

HOUSE

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

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]
Entry	Daytime	15.89
Kitchen/Living	Kitchen/Living	38.15
Bath	Daytime	4.67
Bedroom 1	Bedroom	11.98
Bedroom 2	Bedroom	12.03

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
willdow iD	Description	U-value*	3666	SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W34	2400	2410	Sliding	45	SW	No
Kitchen/Living	ALM-003-01 A	W36	1500	2000	Awning	70	NW	No
Bedroom 1	ALM-003-01 A	W35	1500	1810	Awning	70	NW	No
Bedroom 2	ALM-003-01 A	W32	1500	1100	Awning	90	SW	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window	Maximum		Substitution to	itution 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 Avai	lable							

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 ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.50		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-2	Cavity Brick	0.30		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-3	Cavity Brick	0.85		Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4095	SW	3000	No
Kitchen/Living	EW-2	2700	4195	NW	700	Yes

0011746500 NatHERS Certificate

8.4 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 1	EW-2	2700	1100	SW	7200	No
Bedroom 1	EW-3	2700	3200	NW	500	Yes
Bedroom 2	EW-3	2700	3800	SW	300	Yes
Bedroom 2	EW-3	2700	2700	NW	4800	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Steel Stud Frame, Direct Fix Plasterboard	41.58	No insulation
IW-002	Cavity brick	88.02	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Concrete Slab, Unit Below 200mm	15.89	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	38.15	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	4.67	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	11.98	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	12.03	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]
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Entry	1	Exhaust Fans	300	Sealed

0011746500 NatHERS Certificate		8.4 Star Rating as of 24 Feb 2025			NATIONWIDE HIGHLY WALL
Location	Quantity	у Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	1	Exhaust Fans	300	Sealed	
Bath	1	Exhaust Fans	300	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

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.

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

ALC: NO

0011746500 NatHERS Certificate

8.4 Star Rating as of 24 Feb 2025



Hot water system

Appliance/ system type	Fuel type W	Hot Water	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load	
		CER Zone			lower limit	upper limit	[litres]	
No Data Available								
Pool/spa equipment								
Appliance/ system type		Fuel type		Minimum efficiency/ performance		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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Glossary

4500	
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. 0011746526

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 11, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*49.6Unconditioned*7.9Total57.5Garage0.0

Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreeEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDec

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

11.4 MJ/m²

The more stars

the more energy efficient

NATIONWIDE

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	3.0	8.4
oad limits	N/A	N/A

Features determining load limits

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

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

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



9.1 Star Rating as of 24 Feb 2025

-					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					

HOUSE

	Approva	I Stage	Construction Stage				
Certificate check	ecked	hority/ scked	ked	hority ecked	Other		
Continued	Assessor checked	Consent Authority Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other		
Additional NCC requirements for thermal performance (not 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	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	28.73
Entry	Daytime	8.92
Bath	Unconditioned	7.87
Bedroom 1	Bedroom	11.98

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-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	

Custom windows*

Window Maximum SHGC* ——		Substitution to	Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
No Data Avail	able				

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	W27	1500	2050	Awning	70	NW	No
Kitchen/Living	ALM-004-03 A	W23	2400	2410	Sliding	45	NE	No
Bath	ALM-004-03 A	W28	600	900	Sliding	45	NW	No
Bedroom 1	ALM-003-01 A	W24	1450	1100	Awning	90	NW	No

Roof window* type and performance value

Default roof windows*

Window ID	Window ID Description Husebut SHGC*		Substitution to	Substitution tolerance ranges		
WINGOW ID	Description	U-value*	51160	SHGC lower limit	SHGC upper limit	
No Data Available						



Custom roof windows*

Window ID Window Maximum	SHCC*	Substitution to	lerance ranges		
	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 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] Orientation	Outdoor shade	Diffuser	
No Data Available							

External door schedule

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

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0.85		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-2	Cavity Brick	0.50		Foil reflective both sides of the Bulk Insulation R4	Yes
EW-3	Cavity Brick	0.30		Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3900	NW	0	Yes
Kitchen/Living	EW-1	2700	3100	NE	4500	No

0011746526 NatHERS Certificate

9.1 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-2	2700	300	SW	0	No
Bath	EW-3	2700	2890	NW	3100	No
Bedroom 1	EW-3	2700	3200	NW	100	Yes
Bedroom 1	EW-3	2700	2000	NE	100	No
Bedroom 1	EW-3	2700	1000	SW	6800	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Steel Stud Frame, Direct Fix Plasterboard	28.08	No insulation
IW-002	Cavity brick	44.55	No Insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 200mm	28.73	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	8.92	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.87	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	11.98	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 Steel	Bulk Insulation R2.5	
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Entry	1	Exhaust Fans	300	Sealed

0011746526 NatHERS Certific	ate 9	9.1 Star Rating as of 24 Feb 2025			NATIONWIDE HOUSE
Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Bath	1	Exhaust Fans	300	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

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

		performance	capacity
Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
	Location	Location Fuel type	Location Fuel type efficiency/

......



Hot water system

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

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

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

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

Annual energy load the floor area modelled in the software for the purpose of the NaIHERS assessment. Note, this may not be consistent with the floor area in the design documents. Ceiling penetrations Energy required for hearing and cooling, based on standard occupancy assumptions. In some dictudes intures attached to the ceiling, including downights, vents, exhaust fans, range hoods, chinneys and flues. Excludes intures attached to the ceiling with small holes through the ceiling for winng, e.g. ceiling fans; pendant lights, and COP 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 garges. Custom windows windows listed in NaIHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating. Default windows windows intal are expresentative of a specific type of window product and whose properties have been derived by statistical 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 ABCB housing Provisions Standard). Exposure category - open terrain with no abstrictions below? terrain with no abstrictions below? Exposure category - open terrain with no abstrictions below? terrain with the obstructions below? Exposure category - open terrain wit	AFRC	Australian Fenestration Rating Council
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Curronitational circumstances it will include garages. Include the set of t	COP	Coefficient of performance
Outside 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 UEIGiency 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 ABCE Housing Provisions Standard). Entrance door the net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard). Exposure see exposure categories below. Exposure category – exposed terrain with no bestructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors). Exposure category – ponel terrain with numerous; closely spaced obstructions below 10m e.g. alows 3 floors). Exposure category – suburban terrain with numerous; closely spaced obstructions over 10 m e.g. alows 3 floors). Not actional shading feature The openability percentage or operable (moveable) area of doors or windows that is used in venilation calculations. Net zero home a home that cahleves a net zero energy value ² . Opening percentage the openability percentage or operable (moveable) area of doors or windows that is used in venilation	Conditioned	circumstances it will include garages.
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Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746542

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Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 12, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 69.8 Unconditioned* 0.0 Total 69.8 Garage 0.0 Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDeaBusiness nameGreEmaildeaPhone854Accreditation No.DMAssessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDec

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

10.7 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
lodelled	6.5	4.2
oad limits	N/A	N/A

Features determining load limits

L

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=juYTTTuTR . When using either link, ensure you are visiting hstar.com.au



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

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

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



9.2 Star Rating as of 24 Feb 2025

•					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>

9.2 Star Rating as of 24 Feb 2025

	Approva	al Stage	Constru Stage	ction	
Certificate check	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performa	nce (not included 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? Image: Imag

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	0	0					

'Additional notes' table below?	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	12.03
Entry	try Daytime 6.87	
Kitchen/Living	Kitchen/Living	30.54
Bath	Daytime	7.99
Bedroom 2	Bedroom	12.33

Window and glazed door type and performance

Default windows*

Window ID Window		Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	

Custom windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
willdow iD	Description	U-value*	3600	SHGC lower limit	SHGC upper limit
No Data Availa	able				

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-004-03 A	W27	800	1810	Sliding	45	SW	No
Kitchen/Living	ALM-004-03 A	W28	1500	1200	Sliding	45	SW	No
Kitchen/Living	ALM-004-03 A	W28	1500	2050	Sliding	45	NW	No
Kitchen/Living	ALM-004-03 A	W31	2400	2410	Sliding	45	NE	No
Bedroom 2	ALM-004-03 A	W25	1500	1810	Sliding	45	NW	No

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	lerance ranges	
WINGOW ID	Description	U-value*	3160	SHGC lower limit	SHGC upper limit
No Data Avail	able				



Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	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	lable							

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] 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 \	Bulk insulation	Reflective
ID	type	absorptance [[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

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	3395	SW	0	No
Bedroom 1	EW-1	2700	3595	SE	0	No
Kitchen/Living	EW-1	2700	2995	SW	0	Yes
Kitchen/Living	EW-1	2700	700	NW	4000	No

0011746542 NatHERS Certificate

9.2 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	
Kitchen/Living	EW-1	2700	4000	SW	700	No	
Kitchen/Living	EW-1	2700	4100	NW	0	Yes	
Kitchen/Living	EW-1	2700	3200	NE	3300	No	
Bedroom 2	EW-1	2700	3295	NW	4300	Yes	

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Steel Stud Frame, Direct Fix Plasterboard	40.77	No insulation
IW-002	Cavity brick	25.92	No Insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab, Unit Below 200mm	12.03	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	6.87	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	30.54	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.99	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	12.33	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]
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

0011746542 NatHERS Certificate		9.2 Star Rating as of 24 Feb 2025			
Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	HOUNDE
Bath	1	Exhaust Fans	300	Sealed	

Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	900
Kitchen/Living	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

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

ATTAC .



Hot water system

Appliance/ system type	Fuel type	Hot Minimum Water efficiency	Zone 3	Zone 3 Substitution tolerance ranges		Assessed daily load	
	CER Zone /STC	510	lower limit	upper limit	[litres]		
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimu efficienc performa	cy/	Recomm capac	
No Data Available							

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

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

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

	Australian Fenestration Rating Council
	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assassed 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	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 neating and cooling ducts.
СОР С	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.
	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 Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity nput
	This is your homes rating without solar or batteries.
d d	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).
	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.
	see exposure categories below.
	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
s	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).
	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.
	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
	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.
	a home that achieves a net zero energy value*.
	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value a	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 z	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the cone 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 c foil) ir	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides nsulative properties.
Roof window for s	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.
ž	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.
(SUGC) S	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 neat it transmits.
bits	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 b	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, out 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 th	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned a	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features p	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).
	device 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. 0011746427

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 13, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 77.8 Unconditioned* 0.0 Total 77.8 Garage 0.0 Exposure type Suburban NatHERS climate zone

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreeEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters NationalDeclaration of interestDec

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

The more stars

the more energy efficient

NATIONWIDE

7.3 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	2.7	4.6
oad limits	N/A	N/A

Features determining load limits

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



* Refer to glossary Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 13, 12-16 Stuart Street , Warrawong , NSW , 2502

About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

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

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



9.8 Star Rating as of 24 Feb 2025

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

<u>.</u>

9.8 Star Rating as of 24 Feb 2025

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

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]	
Entry	Daytime 12.77		
Bedroom 1	Bedroom	11.88	
Kitchen/Living	Kitchen/Living	33.75	
Bath	Daytime	7.53	
Bedroom 2	Bedroom	11.88	

Window and glazed door type and performance

Default windows*

Window ID	Window	/indow Maximum SHG		Substitution to	Substitution tolerance ranges	
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

Window ID	Window	Window Maximum Description U-value*		Substitution tolerance ranges		
	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-004-03 A	W41	1500	1810	Sliding	45	NE	No
Kitchen/Living	ALM-004-03 A	W39	2400	2410	Sliding	45	NW	No
Kitchen/Living	ALM-004-03 A	W40	1500	2050	Sliding	50	NE	No
Kitchen/Living	ALM-003-01 A	W42	1200	1100	Awning	90	NE	No
Bedroom 2	ALM-004-03 A	W32	1500	1810	Sliding	45	NW	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	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 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	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

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	3095	NE	300	Yes
Bedroom 1	EW-1	2700	700	SE	0	No
Kitchen/Living	EW-1	2700	1200	SW	3100	No
Kitchen/Living	EW-1	2700	4300	NW	2800	No

0011746427 NatHERS Certificate

9.8 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	7395	NE	0	Yes
Bedroom 2	EW-1	2700	3095	NW	4000	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	51.30	No Insulation
IW-002	Steel Stud Frame, Direct Fix Plasterboard	51.57	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Concrete Slab, Unit Below 200mm	12.77	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	11.88	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	33.75	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.53	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	11.88	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]
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed



Ceiling fans

Location	Quantity	Diameter [mm]
Bedroom 1	1	900
Kitchen/Living	1	900
Bedroom 2	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

Appliance schedule

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

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

Cooling system

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



Hot water system

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

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

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

are not quality assured.

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

Disclaimer

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

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

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

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

Glossary

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. 0011746435

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 14, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 53.8 Unconditioned* 0.0 Total 53.8 Garage 0.0 Exposure type Suburban NatHERS climate zone

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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



9.1 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Nodelled	5.1	4.1
oad limits	N/A	N/A

Features determining load limits

Floor Type	N/A
(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=BWKNzSRdU . When using either link, ensure you are visiting hstar.com.au



* Refer to glossary Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23) for Unit 14, 12-16 Stuart Street , Warrawong , NSW , 2502

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



9.4 Star Rating as of 24 Feb 2025

•					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>

9.4 Star Rating as of 24 Feb 2025

-					HOUSE	
	Approv	al Stage	Construction Stage			
Certificate check	checked	Authority/ checked	ked	Authority checked	Other	
Continued	Assessor ch	Consent Aut Surveyor ch	Builder checked	Consent Aut Surveyor cho	Occupancy/Other	
Additional NCC requirements for thermal performance (n	ot included in a	the NatHL	ERS asse	essment)	n	
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	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]
Bath	Daytime	7.58
Kitchen/Living	Kitchen/Living	30.99
Entry	Daytime	4.12
Bedroom 1	Bedroom	11.1

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	3666	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-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	W24	1500	2400	Awning	90	NE	No
Kitchen/Living	ALM-004-03 A	W33	2400	2410	Sliding	45	SE	No
Bedroom 1	ALM-004-03 A	n/a	850	1810	Sliding	45	NE	Yes

Roof window* type and performance value

Default roof windows*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WINGOW ID	Description	U-value*	31100	SHGC lower limit	SHGC upper limit	
No Data Availa	able					



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 Avai	lable				

Roof window* schedule

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

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

Skylight* schedule

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

External door schedule

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

External wall type

Wall	Wall	Solar	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3800	NE	400	Yes
Kitchen/Living	EW-1	2700	3800	SE	3600	No
Kitchen/Living	EW-1	2700	995	NE	3775	No
Bedroom 1	EW-1	2700	3195	NE	3725	Yes

0011746435 NatHERS Certificate

HOUSE

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 1	EW-1	2700	1600	SE	0	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	53.19	No Insulation
IW-002	Steel Stud Frame, Direct Fix Plasterboard	20.79	No insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Concrete Slab, Unit Below 200mm	7.58	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	30.99	None	No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	4.12	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	11.10	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]
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]	
Kitchen/Living	1	900	

0011746435 NatHERS Certificate	9.4 Star Rating as of 24 Feb 2025		HOUVE
Location	Quantity	Diameter [mm]	
Bedroom 1	1	900	

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

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 ficiency/ formance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel type	eff	inimum ficiency/ formance		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							[]

0011746435 NatHERS Certificate Pool/spa equipment	9.4 Star Rating as of 24 Feb 2025		HOU
Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

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

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

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

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

Glossary

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

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746468

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 15, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned*57.2Unconditioned*0.0Total57.2Garage0.0

Exposure type Suburban NatHERS climate zone 56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

on 17/6

Declaration completed: no conflicts

Greenview Consulting Pty Ltd

dean@greenview.net.au

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME

15.5 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	11.5	4.0		
oad limits	N/A	N/A		

Features determining load limits

Floor Type	NUA
(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=najEOrxpq . When using either link, ensure you are visiting hstar.com.au



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

- SF Suspended Floor (or a mixture of CSOG and SF) NA Not Applicable
- NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



8.6 Star Rating as of 24 Feb 2025

					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assess	Consen Survey	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					
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					

8.6 Star Rating as of 24 Feb 2025

HOUSE

	Approva	Il Stage	Constru Stage	HOUSE	
Certificate check	cked	ority/ cked	eq	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	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 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					
			4	1 K. C	Second and a

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

Additional notes



Room schedule

Room	Zone Type	Area [m ²]
Entry	Daytime	5.17
Kitchen/Living	Kitchen/Living	31.33
Bath	Daytime	7.63
Bedroom 1	Bedroom	13.06

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	otion U-value* 5		SHGC lower limit	SHGC upper limit
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -	4.3	0.53	0.50	0.56
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom windows*

Window ID	Window	v Maximum		Substitution tolerance ranges		
	Description	U-value*	SHGC*	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-004-03 A	W41	2400	2410	Sliding	45	NE	No
Kitchen/Living	ALM-003-01 A	W40	1500	900	Awning	90	SE	No
Kitchen/Living	ALM-003-01 A	W42	1500	900	Awning	90	SE	No
Kitchen/Living	ALM-003-01 A	W39	1500	900	Awning	90	SE	No
Bedroom 1	ALM-004-03 A	W38	1500	1810	Sliding	45	SE	No

Roof window* type and performance value

Default roof windows*

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



Custom roof windows*

Window ID	Window Maximum		SHCC*	Substitution tolerance 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	lable							

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] 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 \	Bulk insulation	Reflective
ID	type	absorptance [[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Entry	EW-1	2700	1790	NW	0	No
Kitchen/Living	EW-1	2700	895	NW	0	No
Kitchen/Living	EW-1	2700	3700	NE	2600	Yes
Kitchen/Living	EW-1	2700	3800	SE	500	Yes

0011746468 NatHERS Certificate

8.6 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	800	SW	5800	No
Kitchen/Living	EW-1	2700	2395	SE	1300	Yes
Bath	EW-1	2700	2995	SW	0	No
Bath	EW-1	2700	2595	NW	0	No
Bedroom 1	EW-1	2700	700	NE	8800	No
Bedroom 1	EW-1	2700	3400	SE	600	Yes
Bedroom 1	EW-1	2700	3895	SW	0	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Steel Stud Frame, Direct Fix Plasterboard	28.62	No insulation
IW-002	Cavity brick	14.58	No Insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Concrete Slab, Unit Below 200mm	5.17	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	31.33	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.63	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	13.06	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]
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	



Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bath	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

Appliance schedule

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

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

Cooling system

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

8.6 Star Rating as of 24 Feb 2025



Hot water system

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

Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

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Glossary

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Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. 0011746492

Generated on 24 Feb 2025 using BERS Pro v5.2.4 (3.23)

Property

Address

Lot/DP NCC class* Floor/all Floors Type Unit 16, 12-16 Stuart Street, Warrawong , NSW , 2502 Lot 10-12 DP 35004 2 G of 1 floors New Home

Plans

Main plan Prepared by BGYVW SARM Architects

Construction and environment

Assessed floor area [m2]*

Conditioned* 49.4 Unconditioned* 0.0 Total 49.4 Garage 0.0 Exposure type Suburban NatHERS climate zone

Greenview Consulting Pty Ltd

Declaration completed: no conflicts

dean@greenview.net.au

56 Mascot (Sydney Airport)



Accredited assessor

NameDealBusiness nameGreEmaildealPhone854Accreditation No.DMIAssessor Accrediting OrganisationDesign Matters National

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

Dean Gorman

8544 1683

DMN/13/1645

National Construction Code (NCC) requirements

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

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

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

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



NATIONWIDE HOUSE ENERGY RATING SCHEME

17.8 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	12.8	5.0
oad limits	N/A	N/A

Features determining load limits

м

L

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=DBfjtFMeh . When using either link, ensure you are visiting hstar.com.au



About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & Cooling Load Limits

Additional information

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

Setting Options:

Floor Type:

CSOG - Concrete Slab on Ground

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

NCC Climate Zone 1 or 2:

Yes

No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Energy use



Greenhouse gas emissions



Cost



8.3 Star Rating as of 24 Feb 2025

•					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					

HOUSE

0011746492 NatHERS Certificate8.3 Star Rating as of 24 Feb 2025					HOUSE	
	Approva	al Stage	Constru Stage	ction		
Certificate check 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		ERS asse			
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	ne 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 assess	ment)	n	1	
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add 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]
Entry	Daytime	2.84
Kitchen/Living	Kitchen/Living	27.27
Bath	Daytime	7.32
Bedroom 1	Bedroom	11.97

Window and glazed door type and performance

Default windows*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
	Description	U-value*	3666	SHGC lower limit	SHGC upper limit	
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain Iow-E -	4.3	0.53	0.50	0.56	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	

Custom windows*

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

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-004-03 A	W34	2400	2410	Sliding	45	SE	No
Kitchen/Living	ALM-003-01 A	W40	1500	900	Awning	90	SE	No
Bedroom 1	ALM-004-03 A	W38	1500	1810	Sliding	45	SE	No

Roof window* type and performance value

Default roof windows*

Window Maximum SHGC*		Substitution to	Substitution tolerance ranges			
WINGOW ID	Description	U-value*	31100	SHGC lower limit	SHGC upper limit	
No Data Availa	able					



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 Avai	lable				

Roof window* schedule

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

Skylight* type and performance

 Skylight ID
 Skylight description
 Skylight shaft reflectance

 No Data Available
 Volume
 Volum
 Volume
 Volume

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	 Bulk insulation	Reflective
ID	type	absorptance	[R-value]	wall wrap*
EW-1	Cavity Brick	0.50	Foil reflective both sides of the Bulk Insulation R4	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3095	NE	0	No
Kitchen/Living	EW-1	2700	4000	SE	2700	No
Kitchen/Living	EW-1	2700	500	SW	900	No
Kitchen/Living	EW-1	2700	2595	SE	300	Yes

0011746492 NatHERS Certificate

8.3 Star Rating as of 24 Feb 2025



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Bedroom 1	EW-1	2700	3000	NE	2600	No
Bedroom 1	EW-1	2700	3100	SE	300	Yes
Bedroom 1	EW-1	2700	2500	SW	0	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Cavity brick	38.34	No Insulation
IW-002	Steel Stud Frame, Direct Fix Plasterboard	26.19	No insulation

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Entry	Concrete Slab, Unit Below 200mm	2.84	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 200mm	27.27	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 200mm	7.32	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	11.97	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]
Entry	Plasterboard on Steel	Bulk Insulation R2.5	
Kitchen/Living	Plasterboard on Steel	Bulk Insulation R2.5	
Bath	Plasterboard on Steel	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Steel	Bulk Insulation R2.5	

Ceiling penetrations*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	1	Exhaust Fans	300	Sealed	
Bath	1	Exhaust Fans	300	Sealed	



Ceiling fans

Location	Quantity	Diameter [mm]
Kitchen/Living	1	900
Bedroom 1	1	900

Roof type

Construction	Added insulation	Solar	Roof shade
	[R-value]	absorptance	[colour]
Corrugated Iron Steel Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	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]
Ceiling		900	0.75	No
Roof		900	1.5	No
Internal Wall		600	0.75	No

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 ficiency/ formance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation	Fuel type	eff	inimum ïciency/ formance		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	8.3 Star Rating as of 24 Feb 2025		HOL
Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



Explanatory notes

About this report

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

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

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

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

Accredited assessors

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

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

are not quality assured.

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

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