# Nationwide House Energy Rating Scheme<sup>®</sup> Class 2 Summary NatHERS<sup>®</sup> Certificate No. 0009203240

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

### Property

Address

Lot/DP NatHERS Climate Zone Casino , NSW , 2470 Lot C,D,E DP 35927 9 Amberley

34-36 Light Street and 42 Walker Street



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



National Construction Code (NCC) requirements

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

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

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

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

### Thermal performance Star rating





R

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

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

# NCC heating and cooling maximum loads (MJ/m<sup>2</sup>/p.a.)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled block average	15.3	19.8
Maximum block limit	N/A	N/A

# Whole of Home performance rating

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

## Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m <sup>2</sup> /p.a.]	Cooling load (load limit) [MJ/m <sup>2</sup> /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
0008938292-02	1	27.0 (N/A)	11.8 (N/A)	38.8	8	0
0008938326-02	2	12.2 (N/A)	8.4 (N/A)	20.6	9.4	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 Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470 Page 2



### Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (load limit) [MJ/m <sup>2</sup> /p.a.]	Cooling load (load limit) [MJ/m <sup>2</sup> /p.a.]	Total load [MJ/m²/p.a.]	Star Rating	Whole of Home Rating
0008938359-02	3	6.4 (N/A)	10.2 (N/A)	16.7	9.8	0
0008938367-02	4	2.1 (N/A)	11.7 (N/A)	13.7	10	0
0008938250-02	5	5.7 (N/A)	7.2 (N/A)	12.8	10	0
0008938276-02	6	13.2 (N/A)	5.5 (N/A)	18.7	9.6	0
0008938300-02	7	2.9 (N/A)	8.6 (N/A)	11.5	10	0
0008938417-02	8	28.6 (N/A)	36.7 (N/A)	65.3	6.1	0
0008938334-02	9	22.0 (N/A)	35.9 (N/A)	57.9	6.6	0
0008938375-02	10	18.9 (N/A)	32.1 (N/A)	51.0	7.1	0
0008938268-02	11	29.4 (N/A)	33.4 (N/A)	62.8	6.3	0
0008938284-02	12	12.0 (N/A)	22.4 (N/A)	34.4	8.3	0
0008938318-01	13	22.6 (N/A)	24.0 (N/A)	46.6	7.4	0
0008938342-02	14	10.9 (N/A)	28.8 (N/A)	39.7	7.9	0

# **Explanatory notes**

### About this ratings

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

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

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

### **Accredited Assessors**

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

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

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

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

### Disclaimer

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

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

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



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

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# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938292-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

### Property

### Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

#### Assessed floor area [m2]\* Conditioned\* 64.5 Unconditioned\* 0.0 64.5 Total

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 1, 34-36 Light Street and 42 Walker Street,



Garage

### Accredited assessor

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

0.0

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

### National Construction Code (NCC) requirements

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

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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

# 38.9 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	27.0	11.8
oad limits	N/A	N/A

### Features determining load limits

L

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

## Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

### Verification

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\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 1, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470

### About the ratings

### Thermal performance rating

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

### Whole of Home performance rating

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

### Heating & Cooling Load Limits

#### Additional information

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

### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

# Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

# Predicted Whole of Home annual impact by appliance

### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 1, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

### 8 Star Rating as of 29 Jan 2024

Certificate check	Approva	l Stage	Constru 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.	Assess	Conser Survey	Builder	Conser 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					



0008938292-02 NatHERS Certificate 8 Star Rating as of 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	necked	thority/ iecked	checked	thority lecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder cheo	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu-	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asses	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add but are not limited to: condensation, structural and fire safety requirements and any st requirements.					

Additional notes



### Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	29.67
Hall	Daytime	6.14
Bedroom 1	Bedroom	11.24
Bedroom 2	Bedroom	10.48
Bathroom	Daytime	6.99
Stair 3	Glazed Common Area	20.39

# Window and glazed door type and performance

### Default windows\*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges			
window iD	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit		
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60		
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74		

### Custom windows\*

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

# Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	W3	2400	2400	Awning	45	W	No
Kitchen/Living	ALM-001-01 A	W2	2400	970	Awning	45	W	No
Kitchen/Living	ALM-001-01 A	W14	1200	970	Awning	90	S	No
Kitchen/Living	ALM-001-01 A	W7	1200	1570	Awning	90	S	No
Bedroom 1	ALM-001-01 A	W16	1200	1570	Awning	90	E	No
Bedroom 2	ALM-001-01 A	W17	1200	1570	Awning	90	E	No
Bedroom 2	ALM-001-01 A	W18	1200	730	Awning	90	S	No
Stair 3	ALM-002-01 A	W1	880	970	Awning	00	W	No
Stair 3	ALM-001-01 A	W11	2340	920	Awning	90	W	No
Stair 3	ALM-001-01 A	W12	2400	500	Awning	45	W	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 1, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938292-02 NatHERS Certificate 8 Star Rating as o				<b>s of</b> 29 Jan 2024				
Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Stair 3	ALM-001-01 A	W10	2340	920	Awning	90	E	No
Stair 3	ALM-001-01 A	W9	2400	600	Awning	45	E	No

# Roof window\* type and performance value

### Default roof windows\*

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

### Custom roof windows\*

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

# Roof window\* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data 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 <sup>2</sup> ] 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		Bulk Insulation R0.7	No
EW-2	Metal Clad Timber Stud Frame Direct Fix	0		Bulk Insulation R2.5	No

# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4445	W	2650	Yes
Kitchen/Living	EW-1	2700	1200	E	0	No
Kitchen/Living	EW-1	2700	900	S	0	No
Kitchen/Living	EW-1	1200	1000	S	0	Yes
Kitchen/Living	EW-1	1501	1000	S	0	No
Kitchen/Living	EW-1	2700	2000	S	0	No
Kitchen/Living	EW-1	1200	1700	S	0	Yes
Kitchen/Living	EW-1	1501	1700	S	0	No
Kitchen/Living	EW-1	2700	1800	S	0	No
Bedroom 1	EW-1	2700	3945	Ν	0	No
Bedroom 1	EW-1	2700	600	E	0	No
Bedroom 1	EW-1	1200	1600	E	0	Yes
Bedroom 1	EW-1	1501	1600	E	0	No
Bedroom 1	EW-1	2700	945	E	0	No
Bedroom 2	EW-1	2700	695	E	0	No
Bedroom 2	EW-1	1200	1650	E	0	Yes
Bedroom 2	EW-1	1501	1650	E	0	No
Bedroom 2	EW-1	1500	900	E	0	No
Bedroom 2	EW-1	1200	900	E	0	No
Bedroom 2	EW-1	2700	2100	S	0	No
Bedroom 2	EW-1	1200	750	S	0	Yes
Bedroom 2	EW-1	1501	750	S	0	No
Bedroom 2	EW-1	2700	695	S	0	No
Stair 3	EW-1	2700	5245	W	0	Yes

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 1, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938292-02 NatHERS Certificate 8 Star Ratir

8 Star Rating as of 29 Jan 2024

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]	CORT FORM A 2000
Stair 3	EW-2	2700	2045	E	1400	Yes	

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Single Skin Brick	62.10	No insulation
IW-003	Cavity brick	0.00	No Insulation

# Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	29.67	None	No Insulation	Ceramic Tiles 8mm
Hall	Concrete Slab on Ground 100mm	6.14	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	11.24	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	10.48	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	6.99	None	No Insulation	Ceramic Tiles 8mm
Stair 3	Concrete Slab on Ground 100mm	20.39	None	No Insulation	Ceramic Tiles 8mm

# Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Hall	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 2	Concrete, Plasterboard with Timber Frame	No insulation	
Bathroom	Concrete, Plasterboard with Timber Frame	No insulation	
Stair 3	Concrete, Plasterboard with Timber Frame	No insulation	



# **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	13	Downlights - LED	150	Sealed	
Kitchen/Living	13	Exhaust Fans	150	Sealed	
Hall	2	Downlights - LED	150	Sealed	
Bedroom 1	5	Downlights - LED	150	Sealed	
Bedroom 2	4	Downlights - LED	150	Sealed	
Bathroom	2	Downlights - LED	150	Sealed	
Bathroom	2	Exhaust Fans	150	Sealed	

# **Ceiling** fans

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

# Roof type

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

## Thermal bridging schedule for steel frame elements

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

# Appliance schedule

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

Note: A flat assumption of 5W/m<sup>2</sup> 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 Fi	uel type	eff	nimum iciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water	Minimum efficiency	Zone 3		ibstitution e ranges	Assessed daily load
	51	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							

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 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 in the design documents.           Colling penetrations         features that require a penetration to the calling, including downlights, vents, exhaust fans, range hoods, chinneves and flues. Exhaustates futures at the calling with small holes through the calling for wiring, e.g. calling fans, pendari lights, and conditioned           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 grages.           Custom windows         windows fleted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating 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 now much cooling can be achieved by an air conditioner for a single KWh of electricity fund in the dosign or batteries.           Entrance door         these signify ventiliation benefits in the modelling log tort on limited in costs to the building user, the environment and energy networks (as there a callopoids below).           Exposure category – exposed         terrain with numerous, closely paced obstructions below 10% obstructions bel	AFRC	Australian Fenestration Rating Council
Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Ceiling penetrations         Features that require a penetration to the coiling, including downlights, verts, exhaust fans, range hoods, chimneys and flues. Evolutes flutwes attached to the ceiling with an all hoes intrough the cailing for wiring, e.g. ceiling fans, bundard (bits, software).           COP         Coefficient of performance         a converting with a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         Windows, letch in NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Schemer) rating.           Default windows         microsoft in a vertex personative of a specific type of window product and whose properties have been derived by statistical microsoft in a cossist of the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Energy value         This is your homes rating without solar or batteries.           Energy value         The encores to society including software and must not be modelied as a door when opening to a minimally wentil as down and the ABCB Housing Provisions Standard).           Exposure category - poent         series any software and the assessment. Note, distributions are a similar height e.g. casslands with few well scattered obstructions below 100, farmalnad with scattered scheet (slight) wegetated bushi holds, e.g. divadid unit (e.g. daved 3 floocs), errorshang o		M. A Contract of the second seco
Geling penetrations         [satures that require a penetration to the celling, including downlights, exhaust fans, range hoods, chinneys and flues, backlight and the schling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the c	<u> </u>	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         Windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         Windows 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 selection         Energy selection         Energy selection           Energy value         The is voit to esciently including, but not limited to costs to the building user, the environment and energy networks (as defined in he ABCB Housing Provisions Standard).           Exposure category – exposed         Iterain with no obstructions as a Standard).         Exposure category – protected         terrain with no obstructions as a similar height e.g. grasslands with few well scattered obstructons below 10m, farmland with scattered desk. lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered desk, lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered desk, lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered desk, lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered obstructions and a sindex figure and assoches y spaced obstructions now to esolicati a	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
Continuined         circumstances it will include garages.           Custom windows         windows listed in NaHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical provides.           ER         Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category - exposed         these signify ventilation beenefits in the modelling software and must not be modelled as a door whon opening to a minimally ventilated corridor in a Class 2 building.           Exposure category - protected         terrain with numerous, closely spaced obstructions beiow Unit, seguitation bousing, heavity vegetated bushland areas.           Exposure category - protected         terrain with numerous, closely spaced obstructions beiow Unit, seguitation areas.           Exposure category - protected         terrain with numerous, closely spaced obstructions beion Unit.           National Construction Code (NCC) Class 1, 20 4 buildings or operate (norwable) area of doors or windows that is used in ventilation calculations.           National Construction Code (NCC) Class 1, 20 4 buildings or operate (norwable) area of doors or windows that is used in ventilation calculations.           Reflective wr	COP	Coefficient of performance
Clusterin windows         Scheme) 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.           EFR         Energy 2Fficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input.           Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure         see exposure category exposed         terrain with no bestructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usualy above 10 floors).           Exposure category – portected         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usualy above 10 floors).           Exposure category – portected         terrain with numerous; closely spaced obstructions below 10m e.g. above 3 floors).           Exposure category – suburban         terrain with numerous; closely spaced obstructions e.g. analysing a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings the the ritorian with exposure models NCC Class 1, 2 or 4 buildings and attached Class 10 ab buildings. Definitions can be found at www.abcb gov.au.           Note tor home         a home that achieves an ext zero energy value?           Opening percentage         the openability percenta	Conditioned	circumstances it will include garages.
Detail windows         methods.           EER         Energy use         This is your homes rating without solar or batteries.           Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard).           Entrance door         these signify ventilation banefits in the modelling software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally the obstructions e g. fall grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – portected         terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas.           Horizontal shading feature         Provisonal shading, the building in the horizontal plane, e.g. eaves, verandans, pergolas, carports, or overhangs or balconles more as hading by their function and use, and assigns a classification code. NatHERS to have models NCC Class 1, 2 or 4 buildings and attached Class 10 abuildings. Definitions cane be found at www.abcb.gov.au. <tr< th=""><th>Custom windows</th><th></th></tr<>	Custom windows	
LLK         input <sup>T</sup> Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Entrance door         these signify vertilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with no obstructions e.g. and grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m.e.g. city and industrial areas.           Provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentent that is recommended by Nati-ERS to achieve the desired comfort on dillos.           Provisional value         read avis ton repersent an actual value. For ex	Default windows	
Energy value         The net cost is 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         The net cost is 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 = exposure categories below.         Exposure category = open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category = open         terrain with no work category = exposed abstructions below 10m e.g. suburban housing, heavily vegetated bush looks, elevated units (e.g. above 3 floors).           Exposure category = protected         terrain with numerous, closely spaced obstructions over 10 m e.g. clusvor 3 floors).           Exposure category = suburban housing feature         terrain with numerous, closely spaced obstructions over 10 m e.g. clussification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abcl. gov.au.           National Construction Code (NCC) Class         the NCC groups buildings and attached Class 10 buildings. Definitions can be found at www.abcl. gov.au.           Recommended capacity         the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the na selection sizing should be contimed by a suitably qualified person is	EER	
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 category – exposed         terrain with no obstructions of a fair grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions of a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, effevated units (e.g. above 3 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10m 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 XCC 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 zoro home         a home that achieves a net zero energy value".           Provisional value         or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified and the does not perseent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional value of medium and with sit tore cor zones serviced. This is a recommendator hou the final sel	Energy use	
Link are used         ventilated condor         ventilated condor           Exposure         see exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions set as inflar height e.g. grasslands with few well scattered shstructions below 10m, farmland with scattered sheat units (e.g. above 3 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Notizonal Shading feature         provides shading to the buildings in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           NtCC) Class         1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abots.gov.au.           Nte zero home         a home that achieves a net zero energy value <sup>6</sup> .           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 or metage or parable (moveable) area of doors or windows that is used in ventilation calculations.           Reflective wrap (also known as cord lingh) for NatHERS t	Energy value	
Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10m e.g. city and industrial areas.           Provisonal 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           Opening percentage         the once perable (moveshiel) area of doors or windows that is used in ventilation calculations.           Provisional value         a home that achieves a net zero energy value*.           Provisional value         a nassumed 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 on the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as for light) for NatHERS this is typically an operable (moved) is out solutes eaves. <th>_</th> <th>ventilated corridor in a Class 2 building.</th>	_	ventilated corridor in a Class 2 building.
Exposure category – open         terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions below 10m 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           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1.2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abc.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveabel) area of doors or windows that is used in ventilation calculations.           an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value         a provisional value           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 ores serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified splate area splate to walls, profes and will walls, but excludes eaves.           Stof window         for NatHERS this is		
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 below 10m e.g. suburban housing, heavily vegetated bushland areas.         National Construction Code (NCC) Class       terrain with numerous, closely spaced obstructions over 10 m e.g. exity and industrial areas.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (NCC) Class         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 cullined in the NatHERS technical Note and a 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 confirmed by a suitably qualified person.         Reflective wrap (also known as foll)       the apperties.         Roof window       for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at celling level.         Syllight (also known as roof lights) for NatHERS this is typically a moulded unit w	Exposure category – exposed	
Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies (NCC) Class           National Construction Code (NCC) Class         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (NCC) Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.acbc.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 model. Acceptable provisional values are outlined in the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the provides value of miss are commendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as foll)         for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Stros		scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies           National Construction Code (NCC) Class         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value of medium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         the 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 includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically an operable window (i.e. can be opened), will have a diffuser at ceiling level.           Store         Small-scale Technology Certificates, certificates created by the Great radiation admitted through a window, but directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between	<u>8</u> 21	
National Construction Code (NCC) Class       from upper levels.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.         Net zero home       a home that achieves a net zero energy value*.         Opening percentage       the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS technical Note and can be found at www.nathers.gov.au         Recommended capacity foril, sis 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.         Shading features       includes neighbouring buildings, fonces, and wing walls, but excludes eaves.         Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at celling level.         Solar heat gain coefficient SHAC()       the fraction of incident solar radiation admitted through a window, both directly trans	Exposure category – suburban	
Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         This is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as 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 (mode) (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 ex		from upper levels.
Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         The capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as foll)         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           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.           Stolar heat gain coefficient (SHGC)         the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subas part of the Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bo	(NCC) Class	
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 recommended by NatHERS to achieve the desired comfort conditions in the insulative properties.         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.         Stors       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)         are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, such as timber battens greater than or equal to 2.0 that must separate the metal frame from the cladding. This		
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       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)         U-value       the rate	Opening percentage	
Recommended capacity       zone or zone's serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.         Reflective wrap (also known as foil)       can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.         Roof window       for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.         Shading features       includes neighbouring buildings, fences, and wing walls, but excludes eaves.         Skylight (also known as roof lights)       for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.         Solar heat gain coefficient (SHGC)       the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.         STCs       Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER)         are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks         U-value       the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.         u-value       the rate of hea	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
foil)       insulativé 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)         u-value       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 s	Recommended capacity	zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
Shading features       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 (wing walls), hences, other buildings, vegetation (protected or listed heritage trees).         window shading device		
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), fonces, other buildings, vegetation (protected or listed heritage trees).         Window shading device       device fixed to windows that provides shading e.g. window awinings or screens but excludes horizontal* or v	Roof window	space, and generally does not have a diffuser.
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) 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. 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 building, 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		
StrCs       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       privides shading to the building (wing walls), fences, other building, 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	Skylight (also known as roof lights	
Original         bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) <sup>1</sup> 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 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 building, 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		subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
Inermal breaks         but is not limited to, materials such as timper 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 building, 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	STCs	bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
Unconditioned         a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.           Vertical shading features         provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).           Window shading device         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Thermal breaks	but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such
Vertical shading features         provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).           Window shading device         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Window shading device         Window shading device           Window shading device         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938326-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

### Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

### Assessed floor area [m2]\*

Conditioned\* 51.2 0.0 Unconditioned\* Total 51.2 Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 2, 34-36 Light Street and 42 Walker Street,



### Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

# 20.6 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Adelled	12.2	8.4
oad limits	N/A	N/A

### Features determining load limits

N/A
N/P
No
No
No

## Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

### Verification

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



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 2, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470



### Thermal performance rating

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

### Whole of Home performance rating

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

### **Heating & Cooling Load Limits**

#### Additional information

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

### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

# Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

# Predicted Whole of Home annual impact by appliance

### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 2, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

### 9.4 Star Rating as of 29 Jan 2024

					HOUSE
Certificate check	Approva	I Stage	Constru Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	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	Conser Survey	Builder	Conser 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					

0008938326-02 NatHERS Certificate 9.4 Star Rating as of 29 Jan 2024					HOUSE
	Approva	I Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e performa	ance asses	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	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			ñ	ñ	

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

### Additional notes



### Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	28.4
Entry Hall	Daytime	5.26
Bedroom 1	Bedroom	10.7
Bathroom	Daytime	6.88
Stair 3	Glazed Common Area	20.13

# Window and glazed door type and performance

### Default windows\*

Window ID	Window	ow Maximum		Substitution tolerance ranges		
	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

### Custom windows\*

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

## Window and glazed door schedule

ALM-002-01 A ALM-001-01 A	W2	2400	0400				
ALM-001-01 A			2400	Awning	45	W	No
	W3	2340	920	Awning	90	E	No
ALM-001-01 A	W10	1200	1090	Awning	90	E	No
ALM-001-01 A	W11	1200	1570	Awning	90	E	No
ALM-001-01 A	W6	2340	920	Awning	90	E	No
ALM-001-01 A	W5	2400	600	Awning	45	E	No
ALM-001-01 A	W7	2340	920	Awning	90	W	No
ALM-001-01 A	W8	2400	500	Awning	45	W	No
ALM-002-01 A	W9	700	980	Awning	00	W	No
	ALM-001-01 A ALM-001-01 A ALM-001-01 A ALM-001-01 A ALM-001-01 A	ALM-001-01 A       W11         ALM-001-01 A       W6         ALM-001-01 A       W5         ALM-001-01 A       W7         ALM-001-01 A       W8	ALM-001-01 A       W11       1200         ALM-001-01 A       W6       2340         ALM-001-01 A       W5       2400         ALM-001-01 A       W7       2340         ALM-001-01 A       W8       2400	ALM-001-01 AW1112001570ALM-001-01 AW62340920ALM-001-01 AW52400600ALM-001-01 AW72340920ALM-001-01 AW82400500	ALM-001-01 A       W11       1200       1570       Awning         ALM-001-01 A       W6       2340       920       Awning         ALM-001-01 A       W5       2400       600       Awning         ALM-001-01 A       W7       2340       920       Awning         ALM-001-01 A       W7       2340       920       Awning         ALM-001-01 A       W8       2400       500       Awning	ALM-001-01 A       W11       1200       1570       Awning       90         ALM-001-01 A       W6       2340       920       Awning       90         ALM-001-01 A       W6       2340       920       Awning       90         ALM-001-01 A       W5       2400       600       Awning       45         ALM-001-01 A       W7       2340       920       Awning       90         ALM-001-01 A       W8       2400       500       Awning       45	ALM-001-01 A       W11       1200       1570       Awning       90       E         ALM-001-01 A       W6       2340       920       Awning       90       E         ALM-001-01 A       W5       2400       600       Awning       45       E         ALM-001-01 A       W7       2340       920       Awning       90       W         ALM-001-01 A       W7       2340       920       Awning       90       W         ALM-001-01 A       W8       2400       500       Awning       45       W

# HOUSE

## Roof window\* type and performance value

### Default roof windows\*

Window ID Window		Maximum	SHGC*	Substitution tolerance ranges			
	Description U-value*		SHGC lower limit	SHGC upper limit			
No Data Avai	able						
Custom roof v	vindows*						
Window ID	Window	Maximum	0110.0*	Substitution to	erance ranges		
Window ID	Window Description	Maximum U-value*	SHGC*	Substitution to SHGC lower limit	blerance ranges SHGC upper limit		

### Roof window\* schedule

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

# Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

# Skylight\* schedule

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

### External door schedule

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

# External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Cavity Brick	0	Bulk Insulation R0.7	No
EW-2 Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3645	W	3000	Yes
Kitchen/Living	EW-1	2700	600	Ν	3200	No
Kitchen/Living	EW-1	2700	1945	E	1400	No
Kitchen/Living	EW-1	1200	1100	E	0	Yes
Kitchen/Living	EW-1	1501	1100	E	0	No
Kitchen/Living	EW-1	2700	600	E	0	No
Kitchen/Living	EW-1	2700	2000	S	2200	No
Bedroom 1	EW-1	2700	3745	Ν	0	No
Bedroom 1	EW-1	2700	850	Е	0	No
Bedroom 1	EW-1	1200	1600	Е	0	Yes
Bedroom 1	EW-1	1501	1600	Е	0	No
Bedroom 1	EW-1	2700	750	Е	0	No
Bedroom 1	EW-1	2700	2150	S	1300	No
Stair 3	EW-2	2700	2145	E	1300	Yes
Stair 3	EW-1	2700	5500	W	0	Yes
Stair 3	EW-1	2700	200	Ν	3700	No

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Cavity brick	46.04	No Insulation
IW-002	Single Skin Brick	43.61	No insulation

# Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	28.40	None	No Insulation	Ceramic Tiles 8mm
Entry Hall	Concrete Slab on Ground 100mm	5.26	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	10.70	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	6.88	None	No Insulation	Ceramic Tiles 8mm

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 2, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Stair 3	Concrete Slab on Ground 100mm	20.13	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Concrete, Plasterboard with Timber Frame	No insulation	
Entry Hall	Concrete, Plasterboard with Timber Frame	No insulation	
Bedroom 1	Concrete, Plasterboard with Timber Frame	No insulation	
Bathroom	Concrete, Plasterboard with Timber Frame	No insulation	
Stair 3	Concrete, Plasterboard with Timber Frame	No insulation	

## **Ceiling** penetrations\*

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

# **Ceiling** fans

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

# Roof type

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



# Thermal bridging schedule for steel frame elements

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

Appliance schedule

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

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

### Cooling system

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

# **Onsite Renewable Energy** Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		



### **Battery** Schedule

System Type

Size [Battery Storage Capacity]

No Data Available



### Explanatory notes

### About this report

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

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

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

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

#### Accredited assessors

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

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

are not quality assured.

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

#### Disclaimer

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

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

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

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

### Glossary

Annual energy load         The predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.           Assessed floor area         the floor area in the design documents.           Colling penetrations         features that require a penetration to the calling, including downlights, vents, exhaust fans, range hoods, chinneves and flues. Exhaustates futures at the calling with small holes through the calling for wiring, e.g. calling fans, pendari lights, and conditioned           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 grages.           Custom windows         windows fleted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating 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 now much cooling can be achieved by an air conditioner for a single KWh of electricity fund in the dosign or batteries.           Entrance door         these signify ventiliation benefits in the modelling log tort on limited in costs to the building user, the environment and energy networks (as there a callopoids below).           Exposure category – exposed         terrain with numerous, closely paced obstructions below 10% obstructions bel	AFRC	Australian Fenestration Rating Council
Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Ceiling penetrations         Features that require a penetration to the coiling, including downlights, verts, exhaust fans, range hoods, chimneys and flues. Evolutes flutwes attached to the ceiling with an all hoes intrough the cailing for wiring, e.g. ceiling fans, bundard (bits, software).           COP         Coefficient of performance         a converting with a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         Windows, letch in NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Schemer) rating.           Default windows         microsoft in a vertex personative of a specific type of window product and whose properties have been derived by statistical microsoft in a cossist of the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Energy value         This is your homes rating without solar or batteries.           Energy value         The encores to society including software and must not be modelied as a door when opening to a minimally wentil as down and the ABCB Housing Provisions Standard).           Exposure category - poent         series any software and the assessment. Note, distributions are a similar height e.g. casslands with few well scattered obstructions below 100, farmalnad with scattered scheet (slight) wegetated bushi holds, e.g. divadid unit (e.g. daved 3 floocs), errorshang o		M. A Contract of the second seco
Geling penetrations         [satures that require a penetration to the celling, including downlights, exhaust fans, range hoods, chinneys and flues, backlight and the schling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the celling for wining, e.g. celling fans, pendant lights, and the c	<u> </u>	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         Windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         Windows 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 selection         Energy selection         Energy selection           Energy value         The is voit to esciently including, but not limited to costs to the building user, the environment and energy networks (as defined in he ABCB Housing Provisions Standard).           Exposure category – exposed         Iterain with no obstructions as a Standard).         Exposure category – protected         terrain with no obstructions as a similar height e.g. grasslands with few well scattered obstructons below 10m, farmland with scattered desk. lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered desk, lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered desk, lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered desk, lightly vegetated bush holeks, elevide well scattered obstructions below 10m, farmland with scattered obstructions and a sindex figure and assoches y spaced obstructions now to esolicati a	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
Continuined         circumstances it will include garages.           Custom windows         windows listed in NaHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical provides.           ER         Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category - exposed         these signify ventilation beenefits in the modelling software and must not be modelled as a door whon opening to a minimally ventilated corridor in a Class 2 building.           Exposure category - protected         terrain with numerous, closely spaced obstructions beiow Unit, seguitation bousing, heavity vegetated bushland areas.           Exposure category - protected         terrain with numerous, closely spaced obstructions beiow Unit, seguitation areas.           Exposure category - protected         terrain with numerous, closely spaced obstructions beion Unit.           National Construction Code (NCC) Class 1, 20 4 buildings or operate (norwable) area of doors or windows that is used in ventilation calculations.           National Construction Code (NCC) Class 1, 20 4 buildings or operate (norwable) area of doors or windows that is used in ventilation calculations.           Reflective wr	COP	Coefficient of performance
Clusterin windows         Scheme) 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.           EFR         Energy 2Fficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input.           Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure         see exposure category exposed         terrain with no bestructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usualy above 10 floors).           Exposure category – portected         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usualy above 10 floors).           Exposure category – portected         terrain with numerous; closely spaced obstructions below 10m e.g. above 3 floors).           Exposure category – suburban         terrain with numerous; closely spaced obstructions e.g. analysing a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings the the ritorian with exposure models NCC Class 1, 2 or 4 buildings and attached Class 10 ab buildings. Definitions can be found at www.abcb gov.au.           Note tor home         a home that achieves an ext zero energy value?           Opening percentage         the openability percenta	Conditioned	circumstances it will include garages.
Detail windows         methods.           EER         Energy use         This is your homes rating without solar or batteries.           Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard).           Entrance door         these signify ventilation banefits in the modelling software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase(corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally ventilase corridor in a Cast's building, software and must not be modelled as a door when opening to a minimally the obstructions e g. fall grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – portected         terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas.           Horizontal shading feature         Provisonal shading, the building in the horizontal plane, e.g. eaves, verandans, pergolas, carports, or overhangs or balconles more as hading by their function and use, and assigns a classification code. NatHERS to have models NCC Class 1, 2 or 4 buildings and attached Class 10 abuildings. Definitions cane be found at www.abcb.gov.au. <tr< th=""><th>Custom windows</th><th></th></tr<>	Custom windows	
LLK         input <sup>T</sup> Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Entrance door         these signify vertilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with no obstructions e.g. and grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m.e.g. city and industrial areas.           Provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentent that is recommended by Nati-ERS to achieve the desired comfort on dillos.           Provisional value         read avis ton repersent an actual value. For ex	Default windows	
Energy value         The net cost is 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         The net cost is 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 = exposure categories below.         Exposure category = open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category = open         terrain with no work category = exposed abstructions below 10m e.g. suburban housing, heavily vegetated bush looks, elevated units (e.g. above 3 floors).           Exposure category = protected         terrain with numerous, closely spaced obstructions over 10 m e.g. clusvor 3 floors).           Exposure category = suburban housing feature         terrain with numerous, closely spaced obstructions over 10 m e.g. clussification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abcl. gov.au.           National Construction Code (NCC) Class         the NCC groups buildings and attached Class 10 buildings. Definitions can be found at www.abcl. gov.au.           Recommended capacity         the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the na selection sizing should be contimed by a suitably qualified person is	EER	
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Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10m e.g. city and industrial areas.           Provisonal 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           Opening percentage         the once perable (moveshiel) area of doors or windows that is used in ventilation calculations.           Provisional value         a home that achieves a net zero energy value*.           Provisional value         a nassumed 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 on the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as for light) for NatHERS this is typically an operable (moved) is out solutes eaves. <th>_</th> <th>ventilated corridor in a Class 2 building.</th>	_	ventilated corridor in a Class 2 building.
Exposure category – open         terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions below 10m 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           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1.2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abc.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveabel) area of doors or windows that is used in ventilation calculations.           an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value         a provisional value           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 ores serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified splate area splate to walls, profes and will walls, but excludes eaves.           Stof window         for NatHERS this is		
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 below 10m e.g. suburban housing, heavily vegetated bushland areas.         National Construction Code (NCC) Class       terrain with numerous, closely spaced obstructions over 10 m e.g. exity and industrial areas.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (NCC) Class         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 cullined in the NatHERS technical Note and a 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 confirmed by a suitably qualified person.         Reflective wrap (also known as foll)       the apperties.         Roof window       for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at celling level.         Syllight (also known as roof lights) for NatHERS this is typically a moulded unit w	Exposure category – exposed	
Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies (NCC) Class           National Construction Code (NCC) Class         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (NCC) Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.acbc.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 model. Acceptable provisional values are outlined in the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the provides value of miss are commendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as foll)         for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Stros		scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies           National Construction Code (NCC) Class         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value of medium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         the 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 includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically an operable window (i.e. can be opened), will have a diffuser at ceiling level.           Store         Small-scale Technology Certificates, certificates created by the Great radiation admitted through a window, but directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between	<u>8</u> 21	
National Construction Code (NCC) Class       from upper levels.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.         Net zero home       a home that achieves a net zero energy value*.         Opening percentage       the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS technical Note and can be found at www.nathers.gov.au         Recommended capacity foril, sis 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.         Shading features       includes neighbouring buildings, fonces, and wing walls, but excludes eaves.         Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at celling level.         Solar heat gain coefficient SHAC()       the fraction of incident solar radiation admitted through a window, both directly trans	Exposure category – suburban	
Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         This is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as 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 (mode) (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 ex		from upper levels.
Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         The capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as foll)         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           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.           Stolar heat gain coefficient (SHGC)         the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subas part of the Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bo	(NCC) Class	
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 recommended by NatHERS to achieve the desired comfort conditions in the insulative properties.         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.         Stors       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)         are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, such as timber battens greater than or equal to 2.0 that must separate the metal frame from the cladding. This		
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       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)         U-value       the rate	Opening percentage	
Recommended capacity       zone or zone's serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.         Reflective wrap (also known as foil)       can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.         Roof window       for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.         Shading features       includes neighbouring buildings, fences, and wing walls, but excludes eaves.         Skylight (also known as roof lights)       for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.         Solar heat gain coefficient (SHGC)       the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.         STCs       Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER)         are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks         U-value       the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.         u-value       the rate of hea	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
foil)       insulativé 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)         u-value       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 s	Recommended capacity	zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
Shading features       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 (wing walls), hences, other buildings, vegetation (protected or listed heritage trees).         window shading device		
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), fonces, other buildings, vegetation (protected or listed heritage trees).         Window shading device       device fixed to windows that provides shading e.g. window awinings or screens but excludes horizontal* or v	Roof window	space, and generally does not have a diffuser.
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) 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. 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 building, 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		
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Original         bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) <sup>1</sup> 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 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 building, 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		subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
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Window shading device         Window shading device           Window shading device         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938359-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

### Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

# Assessed floor area [m2]\*

Conditioned\* 66.4 Unconditioned\* 0.0 66.4 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 3, 34-36 Light Street and 42 Walker Street,



### Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

### National Construction Code (NCC) requirements

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

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

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.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/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	6.4	10.2
oad limits	N/A	N/A

### Features determining load limits

Floor Type	N/A
(lowest conditioned area)	1.00
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=phHMQBxxH . When using either link, ensure you are visiting hstar.com.au



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 3, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470



### Thermal performance rating

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

### Whole of Home performance rating

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

### **Heating & Cooling Load Limits**

#### Additional information

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

### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

# Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

# Predicted Whole of Home annual impact by appliance

### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 3, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

### 9.8 Star Rating as of 29 Jan 2024

					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	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	<u> </u>	0	•	·	
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



<b>0008938359-02 NatHERS Certificate 9.8 Star Rating as of</b> 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	essment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is	not conduc	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	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add	itional requi	rements the	at must also	he satisfied	linclude

: 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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	31.72
Hall	Daytime	4.99
Bedroom 2	Bedroom	10.44
Bedroom 1	Bedroom	12.04
Bathroom	Daytime	7.2
Glazed Common A	Glazed Common Area	17.5

# Window and glazed door type and performance

### Default windows\*

Window ID	Window	Maximum U-value* SHGC*		Substitution to	lerance ranges
WIND	Description			SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

### Custom windows\*

Window ID	Window Maximum		SHGC*	Substitution tolerance ranges		
WIND	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-002-01 A	W9	2400	2400	Awning	45	W	No
Kitchen/Living	ALM-001-01 A	W11	1200	1090	Awning	90	Ν	No
Kitchen/Living	ALM-001-01 A	W12	1200	1570	Awning	90	E	No
Kitchen/Living	ALM-001-01 A	W13	2340	920	Awning	90	E	No
Bedroom 2	ALM-001-01 A	W2	1200	1570	Awning	90	E	No
Bedroom 1	ALM-001-01 A	W10	1200	1570	Awning	90	W	No
Glazed Common A	ALM-001-01 A	W7	2340	920	Awning	90	E	No
Glazed Common A	ALM-001-01 A	W6	2400	610	Awning	45	E	No
Glazed Common A	ALM-001-01 A	W5	2340	920	Awning	90	W	No
Glazed Common A	ALM-001-01 A	W4	2400	500	Awning	45	W	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 3, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

# HOUSE

## Roof window\* type and performance value

### Default roof windows\*

Window ID	Window	Maximum	SHGC*	Substitution to	erance ranges
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
No Data Avail	lable				
Custom roof v	vindows*				
					loronoo rongoo
Window ID	Window	Maximum	SHCC*	Substitution to	neralice raliges
Window ID	Window Description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit

# Roof window\* schedule

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

### Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

## Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m <sup>2</sup> ] 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 ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Cavity Brick	0	Bulk Insulation R0.7	No
EW-2 Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4045	W	3100	Yes
Kitchen/Living	EW-1	2700	3500	Ν	0	No
Kitchen/Living	EW-1	1200	1150	Ν	0	Yes
Kitchen/Living	EW-1	1501	1150	Ν	0	No
Kitchen/Living	EW-1	2700	4050	Ν	0	No
Kitchen/Living	EW-1	2700	900	E	0	No
Kitchen/Living	EW-1	1200	1600	E	0	Yes
Kitchen/Living	EW-1	1501	1600	E	0	No
Kitchen/Living	EW-1	2700	1545	E	600	No
Bedroom 2	EW-1	2700	600	Ν	1600	No
Bedroom 2	EW-1	2700	750	E	0	No
Bedroom 2	EW-1	1200	1650	E	0	Yes
Bedroom 2	EW-1	1501	1650	E	0	No
Bedroom 2	EW-1	2700	800	E	0	No
Bedroom 2	EW-1	2700	3645	S	0	No
Bedroom 1	EW-1	2700	800	W	0	No
Bedroom 1	EW-1	1200	1600	W	0	Yes
Bedroom 1	EW-1	1501	1600	W	0	No
Bedroom 1	EW-1	2700	800	W	0	No
Bedroom 1	EW-1	2700	1500	S	2000	No
Bathroom	EW-1	2700	145	S	2000	No
Glazed Common A	EW-2	2700	1945	E	1300	Yes
Glazed Common A	EW-1	2700	5145	W	0	No

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation	
IW-001	Single Skin Brick	57.78	No insulation	
IW-002	Cavity brick	25.38	No Insulation	



## Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	31.72	None	No Insulation	Ceramic Tiles 8mm
Hall	Concrete Slab on Ground 100mm	4.99	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	10.44	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1	Concrete Slab on Ground 100mm	12.04	None	No Insulation	Carpet+Rubber Underlay 18mm
Bathroom	Concrete Slab on Ground 100mm	7.20	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab on Ground 100mm	17.50	None	No Insulation	Ceramic Tiles 8mm

# Ceiling type

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

# **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Hall	1	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Bathroom	3	Downlights - LED	150	Sealed
Bathroom	3	Exhaust Fans	150	Sealed



# **Ceiling** fans

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

# Roof type

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

# Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

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

### 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							
	Fuel type	Hot Water	Minimum efficiency	Zone 3 STC		ubstitution e ranges	Assessed daily load
Appliance/ system type			/STC	310	lower limit	upper limit	[litres]

0008938359-02 NatHERS Certificate Pool/spa equipment	9.8 Star Rating as of 29 Jan 2024		MOUSE .
Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			
Onsite Renewable Energy	gy Schedule		

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

# Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



### Explanatory notes

### About this report

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

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

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

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

#### Accredited assessors

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

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

are not quality assured.

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

#### Disclaimer

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

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

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

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

### Glossary

Annual energy load         The predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.           Assessed floor area         The floor area in the design documents.           Ceiling penetrations         Exclusion for energina penetration to the ceiling with shall holes through the ceiling for wiring, e.g. ceiling flans, pendant lights, and commends on the ceiling with shall holes through the ceiling for wiring, e.g. ceiling flans, pendant lights, and commendation of the ceiling with shall holes through the ceiling of wiring, e.g. ceiling flans, pendant lights, and commendation of the ceiling with shall holes through the ceiling of wiring, e.g. ceiling flans, pendant lights, and commendation of the ceiling with shall holes through the ceiling of wiring, e.g. ceiling flans, pendant lights, and commendation of the design with shall holes through the ceiling of wiring without salar of a specific type of window product and whose properties have been derived by statistical methods.           Default windows         wirdows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input state or barres in the ABCE Housing Provisions Standard).           Entrance door         These singlify without salar obset to costs to the building user, the environment and energy networks (as thrance door vertification of the ABCE Housing Provisions Standard).           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m (a, subwerth housing, heavity vegetated bushalndard documental, individe ustate oreal standard),	AFRC	Australian Fenestration Rating Council
Assessed floor area         The floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Gelling penetrations         Earlung structures that require a penetration to the celling with multiple, vertis, exhaust fans, range hoods, chimneys and flues. Excludes fluxes is attached to the celling with multiple, vertis, exhaust fans, range hoods, chimneys and flues.           Conditioned         Zone within a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         Windows listen in NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         The representative of a specific type of window product and whose properties have been derived by statistical multiput.           Energy value         The site your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category - popen         sere exposure categories below.         equirat a similar height e.g. grasslands with few wells cattered obstructions below 10m, familand with scattered obstructions as a similar height e.g. grasslands with few wells cattered obstructions below 10m, familand with scattered obstructions below 10m, familand with scattered obstructions below 10m, familand with scattered obstructions e.g. (ad targraing land, ocean-frontage, desext, verandarh, be		N N N N N N N N N N N N N N N N N N N
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 characteristics it will include garages.           Custom windows         Scheme) rating.           Default windows         Window 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 for the single kWh of electricity wells           Energy value         The net cost to goolety including, but not limited to, costs to the building user, the environment and energy networks (as           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated benefits in the modelling software and must not be modelled as a door when opening to a minimally exposure category - exposed           Exposure category - protected         terrain with no obstructions eg. flat grazing land, coean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category - protected         terrain with wo obstructions below.           Exposure category - protected         terrain with wo obstructions below.           Provides hading feature         terrain with numerous, closely spaced obstructions below.           Provides hading feature         terrain with numerous, closely spaced obstructions below. <th></th> <th>the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the</th>		the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows finat are representative of a specific type of window product and whose properties have been derived by statistical lineary and the second state of the specific type of window product and whose properties have been derived by statistical ERE           Energy length         The instruction 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         essensity ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilation for a single kWh of electricity essense category – exposed           Exposure         essense category – exposed         terrain with numerous, closely spaced obstructions below 10m og, suburban housing, heavity expectated businad areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions low or nog, suburban housing, heavity expectated businad areas.           Recommended capacity         terrain with numerous, closely spaced obstructions area assigns a classification code. NatHERS software models NCC Class           Matter and warea astate and busing	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
Continuined         circumstances it will induce garages.           Custom windows         windows itsel in NatHERS software that are variable on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical input.           ER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input.           Energy use         The net cool to sociely induding, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category - exposed         Earling with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category - protected         terrain with numerous, closely spaced obstructions over 10 m e.g. dva in dustrial areas.           Horizontal Jane, dva indig fasture         terrain with numerous, closely spaced obstructions over 10 m e.g. dva indig fasture           Netizonal Construction Code (NCC) Class 1, 2r d- buildings and attached Class 10 a buildings. Definitions can be found at www babe, dowaits and attached Class 10 a buildings. Definition cas a le coll weakels 10 babe.           Recommended capacity         a nome that achieves a net zero energy value?           Notizon Jane         a home that achieves a net zero energy value?           Notizoro home         a home that achieves or operap	COP	Coefficient of performance
Clustorie         Scheme) 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 use         This is your homes rating without solar or batteries.           Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure         see exposure categories below.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – portexted         terrain with no obstructions e.g. flat grazing land, ocean-frontage, devest, exposed high-rise unit (usually above 10 floors).           Exposure category – portexted         terrain with numerous: closely spaced obstructions below 10m e.g. subwrah nousing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous: closely spaced obstructions e.g. envest, verandahs, pergolas, carports, or overhangs or balconles from upper levels.           Noticolal shading feature         frow 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 10 ab buildings. Definitions can be found	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.
Detection with with other         methods.           EER         Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilastic corridor in a Cast 2 building.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas.           Horizontal shading feature         The is end to a structure of the set of the origon and the set of the set or synthese of the set or overhangs or balconies of the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           A home that achieves a net zero energy value?         To a shuiding. Derivative of the set of the set or synthese is the value of the wall color or sing shuid be confirmed by satubly qualies.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. <t< th=""><th>Custom windows</th><th></th></t<>	Custom windows	
LLK         input"           Energy value         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Entrance door         these signify vertilation benefits in the modelling software and must not be modelled as a door when opening to a minimally vertilated corridor in a Class 2 building.           Exposure category – expose         see exposure categories below.           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed bigh-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 me.g. gub 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.           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         ran assumed value that does not represent an actual value. For example, if the wall colour is unspecif	Default windows	
Energy value         The net cost is 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         The net cost is society including, but not limited to, costs to the building user, the environment and energy networks (as defined to the ABCB Housing Provisions Standard).           Exposure category = exposure categories below.         Exposure category = exposure categories below.           Exposure category - open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category - open         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bush lands, effective divised (in list (e.g. above 3 floors).           Exposure category - protected         terrain with numerous, closely spaced obstructions over 10 m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category - suburban housing feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code         the NCC groups buildings and attached Class 10 buildings. Definitions can be found at www.abcb, ova.u.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (move abilid) as cateforial value, for a sample, if the wall colour is unspecified in the documentiation, a provisional value as are	EER	
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 category – exposed         terrain with no obstructions at a similar height e.g. grassands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, eleviated untils (e.g. above 31 foors).           Exposure category – open         terrain with no ubstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Provisional Construction Code         the CC 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         for zender of medium must be modelled. Acceptable provisional values are outlined in the NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired confort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified           Refective wrap (also known as fo	Energy use	
Entrance uson         ventilated condor           exposure         see exposure category – exposed           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m.e.g. city and industrial areas.           Exposure category – suburba         terrain with numerous, closely spaced obstructions over 10 m.e.g. city and industrial areas.           Microard Construction Code         (NCC) Class         terrain with numerous, closely spaced obstructions cate on the curve of a with above, gov au.           Net zero home         a home that achieves a net zero energy value <sup>4</sup> .         Class 1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abots.gov au.           Provisional value         a nome that achieves a net zero energy value <sup>4</sup> .         an assumed value that does not represent an aclual value. For example, if the wall colour is unspecified in the documentation, a provisional value         an assumed value that does not represent an aclual value. For example, if the wall colour is unspecified in the documentation, a cone o zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommend	Energy value	
Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ccean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no ubstructions e.g. flat grazing land, ccean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m.e.g. eluburban housing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m.e.g. eity and industrial areas.           Morizontal 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           Net zero home         a home that achieves a net zero energy value*.         Opening percentage         the one ponability percentage or operable (moves 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, and can be found at www.nathers.gov.au           Reflective wrap (also known as inst the conditions.         can be applied to walls, roofs and cellings. When combined with an appropriate airgap and emissivity value, it provides for NatHERS this is typically an operable (movalue).           Solar heat		ventilated córridor in a Class 2 building.
Exposure category – open         terrain with few obstructions at a similar height e.g., grasslands with few well scattered obstructions below 10m, farmland with           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bush blocks, elevated units (e.g. above 3 foors).           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies           National Construction Code         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 10 buildings. Definitions can be found at www.abc.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 ventillation calculations.           an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value or medium must be modelled. Acceptable provisional values are outilled in the NatHERS technical Note and can be found at www.nathers.gov.au.           Reflective wrap (also known as fort) megnetics.         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides for NatHERS this is typically an operable withow (i.e. can be opened), will have a plaster or similar light well if there is an attic sequently does not have a diffuser.           Stof window         for NatHERS this is typicall		
Exposure category - protected       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.         Horizontal shading feature       provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies         National Construction Code       (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC         Net zero home       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       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 a 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 col lights) for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic feed (ass known as roof lights) for NatHERS this is typically an oulded unit with flexible reflective tubing (light well) and a diffuser	Exposure category – exposed	
Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code (NCC) Class         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abtcb.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) provisional values are outload values for example, if the wall colour is unspecified in the documentation, a provisional value of methal value of methal value of the insis is a 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 foll)         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically 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 b		scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
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National Construction Code (NCC) Class       from upper levels.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.         Net zero home       a home that achieves a net zero energy value*.         Opening percentage       the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an acual 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 foil)       can be applied to walls, roofs and cellings. 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, forces, 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 celling 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. SHG is expressed as a n	Exposure category – suburban	
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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 SHCC)       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	Opening percentage	
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Root window         space, and generally does not have a diffuser.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.           Solar heat gain coefficient (SHGC)         the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.           STCs         Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER)           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 (wing walls), fences, other building, wegetation (protected or listed heritage trees).           Window shading device         device fixed to windows that provides shading e.g. window awnings or screens but excludes h		
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Original         bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) <sup>1</sup> 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 davide         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading		subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
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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<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938367-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

## Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

49.4

0.0

Assessed floor area [m2]\* Conditioned\* 42.6 Unconditioned\* 6.8

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 4, 34-36 Light Street and 42 Walker Street,



Total

Garage

## Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

13.7 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	2.1	11.7
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=bCsiaRRBb When using either link, ensure you are visiting hstar.com.au



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 4, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470

## About the ratings

#### Thermal performance rating

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

#### Whole of Home performance rating

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

## **Heating & Cooling Load Limits**

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- 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



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 4, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 10 Star Rating as of 29 Jan 2024

Certificate check	Approva	I Stage	Construe 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	Consent Surveyo	Builder	Consent Surveyo	Occupai
Genuine certificate check			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		л	ſı		
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown					



					CONTRACTOR OF CONTRACTOR
	Approv	Approval Stage		Construction Stage	
Certificate check Continued		Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not in	ncluded in t	the 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 H	lome 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	assessi	nent)	<u>1</u>	0
					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. 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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	25.97
Bedroom 1	Bedroom	11.8
Hallway	Daytime	4.87
Bath	Unconditioned	6.77

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

#### Custom windows\*

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

## Window and glazed door schedule

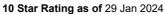
Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	W1	1200	1570	Awning	90	S	No
Kitchen/Living	ALM-001-01 A	W3	2340	920	Awning	90	S	No
Kitchen/Living	ALM-002-01 A	W5	2400	2400	Awning	45	Ν	No
Bedroom 1	ALM-001-01 A	W6	1200	1570	Awning	90	S	No
Bath	ALM-001-01 A	W4	1200	970	Awning	90	Ν	No

## Roof window\* type and performance value

#### Default roof windows\*

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

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 4, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470





Custom roof windows\*

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

## Roof window\* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data 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 <sup>2</sup> ]	Outdoor shade	Diffuser	
No Data Available							

## External door schedule

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

## External wall type

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

## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	400	Е	0	No
Kitchen/Living	EW-1	1200	400	S	0	No
Kitchen/Living	EW-1	1500	400	S	0	No
Kitchen/Living	EW-1	2701	1650	S	0	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 4, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938367-02 NatHERS Certificate

10 Star Rating as of 29 Jan 2024

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Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1595	S	1200	No
Kitchen/Living	EW-1	2700	400	W	0	No
Kitchen/Living	EW-1	2700	3700	Ν	3100	Yes
Bedroom 1	EW-1	2700	200	E	1300	No
Bedroom 1	EW-1	2700	800	S	0	No
Bedroom 1	EW-1	1200	1650	S	0	No
Bedroom 1	EW-1	1501	1650	S	0	No
Bedroom 1	EW-1	2700	750	S	0	No
Bath	EW-1	2700	1500	Ν	0	No
Bath	EW-1	1200	1000	Ν	0	Yes
Bath	EW-1	1501	1000	Ν	0	No
Bath	EW-1	2700	645	Ν	0	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Cavity brick	20.52	No Insulation
IW-002	Single Skin Brick	26.73	No insulation

## Floor type

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	25.97	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	11.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab on Ground 100mm	4.87	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	6.77	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

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

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 4, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938367-02	NatHERS Certificate 1	<b>0 Star Rating as of</b> 29 Jan 2	024	HOUSE
Location	Construction material/type		Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Hallway	Concrete, Plasterboard	d with Timber Frame	No insulation	
Bath	Concrete, Plasterboard	d with Timber Frame	No insulation	

## **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	11	Downlights - LED	150	Sealed
Kitchen/Living	11	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Hallway	1	Downlights - LED	150	Sealed
Bath	2	Downlights - LED	150	Sealed
Bath	2	Exhaust Fans	150	Sealed

## **Ceiling** fans

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

## Roof type

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

## Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

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

0008938367-02 NatHERS Certifica	ate 10 Star	Rating as of 29	Jan 2024				HOUS
Cooling system							
Appliance/ system type	Loc	cation Fu	uel type	effi	nimum ciency/ ormance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Loc	cation Fu	uel type	effi	nimum ciency/ ormance		mended acity
No Data Available							
Hot water system							
Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC -		ubstitution e ranges upper limit	Assessed daily load [litres]
No Data Available							
Pool/spa equipment							
Appliance/ system type		Fuel type		Minimur efficienc performa	y/	Recomm capac	
No Data Available							
Onsite Renewable E	nergy Sch	edule					
System Type Orie	ntation		Syst	em 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<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938250-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

## Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

#### Assessed floor area [m2]\*

Conditioned\* 47.1 Unconditioned\* 8.1 55.2 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 5, 34-36 Light Street and 42 Walker Street,



## Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

#### National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

12.9 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	5.7	7.2
oad limits	N/A	N/A

#### Features determining load limits

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

## Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

### Verification

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



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 5, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470

## About the ratings

#### Thermal performance rating

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

#### Whole of Home performance rating

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

## **Heating & Cooling Load Limits**

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

## Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

## Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 5, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 10 Star Rating as of 29 Jan 2024

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



	Approva	l Stage	Construction Stage			
Certificate check Continued		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 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	ñ		0	

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 <sup>2</sup> ]
Stair 1	Glazed Common Area	35.61
Kitchen/Living	Kitchen/Living	27.8
Bedroom 1	Bedroom	14.48
Hallway	Daytime	4.84
Bath	Unconditioned	8.11

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

Window ID	Window	Maximum		Substitution tolerance ranges		
window ID	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*
Stair 1	ALM-001-01 A	W8	2340	920	Awning	90	Ν	No
Stair 1	ALM-001-01 A	W7	2400	970	Awning	45	Ν	No
Stair 1	ALM-002-01 A	W6	2400	970	Awning	00	S	No
Stair 1	ALM-001-01 A	W5	2340	920	Awning	90	S	No
Kitchen/Living	ALM-001-01 A	W2	1200	1570	Awning	90	S	No
Kitchen/Living	ALM-001-01 A	W1	2340	920	Awning	90	S	No
Kitchen/Living	ALM-002-01 A	W4	2400	2400	Awning	45	Ν	No
Bedroom 1	ALM-001-01 A	W9	1200	1570	Awning	90	S	No
Bath	ALM-001-01 A	W3	1200	970	Awning	90	Ν	No

## HOUSE

## Roof window\* type and performance value

Default roof windows\*

Window		Maximum	SHGC*	Substitution tolerance ranges		
Window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
No Data Avail	able					
Custom roof w	vindows*					
	Window	Maximum	01100*	Substitution to	lerance ranges	
Minuter ID			SHGC*		SHGC upper limit	
Window ID	Description	U-value*		SHGC lower limit	SHOC upper limit	
Window ID	•	U-value*		SHGC lower limit	SHOC upper in	
Window ID No Data Avail	•	U-value*		SHGC lower limit	Shoc upper him	

## 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 <sup>2</sup> ] 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	 Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No
EW-2	Cavity Brick	0	Bulk Insulation R0.7	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 5, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Stair 1	EW-1	2700	2600	Ν	1300	Yes
Stair 1	EW-1	2700	5900	Е	3800	No
Stair 1	EW-1	2700	2845	S	2000	Yes
Kitchen/Living	EW-2	2700	745	S	0	No
Kitchen/Living	EW-2	1200	1600	S	0	Yes
Kitchen/Living	EW-2	1501	1600	S	0	No
Kitchen/Living	EW-2	2700	1400	S	1300	No
Kitchen/Living	EW-2	2700	700	W	2900	No
Kitchen/Living	EW-2	2700	3690	Ν	3000	No
Bedroom 1	EW-2	2700	600	E	0	No
Bedroom 1	EW-2	2700	850	S	0	No
Bedroom 1	EW-2	1200	1600	S	0	Yes
Bedroom 1	EW-2	1501	1600	S	0	No
Bedroom 1	EW-2	2700	950	S	0	No
Bedroom 1	EW-2	2700	600	W	2400	No
Bath	EW-2	2700	945	Ν	0	No
Bath	EW-2	1200	1050	Ν	0	Yes
Bath	EW-2	1501	1050	Ν	0	No
Bath	EW-2	2700	1350	Ν	0	No
Bath	EW-2	2700	600	E	0	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Cavity brick	49.95	No Insulation
IW-002	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-003	Single Skin Brick	33.21	No insulation



## Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Stair 1	Concrete Slab on Ground 100mm	35.61	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	27.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	14.48	None	No Insulation	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab on Ground 100mm	4.84	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab on Ground 100mm	8.11	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

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

## **Ceiling** penetrations\*

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

## **Ceiling** fans

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

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 5, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



## Roof type

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

## Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

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

#### Cooling system Minimum Recommended Location Appliance/ system type Fuel type efficiency/ capacity performance No Data Available Heating system Minimum Recommended Appliance/ system type Location Fuel type efficiency/ capacity performance No Data Available Hot water system Hot **Zone 3 Substitution** Assessed Minimum Zone 3 Water tolerance ranges daily load Appliance/ system type Fuel type efficiency STC upper limit **CER Zone** /STC lower limit [litres] No Data Available Pool/spa equipment Minimum Recommended Appliance/ system type **Fuel type** efficiency/ capacity performance

No Data Available



## **Onsite Renewable Energy** Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

## **Battery** Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



#### Explanatory notes

#### About this report

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

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

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

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

#### Accredited assessors

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

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

are not quality assured.

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

#### Disclaimer

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

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

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

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

### Glossary

Innual energy load         the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.           Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Celling penetrations         Eastures that require a penetration to the celling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures strached to the celling with small holes through the celling for wiring, e.g. celling fans; pendant lights, and heating and cooling duate.           COP         Coefficient of performance         celling the expected to require heating and cooling duate. A submotive the expected to require heating and cooling duate.           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 windows derived with the ABCB Housing Provisions Standard).           Energy value         This and oed to society including but not limited to, coste to the building user, the environment and energy networks (as Energy value.           Energy value         The and oed to society including software and must not be modelled as a door when opening to a minimally wetalized corridor in a Class 2 building.<	AFRC	Australian Fenestration Rating Council
Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Celling penetrations         features that require a penetration to the celling, including downlights, vents, exhaust fans, range hods, chimneys and flues. Excludes fixtures attached to the celling with shall holes through the celling for wining, e.g. celling fans: pendant lights, and heating and cooling ducts.           COP         Coefficient of performance         Coefficient of performance           Cound within a dwelling that associate to the celling with shall holes through the celling for windows issumptions. In some accessing software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           ERR         Energy Ufficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity indiverse as duction with web software and must not be modelled as a door when opening to a minimally the ADB House flow in the MDE House Standard.           Exposure         see ergory exposed         terrain with nomeflix in the modelling software and must not be modelled as a door when opening to a minimally trapsoure category – portected           Exposure         see ergory see ergorese at a set of the endering and software and must not be modelled as a door when opening to a minimally trapsoure category – portected           Exposure category – portected		
Accessed into area         fibor 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 shall holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling duds.           COP         Coefficient of performance         a zone within a dwelling that is expected to require heating and cooling duds.           Custom windows         Schemp ration         a zone within a dwelling that is expected to require heating and cooling duds.           Custom 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 Singly ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally verifieted below.           Exposure category – exposed         terrain with no obstructions e al, flat grazing land, ceean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – suburban         terrain with numerous, closely spaced obstructons below 100 e.g. grasslands with few well scattered bestructons below 100 e.g. grasslands with ge. grass. carports, or overhangs or balconies the nuperous as alighty vegetated bush blocks, elevaded unuis (e.g. abov		
Coop         Coefficient of performance           Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity interpreters and the software interpreters.           Energy value         This is your homes rating without solar or batteries.           Entrance door         terrain with no baciety including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category – exposed         terrain with no class 2 building.           Exposure category – exposed         terrain with neorost loss a a similar height e.g. grasstands with few well scattered obstructions below 10m, farmland with scattered sheed, ightly vegetated bushland reas.           Exposure category – protected         terrain with numerous. closely spaced obstructions veri 10 m e.g. city and industrial areas.    <	Assessed floor area	floor area in the design documents.
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           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         The is your homes rating without solar or batteries.           Energy value         The ener cost to sociely including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure         see exposure category provisions Standard).         terrain with no obstructions e g, flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         seatered sheds, lightly vegletad bush blocks, elevated units (e.g. above 3 floors).         terrain with numerous, closely spaced obstructions eves, verandahs, pergolas, carports, or overhangs or balconies provide stating to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies opticated she	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.
Continuited         circumstances it will include garages.         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.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           ERR         Energy Value         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corndor in a Class 2 building.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions sourd 10 m e.g. euburban housing, heavily vegetated bushland areas.           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconles from Upper levels.           Net zon home         a home that achieves a net zero energy value".         Class 2 buildings and attached Class 10a buildings. Definitional canes. (Exposure category – suburban housing, heavily vegetated bu	COP	Coefficient of performance
Classion windows         Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           EER         Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Norizontal shading feature         provides shading to the building in the norizontal plane, e.g. eave, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           Net zer home         a home that achieves a net zero energy value.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does no	Conditioned	
Default windows         methods.           EER         Energy Efficiency Ratio, measure of how nuch 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 visited corridor in a Class 2 building.           Exposure category – exposed         terrain with nerous, all a frazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – popen         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Invicos tates of sheads, lightly vegetated bushlands, sees, ever, verandharb, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 building and attached Class 10 a buildings. Definitions can be found at www.abcb.gov.au.           Provisional value         a home that achieves a net zero energy value <sup>e</sup> .	Custom windows	
LERK         input <sup>1</sup> Input <sup>1</sup> 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) Frovisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with 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.           Exposure category – suburban         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 (NCC) Class           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           an assumed value of medium must be modelled. Acceptable provisional values are outlined in the NCC mores serviced. This is	Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
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 ventilated coridor in a Class 2 building.           Exposure category – exposed         terrain with no 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 neworks (cosely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Provisonal 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 openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         a horme that achieves a net zero energy value <sup>2</sup> .         cer any series and tachee (low obstructions can be found at www.nathers.gov.au           Recommended capacity         case of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the Zero hore or portele terma with numerous, close of equipment that is recommended by well series and the series of the case influence.           Referencentage         th	EER	
Entrance door         defined in the ABCB Housing Provisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions below 10m 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 10b aludings. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves a net zero energy value <sup>6</sup> .           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           an assumed value by a due of medium must be modelled. Acceptable provisional values are outlined in the NatHERS technical Note and can be found at www.nathers.gov.au           <	Energy use	This is your homes rating without solar or batteries.
Exposure         ventilated corridor in a Class 2 building.           Exposure         see exposure category – exposed           terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions a a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered desh, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Provisonal Shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code         the 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 <sup>2</sup> .           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Recommended capacity         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides should at www.nathers.gov.au           Reflective wrap (also known as foil)         for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or	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 – exposedterrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).Exposure category – openterrain 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 – protectedterrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushblocks, elevated units (e.g. above 3 floors).Horizontal shading featureprovides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconiesNet zero homea home that achieves a net zero energy value*.Opening percentagethe openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.Provisional valueansumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation and use to be found at www.nathers.gov.auRecommended capacitycapacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended ion and the final selection sizing should be confirmed by a suitably qualified person.Reflective wrap (also known as foil)for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.Shading featuresincludes neighbouring buildings, fences, and wing walls, but excludes eaves.Solar heat gain coefficient (SHGC)Small-scale Technology Certificates, certificates c	Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – 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 below 10m e.g. suburban housing, heavily vegetated bushland areas.           Neticital shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           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 and the final selection sizing should be confirmed by a suitably qualified person.           Recommended capacity         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           Reflective wrap (also known as foil)         Gon bapplied 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 win	Exposure	see exposure categories below.
Exposure category – protected         scattered sheds, lightly vegetated bush blocks, eléväted units (e.g. above 3 floors).           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Horizontal shading feature         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           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 or 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS forhical Note and can be found at www.nathers.gov.au           Recommended capacity         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           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, fen	Exposure category – exposed	
Exposure category – suburbanHorizontal shading featureterrain 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.National Construction Code (NCC) Classthe 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*.Opening percentagethe openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. a nome that achieves a net zero energy value*.Provisional valuean 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.auRecommended capacitythis 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.Roof windowfor 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 featuresincludes neighbouring buildings, fences, and wing walls, but excludes eaves.Skylight (also known as roof lights) for NatHERS this is typically a mouled unit with flexible reflective tubing (light well) and	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).
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foil)       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 attice 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)	Recommended capacity	zone or zone's serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
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)		insulative properties.
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(SHGC)       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)	Skylight (also known as roof lights	
bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)		subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
	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	Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks such as polystyrene insulation sheeting or plastic strips
U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.	U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b> a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.	Unconditioned	
Vertical shading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).	Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

## Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938276-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

## Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

#### Assessed floor area [m2]\*

Conditioned\* 70.0 Unconditioned\* 0.0 70.0 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 6, 34-36 Light Street and 42 Walker Street,



## Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683 DMN/13/1645

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

## 18.7 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Nodelled	13.2	5.5
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=NcubHTxPo. When using either link, ensure you are visiting hstar.com.au



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 6, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470



#### Thermal performance rating

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

#### Whole of Home performance rating

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

## **Heating & Cooling Load Limits**

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

## Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

## Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 6, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 9.6 Star Rating as of 29 Jan 2024

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



0008938276-02 NatHERS Certificate 9.6 Star Rating as of 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	essment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is	not conduc	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	S assessi	ment)	0	0
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC Add	itional requi	rements the	at must also	he satisfied	linclude

: 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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	33.5
Hall/LDY	Daytime	5.74
Bedroom 1	Bedroom	13.32
Bedroom 2	Bedroom	11.14
Bathroom	Daytime	6.25
Stair 1	Glazed Common Area	34.87

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum U-value* SHGC*		Substitution tolerance ranges		
window iD	Description			SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

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

## Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	W10	1200	1570	Awning	90	W	No
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	Awning	45	S	No
Bedroom 1	ALM-001-01 A	W11	1200	1570	Awning	90	S	No
Bedroom 2	ALM-001-01 A	W9	1200	1570	Awning	90	W	No
Stair 1	ALM-001-01 A	W7	2340	920	Awning	90	Ν	No
Stair 1	ALM-001-01 A	W8	2400	970	Awning	45	Ν	No
Stair 1	ALM-001-01 A	W6	2340	920	Awning	90	S	No
Stair 1	ALM-002-01 A	W5	2400	970	Awning	00	S	No

## Roof window\* type and performance value

Default roof windows\*

Window ID     Mindow     Indextmann     SHGC*     Custom restriction       No Data Available       Custom roof windows*	SHGC upper limit
Custom roof windows*	
Window Maximum Substitution toler	ance ranges
Window ID Description U-value* SHGC* SHGC lower limit	SHGC upper limit
No Data Available	

## Root window" schedule

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

## Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

## Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m <sup>2</sup> ] Orientati	ion Outdoor shade	Diffuser
No Data Avail	able					

## External door schedule

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

## External wall type

Wall ID	Wall type	Solar absorptance	 Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0	Bulk Insulation R0.7	No
EW-2	Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1900	W	0	No
Kitchen/Living	EW-1	1200	1700	W	0	Yes
Kitchen/Living	EW-1	1501	1700	W	0	No
Kitchen/Living	EW-1	2700	845	W	0	No
Kitchen/Living	EW-1	2700	4200	S	4400	Yes
Bedroom 1	EW-1	2700	4345	W	4200	No
Bedroom 1	EW-1	2700	1200	E	4700	No
Bedroom 1	EW-1	2700	1000	S	0	No
Bedroom 1	EW-1	1200	1600	S	0	No
Bedroom 1	EW-1	1501	1600	S	0	No
Bedroom 1	EW-1	2700	1000	S	0	No
Bedroom 2	EW-1	2700	145	W	0	No
Bedroom 2	EW-1	1200	1651	W	0	Yes
Bedroom 2	EW-1	1501	1651	W	25	No
Bedroom 2	EW-1	2700	1351	W	25	No
Stair 1	EW-2	2700	2500	Ν	1300	Yes
Stair 1	EW-2	2700	5800	E	0	No
Stair 1	EW-2	2700	2945	S	1200	Yes

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation	
IW-001	Single Skin Brick	68.31	No insulation	
IW-002	Cavity brick	46.17	No Insulation	

## Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	33.50	None	No Insulation	Ceramic Tiles 8mm
Hall/LDY	Concrete Slab on Ground 100mm	5.74	None	No Insulation	Ceramic Tiles 8mm

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 6, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

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Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab on Ground 100mm	13.32	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	11.14	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	6.25	None	No Insulation	Ceramic Tiles 8mm
Stair 1	Concrete Slab on Ground 100mm	34.87	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

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

## Ceiling penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Hall/LDY	1	Downlights - LED	150	Sealed
Hall/LDY	1	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bathroom	2	Downlights - LED	150	Sealed
Bathroom	2	Exhaust Fans	150	Sealed

## **Ceiling** fans

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

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 6, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



## Roof type

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

## Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

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

A	•				nimum	Recom	mended
Appliance/ system type	Lo	cation F	uel type		iciency/ ormance	сар	acity
				peri	ormance		
No Data Available							
Heating system							
				Mi	nimum	Decem	un o un ol o ol
Appliance/ system type	Lo	Location Fi		efficiency/ performance		Recommended capacity	
No Data Available							
Hot water system							
		Hot	Minimum	Zone 3	Zone 3 Su	Ibstitution	Assessed
Appliance/ system type	Fuel type	Water CER Zone	efficiency /STC	STC -	toleranc lower limit	e ranges upper limit	daily load [litres]
No Data Available							
Pool/spa equipment							
		Fuel ture		Minimu		Recomm	ended
Appliance/ system type		Fuel type		efficienc performa	-	capad	city



## **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 precided amount of energy required for heating and cooling, based on standard occupancy assumptions.           Assessed floor area         the floor area in the design documents.           Ceiling penetrations         Endures that require a penetration to the ceiling with shall holes through the ceiling for winnig, e.g. ceiling flans, pendart lights, and counsistent with the design documents.           Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances within a dwelling without solar or batteries.           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 now much cooling can be achieved by an air conditioner for a single KMh of electricity input sour homes rating without solar or batteries.           Entrace door         these singlit vertiliation hendies in the modeling obstate and must not be modelied as a door when opening to a minimally vertiliated confide in a Class 2 building.           Exposure category – protected         terrain with numerous, closely papeed obstructions below 10m (a, subward housing, rewolding das a door wheno opening to a sintimal with seqereation with sole	AFRC	Australian Fenestration Rating Council
Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Coiling penetrations         Eastures that require a penetration to the coiling, including downlights, write, exhaust fans, range hoods, chimreys and flues. Eastures that require a penetration to the celling with shall holes through the celling for writing, e.g. celling fans, pendart lights, and counter and the comparison of the celling with shall holes through the celling for writing, e.g. celling fans, pendart lights, and counter and the celling with shall holes through the celling for writing, e.g. celling fans, pendart lights, and the celling with shall holes through the celling for writing, e.g. celling fans, pendart lights, and the celling with shall holes through the celling the shall holes through the shall hole through the shall holes through tholeshall holes through tholes the hole shall holes throu		
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 charameters it will include garages.           Custom windows         Before that are expected to require heating and cooling based on standard occupancy assumptions. In some charameters it will include garages.           Default windows         Before 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 for the electricity wells           Energy value         The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as the ese signify ventilation barefile in the modelling software and must not be modelled as a door when opening to a minimally ventilated corrider in a Class 2 building.           Exposure         ese exposure category exposed         terrain with no obstructions eg. flat grazing land, ccean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category - protected         terrain with evo obstructions below.         ese exposure category exposed           Exposure category - protected         terrain with evo obstructions below.         ese signify vegatad busing the built in the force on the substruction solution and and the state of heart wells and the dese signify vegatad busing the built in the force on thear dostate of the dostan teas.	<u> </u>	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) relating.           Default windows         windows finat are representative of a specific type of window product and whose properties have been derived by statistical individual solar or batteries.           ERR         Energy Enciency 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 – exposed         terrain with numerous, closely spaced obstructions below tones of sumptions at a similar head by a statistical work in the second tone of the second with the output of the output devised and the second with the second tone of the second with t	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
Continuing         circumstances it will indude garages.           Custom windows         windows tisted in NatHERS software that are variable on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical input.           ER         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 cool to sociely induding, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category - exposed         Errain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category - protected         Errain with numerous, closely spaced obstructions below Tom e.g. day and industrial areas.           Exposure category - protected         Errain with numerous, closely spaced obstructions below Tom e.g. and a signard and the explanation of the e.g. and signard and the defined and the set of the explanation of the explanatis (e.g. and industrial areas. <t< th=""><th>COP</th><th></th></t<>	COP	
Classion windows         Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           EER         Energy 2Efficiency 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 Abbit Houng Provisions Standard).           Exposure         see exposure categories below.           Exposure         see exposure categories below.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usualy above 10 floors).           Exposure category – portected         terrain with numerous, closely spaced obstructions below 10m e.g. subwrah nousing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions and a singlar a classign as a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings of the the cole and can be found at www.abcb gov.au.           Not zon home         the openability percentage or operable (moveable) area of doors owindows that is used in ventilation calculations.           Anome that achieves a net zero energy value <sup>6</sup> .         Desinta desinteres and and to the sen tereorenergy value <sup>6</sup> . </th <th>Conditioned</th> <th>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.</th>	Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Default windows         methods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricitly 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).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposed         terrain with no bustructions e.g. fat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions ever 10 m e.g. euburban housing, heavily segetated bushland areas.           Exposure category – spoteletad         terrain with numerous, closely spaced obstructions ever 10 m e.g. euburban housing, heavily segetated bushland areas.           Horizontal shading feature         the openability percentage or operable (moveable) area of works with fireweab gova.           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 wentilation.           Recommended capacity         cr 4 buildings. forces, and wing walls, but excludes eaves.           Reference warp (also known as foil)         cr 4 buildings, fences, and wing walls,	Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
LLK         input"           Energy value         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Entrance door         these signify vertilation benefits in the modelling software and must not be modelled as a door when opening to a minimally vertilated corridor in a Class 2 building.           Exposure category – exposure categories below.         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with no obstructions e.g. alta grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m.e.g. suburban housing, heavily vegetated bushland areas.           Provides shading feature         from upper levels.         terrain with numerous, closely spaced obstructions one to not any at wastfication 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 percenting the modelle	Default windows	
Energy value         The net cost is society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposed terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with new obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, effectived units (e.g. above 3 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m e.g. auburban housing, heavily vegetated bushland areas.           Exposure category – suburban twith numerous, closely spaced obstructions over 10 m e.g. auburban housing, heavily vegetated bushland areas.           National Construction Code         the NCC groups buildings and attached Class 10a buildings. Definitions can be found at www.abc.gov.au.           National construction Code         the one that achieves a net zero energy value*.           Opening percentage         the onpercentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Recommended capacity         the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendato	EER	
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 category – exposed         terrain with no achase 2 building.           Exposure category – open         terrain with no achase 2 building.         device a shading they obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code (NCC) Class         CC 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".         Definitions can be found at www.abtErgs or a classification code. NatHERS software models NCC class and building code and that does not represent an actual value. For example, if the wall colour is supsecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional value are outined in the NatHERS that does not represent an actual value. For example, if the wall colour is supsecified in the documentation, an t	Energy use	
Entrance uson         ventilated condor           Exposure         see exposure category – exposed           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no 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 over 10 m e.g. city and industrial areas.           Exposure category – suburbat         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas, or overhangs or balconies from upper levels.           National Construction Code         (NCC) Class 1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abots.gov.au.           Net zero home         a home that achieves a net zero energy value <sup>*</sup> .           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in wentilation calculations.           Provisional value         an assumed value that dees not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value or metage or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommended by the flas	Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10m e.g. cuburban housing, heavily vegetated bushland areas.           Exposure category – uburban         terrain with numerous, closely spaced obstructions over 10m e.g. cuburban housing, heavily vegetated bushland areas.           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           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the once perable (moverable) area of doors or windows that is used in ventilation calculations.           Provisional value         a nassumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, and can be found at www.nathers.gov.au           Reflective wrap (also known as can be applied to walls, roofs and cellings. When combined with an appropriate airgap and emissivity value, it provides for NatHERS this is typically an operable (moved with flexible reflective tubing (light well) and a diffuser at celling levell.           Shading features		ventilated córridor in a Class 2 building.
Exposure category - open         terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with           Exposure category - protected         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bush blocks, elevated units (e.g. above 3 floors).           Horizontal shading feature         provides shading in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1.2 or 4 building and attached Class 10 buildings. Definitions can be found at www.abc.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           an assumed value that does not provide and twww.nathers.gov.au         this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or ones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified provides in strain with an strain strain with an error should at wall and solar admines. Building should be confirmed by a suitably qualified spreade, and generally does ton have a diffuser.           Recommended capacity         reside applied to walls, noofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides follower spreadis ware of solar one allower windows. SHGC, the less solar heat ga		
Exposure category – protected       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. subtrahan housing, heavily vegetated bushland areas.         Exposure category – suburban       terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.         National Construction Code       Class         (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC         Net zero home       a home that achieves a net zero energy value*.         Opening percentage       the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional values are cullined in the NatHERS technical Note and can be found at www.nathers.gov.au         Recommended capacity       can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.         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 feG(C) as an dowing 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	Exposure category – exposed	
Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code (NCC) Class 1, 2 or 4 buildings by their function and use, and assigns a classification code. NatHERS software models NCC (Class 1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be models. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as foll)         for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.           Shading features         includes neighbouring buildings, fenceas, and		scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
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National Construction Code (NCC) Class       from upper levels.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.         Net zero home       a home that achieves a net zero energy value*.         Opening percentage       the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an acual 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 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, forces, 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 celling 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	Exposure category – suburban	
Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         This is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as 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.           Stoar 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 e	-	from upper levels.
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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.         Stocs       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, as polystyrene insulation sheeting or plastic strips         U-value       the rate of heat transfer throrough a window. The lower the U-value, the batter oreninuous ther	Opening percentage	
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Original         bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) <sup>1</sup> 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 inber 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 building, vegetation (protected or listed heritage trees).           Window abading davide         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading		subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
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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<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938300-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

## Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

## Assessed floor area [m2]\*

Conditioned\* 62.6 Unconditioned\* 7.4 70.0 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 7, 34-36 Light Street and 42 Walker Street,



## Accredited assessor

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

Declaration completed: no conflicts

## NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

#### National Construction Code (NCC) requirements

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

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

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

11.5 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	2.9	8.6
oad limits	N/A	N/A

#### Features determining load limits

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

## Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

## Verification

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



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 7, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470

## 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



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 7, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 10 Star Rating as of 29 Jan 2024

Certificate check	Approval Stage		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.	Assess	Consen Surveyo	Builder	Consen Surveyo	Occupa	
Genuine certificate check		ſı	л			
Does this Certificate match the one available at the web address or QR code verification link on the front page?						
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?						
Thermal performance check						
Windows and glazed doors						
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?						
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?						
External walls						
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?						
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?						
Floor						
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?						
Ceiling penetrations*						
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?						
Ceiling						
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?						
Roof						
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?						
Apartment entrance doors (NCC Class 2 assessments only)						
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.						
Exposure*						
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".						
Heating and cooling load limits*						
Do the load limits settings (shown on page 1) match what is shown						



	Approval Stage		Construction Stage			
Certificate check Continued		Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
Additional NCC requirements for thermal performance (not inclu	ıded in tl	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	ñ	ñ	ñ	

#### **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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	28.95
Hall	Daytime	4.83
Bedroom 1	Bedroom	16.37
Bedroom 2	Bedroom	12.45
Bathroom	Unconditioned	7.41
Glazed Common A	Glazed Common Area	6.05

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum		Substitution tolerance ranges		
window iD	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

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

## Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	W4	2400	2400	Awning	45	Ν	No
Kitchen/Living	ALM-002-01 A	W7	600	1450	Awning	00	E	No
Bedroom 1	ALM-001-01 A	W3	1200	1570	Awning	90	Ν	No
Bedroom 2	ALM-001-01 A	W1	1200	1570	Awning	90	W	No
Bathroom	ALM-001-01 A	W2	1200	970	Awning	90	W	No
Glazed Common A	ALM-001-01 A	W5	2340	920	Awning	90	Ν	No
Glazed Common A	ALM-001-01 A	W6	2400	970	Awning	45	Ν	No

## HOUSE

## Roof window\* type and performance value

Default roof windows\*

Description     U-value*     SHGC lower limit     SHGC uppe       No Data Available     Custom roof windows*     Maximum     SHGC*     Substitution tolerance ranges       Window ID     Window     Maximum     SHGC*     SHGC lower limit     SHGC uppe	window ID		Maximum	SHCC*	Substitution to	lerance ranges
Custom roof windows* Window ID Window Maximum SHGC* Substitution tolerance ranges Description U-value* SHGC lower limit SHGC uppe		Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit
Window ID         Window         Maximum         Substitution tolerance ranges           Description         U-value*         SHGC*         SHGC lower limit         SHGC uppe	No Data Availabl	le				
Window ID Description U-value* SHGC* SHGC lower limit SHGC uppe	Custom roof wind	dows*				
Description U-value* SHGC lower limit SHGC uppe	Min dawy ID	Window	Maximum	01100*	Substitution tolerance ranges	
	window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit
No Data Available	No Data Availab	le				

## 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 <sup>2</sup> ] Orientation	Outdoor shade	Diffuser
No Data Avail	able					

## External door schedule

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

## External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Cavity Brick	0	Bulk Insulation R0.7	No
EW-2 Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3795	Ν	2900	Yes
Kitchen/Living	EW-1	2700	6200	E	0	No
Bedroom 1	EW-1	2700	4145	W	0	No
Bedroom 1	EW-1	2700	1100	Ν	0	No
Bedroom 1	EW-1	1200	1650	Ν	0	Yes
Bedroom 1	EW-1	1501	1650	Ν	0	No
Bedroom 1	EW-1	2700	1000	Ν	0	No
Bedroom 1	EW-1	2700	2300	E	4150	No
Bedroom 1	EW-1	2700	245	Ν	2300	No
Bedroom 2	EW-1	2700	950	W	0	No
Bedroom 2	EW-1	1200	1650	W	0	Yes
Bedroom 2	EW-1	1501	1650	W	0	No
Bedroom 2	EW-1	2700	445	W	0	No
Bathroom	EW-1	2700	945	W	0	No
Bathroom	EW-1	1200	1050	W	0	Yes
Bathroom	EW-1	1501	1050	W	0	No
Bathroom	EW-1	2700	1395	W	0	No
Glazed Common A	EW-2	2700	2645	Ν	1300	No
Glazed Common A	EW-2	2700	2300	Е	0	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Cavity brick	18.23	No Insulation
IW-003	Single Skin Brick	44.01	No insulation

## Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	28.95	None	No Insulation	Ceramic Tiles 8mm

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 7, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 0008938300-02 NatHERS Certificate

10 Star Rating as of 29 Jan 2024



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Hall	Concrete Slab on Ground 100mm	4.83	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	16.37	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab on Ground 100mm	12.45	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab on Ground 100mm	7.41	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab on Ground 100mm	6.05	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

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

## **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	13	Exhaust Fans	150	Sealed
Hall	1	Downlights - LED	150	Sealed
Bedroom 1	7	Downlights - LED	150	Sealed
Bedroom 2	5	Downlights - LED	150	Sealed
Bathroom	3	Downlights - LED	150	Sealed
Bathroom	3	Exhaust Fans	150	Sealed

## **Ceiling** fans

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

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 7, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938300-02 NatHER	S Certificate 10 Star Rating	<b>as of</b> 29 Jan 2024	4		HIGHNE
Location		Quantity		Diameter [mm]	CONTRACTOR STOL
Bedroom 2		1		900	
Roof type					
Construction	Added insulation [R-value]		Solar absorptance	Roof shade[colour]	

None Present

## Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

Note: A flat assumption of 5W/m<sup>2</sup> 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		<b>ibstitution</b> 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 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.
<b>Reflective wrap</b> (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<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938417-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

## Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

Assessed floor area [m2]\* Conditioned\* 67.4 Unconditioned\* 0.0 Total 67.4

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 8, 34-36 Light Street and 42 Walker Street,



Garage

## Accredited assessor

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

0.0

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

## 65.3 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Nodelled	28.6	36.7
oad limits	N/A	N/A

#### Features determining load limits

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)
)
)

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



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 8, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470



#### Thermal performance rating

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

#### Whole of Home performance rating

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

## **Heating & Cooling Load Limits**

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

## Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

## Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 8, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 6.1 Star Rating as of 29 Jan 2024

	1				HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupa
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
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					



0008938417-02 NatHERS Certificate6.1 Star Rating as of 29 Jan 2024					HOUSE	
	Approva	al Stage	Constru Stage	ction		
Certificate check	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other	
	Assess	Consen Survey	Builder	Consen Surveyo	Occupa	
Additional NCC requirements for thermal performance (not inclu-	uded in t	he NatHE	ERS asse	essment)		
Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is i	not conduc	ted)	
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						
Note: This Certificate only covers the energy efficiency requirements in the NCC. Add	itional requi	rements the	t must also	he satisfied	include	

: 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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	31.55
Hall	Daytime	5.85
Bedroom 1	Bedroom	11.98
Bedroom 2	Bedroom	11.11
Bathroom	Daytime	6.87
Stair 3	Glazed Common Area	21.53

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

#### Custom windows\*

Window ID	Window			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*
Kitchen/Living	ALM-002-01 A	W8	2400	2400	Awning	45	W	No
Kitchen/Living	ALM-001-01 A	W6	1200	970	Awning	10	S	No
Kitchen/Living	ALM-001-01 A	W7	1200	1570	Awning	10	S	No
Bedroom 1	ALM-001-01 A	W15	1200	1570	Awning	10	E	No
Bedroom 2	ALM-001-01 A	W17	1200	1570	Awning	10	E	No
Bedroom 2	ALM-001-01 A	W18	1200	730	Awning	10	S	No
Stair 3	ALM-002-01 A	W9	1500	970	Awning	00	W	No
Stair 3	ALM-001-01 A	W10	2400	970	Awning	45	W	No
Stair 3	ALM-002-01 A	W11	2400	500	Awning	00	W	No
Stair 3	ALM-001-01 A	W12	2400	970	Awning	45	E	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 8, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938417-02 Nath	IERS Certificate	6.1 Star Rating as of 29 Jan 2024						HIGHNIE
Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Stair 3	ALM-002-01 A	W13	2400	610	Awning	00	E	No

## Roof window\* type and performance value

#### Default roof windows\*

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

#### Custom roof windows\*

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

## Roof window\* schedule

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

## Skylight\* type and performance

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

## Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser
Bathroom	GEN-04-006a	S1	50	0.09	S	None	No

## 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		Bulk Insulation R0.7	No
EW-2	Metal Clad Timber Stud Frame Direct Fix	0		Bulk Insulation R2.5	No

## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4445	W	2850	Yes
Kitchen/Living	EW-1	2700	1200	E	450	No
Kitchen/Living	EW-1	2700	850	S	600	No
Kitchen/Living	EW-1	2700	1100	S	600	Yes
Kitchen/Living	EW-1	2700	2000	S	600	No
Kitchen/Living	EW-1	2700	1650	S	600	Yes
Kitchen/Living	EW-1	2700	1800	S	600	No
Bedroom 1	EW-1	2700	3995	Ν	300	No
Bedroom 1	EW-1	2700	500	E	450	No
Bedroom 1	EW-1	2700	1700	E	450	Yes
Bedroom 1	EW-1	2700	995	E	450	No
Bedroom 2	EW-1	2700	695	E	450	No
Bedroom 2	EW-1	2700	1650	E	450	Yes
Bedroom 2	EW-1	2700	950	E	450	No
Bedroom 2	EW-1	2700	2100	S	450	No
Bedroom 2	EW-1	2700	800	S	450	Yes
Bedroom 2	EW-1	2700	695	S	1800	No
Stair 3	EW-1	2700	5245	W	450	Yes
Stair 3	EW-2	2700	2045	E	100	Yes

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	62.10	No insulation

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 8, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

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2-02 NatHERS Certificate	6.1 Star Rating as of 29 Jan 2024			HOUSE
Wall type		Area [m <sup>2</sup> ]	Bulk insulation	
Cavity brick		0.00	No Insulation	

## Floor type

Wall ID

IW-003

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	31.55	None	No Insulation	Ceramic Tiles 8mm
Hall	Concrete Slab, Unit Below 150mm	5.85	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	11.98	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab, Unit Below 150mm	11.11	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	6.87	None	No Insulation	Ceramic Tiles 8mm
Stair 3	Concrete Slab, Unit Below 150mm	21.53	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Hall	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R2.5	
Bathroom	Plasterboard on Timber	Bulk Insulation R2.5	
Stair 3	Plasterboard on Timber	Bulk Insulation R2.5	

## Ceiling penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	13	Exhaust Fans	150	Sealed
Hall	2	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bathroom	2	Downlights - LED	150	Sealed
Bathroom	2	Exhaust Fans	150	Sealed

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 8, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



## **Ceiling** fans

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

## Roof type

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

## Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

Note: A flat assumption of 5W/m<sup>2</sup> 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	Fuel type Water efficiency		Zone 3 STC	tolerance ranges		Assessed daily load	
		CER Zone	/STC	510	lower limit	upper limit	[litres]	
No Data Available								

0008938417-02 NatHERS Certificate Pool/spa equipment	6.1 Star Rating as of 29 Jan 2024		HOUSE
Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			
Onsite Renewable Energy	gy Schedule		

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

## Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



#### Explanatory notes

#### About this report

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

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

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

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

#### Accredited assessors

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

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

are not quality assured.

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

#### Disclaimer

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

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

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

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

### Glossary

Annual energy load         the predicted amount of energy regured for heating and cooling, based on standard occupancy assumptions.           Assessed floor area         the floor area in the design documents.           Ceiling penetrations         features that require a penetration to the calling, including downlights, wents, exhaust fans, range hoods, chimneys and flues. The calling including downlights, wents, exhaust fans, range hoods, chimneys and flues. The calling and cooling based on standard occupancy assumptions. In some construction will include garages.           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 constructions that in a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some constructions the induced by statistical methods.           Default windows         windows that are representative of a specific type of window product and whose properties have been deviced by statistical methods.           ERR         Energy Efficiency Ratio, measure of now much cooling can be achieved by an air conditioner for a single KWh of electricity instal without solar or batteries.           Entrance door         these single yind within the oblet of costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category – popenticate and the oblet of thease in obletof the oblet of thease.	AFRC	Australian Fenestration Rating Council
Assessed floor area         The floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.           Ceiling penetrations         Features that require a penetration to the ceiling (in cluding downlights, write, exhaust fans, range hoods, chimneys and flues. Excludes fluxes shatched to the ceiling with mall holes through the ceiling (or wrine, e.g. ceiling fans, capacity, and the ceiling with a sepaceted to require heating and cooling based on standard occupancy assumptions. In some a zone within a welling that is expected to require heating and cooling based on standard occupancy assumptions. In some drough windows is left. In NatHERS Software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows, link are representative of a specific type of window product and whose properties have been derived by statistical methods. 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).           Energy value         The set cost to society including, but not limited societs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure category – open         see exposure categories below.           Exposure category – potected         terrain with nonerous, closely spaced obstructions sover 10 me q. eucleards, periods, caports, or overhangs or balconies (NCC) Class.           Not zaro bone         terrain with numerous, closely spaced obstructions below (10 m, e.g. suburtah nousing, heavily vegetated bushind areas.		
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 claumatines it will include garages.           Custom windows         external training that are representative of a specific type of window product and whose properties have been derived by statistical methods.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           EFR         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input for the single without solar or batteries.           Energy value         The at cost to society including, but not limited to costs to the building user, the environment and energy networks (as these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally very ventilation benefits in the modelling software and must not be modeled as a door when opening to a minimally exposure category - exposed terrain with no obstructions es g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category - protected         terrain with we obstructions selew.           Exposure category - protected         terrain with works operative syspeced obstructions below 10m, farmiand with scattered shead, lightly vegetated bushland areas.           Exposure category - protected         terrain with numerous, closely spaced obstructions below 10m (andustrial areas.)           N		the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity           Energy value         The is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to costs to the building user, the environment and energy networks (as defined in he ARCE Housing Provisions Standard).           Exposure category – expose         exe exposure categories below.           Exposure category – open         terrain with no obstructions at a similar height e.g. grassiands with few well scattered obstructions below 10m, farmland with scattered besit, lightly vegetated bush holes, elevide usubhan housing, heavily vegetated bush hand reas.           Exposure category – protected         terrain with numerous, closely spaced obstructions end be found at wwascb. gov.au.           Resposure category – subcat         terrain with numerous, closely spaced obstructions can be found at wwascb. gov.au.           Resposure category – protected         terrain with numerous, closely spaced obstructions can be	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.
Continuities         Continuity           Custom windows         windows         windows         Software hat are expresentative of a specific type of window product and whose properties have been derived by statistical windows that are representative of a specific type of window product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and by statistical product and whose properties have been derived by statistical product and whose properties have been derived by statistical product and by statistical product and by an arc conditioner for a single kWh of electricity input           Energy use         The net cost of society including, but not limited to, costs to the building user, the environment and energy networks (as derived by ventilated corridor in a Class 2 building.           Exposure category – protected         terrain with numerous, closely spaced obstructions below for e.g. suburban thousing, heavily vegetated bushland areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions due to the specific and and the web by soft and the substrule areas.           Exposure category = protected         terrain with numerous, closely spaced obstructions and sengeng and inductinal are	COP	Coefficient of performance
Custom windows         Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.           EER         Energy 2Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single KWh of electricity input input in the RSD Bhousing Provisions Standard).           Energy value         The net cast to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ASD Bhousing Provisions Standard).           Exposure         see exposure categories below.           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 – portected         terrain with no explorations at a similar height e.g. grassends with few wells categord both cutoins below 10m, farmland with sequence to the statesed obstructions below 10m e.g. suburban housing, heavily vegetated bushhand areas.           Exposure category – suburban         terrain with numerous; closely spaced obstructions over 10 m e.g. away, verandahs, pergolas, carports, or overhangs or balconles from upper levels.           Net zero home         the Openability percentage or operable (moveable) area of doors owindows that is used in ventilation calculations.           Anome that achieves an elize or energy value?         operability percentage or operable (moveable) area of doors sind modus in a suppe	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.
Data in windows         methods.           EER         Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCE Housing Provisions Standard).           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilased corridor in a Cast's 2 building.           Exposure category – exposed         terrain with exposure category – open           Errain with exposure category – protected         terrain with no obstructions e.g. flar grazing land, ocean-frontage, desert, exposed dostructions below 10m, familand with texposure category – protected           Horizontal shading feature         The openability percentage obstructions and a milar building. Definition and use, and assigns a classification code. NatHERS software models NCC Class (Cast 2, or abuildings. Definitions can be found at www.abcb.gov.au.           Net zoro home         a home that achieves an et zoro energy value?.           Opening percentage         the openability percentage or operable (moveable) area of doors vindows that is used in ventilation calculations.           na sourd value that doel son to 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 Actual towars and a solar solar a classify a solar solar and cost to example, if the wall colour is unspecified in the documentation, a pr	Custom windows	
EEK         input <sup>C</sup> C         C <thc< td=""><td>Default windows</td><td></td></thc<>	Default windows	
Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as           Entrance door         these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.           Exposure category – exposed terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions as a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elvedsted units (e.g. above 3 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – suburban towith numerous, closely spaced obstructions over 10 m e.g. divaling sings a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abcl. gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operalet (moveabile) area of doors or windows that is used in ventilation calculations.           Recommended capacity         the applied to walls, roofs and cellings. When combined with an appropriate airgap and emissivity value, it provides insultation calculation.           Reflective wrap (also known as roof lights)         for Autility desend no wing and attached cas	EER	
Line by Variab         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 category – exposed         terrain with no obstructions e.g., flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g., flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m e.g. exity and industrial areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions ever 10 m e.g. exity and industrial areas.           Provisional shading feature         from upper levels.           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC (Class 1, 2 or 4 buildings and attached Class 10a building. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves on or persent an actual value. For example, if the wall colour is unspecified in the documentation, an assumed value that does on or persent an actual value. Cre example, if the wall colour is unspecified in the documentation, and asserted area actual value. Cre example, if the wall colour is unspecified in the documentation, an assumed value that does on or peresent an actual value. Cre example, if the wall colour i	Energy use	
Link are used         ventilated condor         ventilated condor           Exposure         see exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions set as inflar height e.g. grasslands with few well scattered shstructions below 10m, farmland with scattered sheatnuts (e.g. above 3 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           National Construction Code         (NCC) Class         or overhangs or balconies           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NAtHERS software models NCC           Opening percentage         the openability percentage or openable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         a nome that achieves a net zero energy value <sup>6</sup> .         fte well colour is unspecified in the documentation, a provisional value or or size of equipment that is recommended provisional value or metage or perable (moveable) area of doors or windows that is used in ventilation calculations.           Refeactive wrap (also known as roof lights) for NatHERS this is typically an operable (moveable). Acceptable provisional value esined comfired by a suitably qualified person.	Energy value	defined in the ABCB Housing Provisions Standard).
Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, oceant-fortage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, oceant-fortage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions oven 10 m.e.g. uburban housing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions oven 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.           National Construction Code (NCC) Class 1, 2 or 4 buildings and attached Class 10 ab 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 oncentate of medium must be modelled. Acceptable provisional value           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional values are outlined on the NatHERS to achieve the desired confort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as roof light) for NatHERS this is typically an operable (moveave a uning value entinge value).	Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category - open         terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with           Exposure category - protected         terrain with numerous, closely spaced obstructions below 10m e.g. city and industrial areas.           Exposure category - suburban         terrain with numerous, closely spaced obstructions below 10m 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           National Construction Code         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1.2 or 4 buildings and attached Class 10 buildings. Definitions can be found at www.abc.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveabel) area of doors or windows that is used in ventilation calculations.           an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value         a provisional value           Reflective wrap (also known as icol ab be found at www.athers gov.au         this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or ores serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified specified.           Solar heat gain coefficient (SHGC)         the rapit		
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         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of medium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         the site capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the person. Too service of models with an appropriate airgap and emissivity value, it provides 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 greenally does not have a diffuser.           Stading features         includes neighbouring buildin	Exposure category – exposed	
Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.           National Construction Code         the NCC proups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10 a 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 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 province 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 foril light)         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.           Stylight (also known as roof ligh		
Horizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies           National Construction Code (NCC) Class         the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.           Net zero home         a home that achieves a net zero energy value*.           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value 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 cellings. When combined with an appropriate airgap and emissivity value, it provides includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar her factor of incident solar radiation admitted through a window, but direcity transmitted as well as absorbed and subsequently released in	<u>8</u> 21	
Indication is nature from upper levels.       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       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, forces, 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       the fraction of incident radiation admitted through a window, both directly transmitted as well as absorbed and	Exposure category – suburban	
(NCC) Class         Class 1, Z 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 or imedium must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           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 noperable 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 insmits.           Solar heat gain coefficient (SHGC)         Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER)           StrCs         Small-scale Technology Certificates, certifica		from upper levels.
Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.           Provisional value         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au           Recommended capacity         The capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.           Reflective wrap (also known as foll)         can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.           Solar heat gain coefficient (SHGC)         the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subage part of the Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)           Thermal breaks         una atom the a window. The lowere the u-value, the better the insulating ability. <td>(NCC) Class</td> <td>Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.</td>	(NCC) Class	Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
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 recommended to walt and the inal 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.         Stors       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, such as timber battens greater than or equal to 2.0 mm thick or continuous		<u>0</u> 7
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       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)         U-value       the rate	Opening percentage	
Recommended capacity       zone or zone's serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.         Reflective wrap (also known as foil)       can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.         Roof window       for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.         Shading features       includes neighbouring buildings, fences, and wing walls, but excludes eaves.         Skylight (also known as roof lights)       for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.         Solar heat gain coefficient (SHGC)       the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.         STCs       Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER)         are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks         U-value       the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.         u-value       the rate of hea	Provisional value	a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note
foil)       insulativé 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)         u-value       the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.         u-value       the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.         u-value       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 (wing walls), fences, other building, wells), fonces, other building, wells in the building (wing walls), fences, other building, vegetation (prote	Recommended capacity	zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified
Rtock window         space, and generally does not have a diffuser.           Shading features         includes neighbouring buildings, fences, and wing walls, but excludes eaves.           Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.           Solar heat gain coefficient (SHGC)         the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.           STCs         Small-scale Technology Certificates, certificates created by the REC registry for renewable energy Regulator (CER)           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 (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		can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
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 (wing walls), forces, other building, weight, or vertical shading e.g. window swnings or screens but excludes horizontal* or vertical shading	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.
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) 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. 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 building, 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	Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
String       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 (wing walls), fences, other building, 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	Skylight (also known as roof lights)	
Sites         bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER) <sup>+</sup> 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 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	Solar heat gain coefficient (SHGC)	subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
Inermal breaks         Dut is not limited to, materials such as timper 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 building, 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	STCs	bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
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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         Window shading device           Window shading device         device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading	Unconditioned	
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
	Window shading device	device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

## Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938334-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

#### Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

#### Assessed floor area [m2]\*

Conditioned\* 51.7 Unconditioned\* 0.0 Total 51.7 Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 9, 34-36 Light Street and 42 Walker Street,



### Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

#### National Construction Code (NCC) requirements

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

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

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

## 57.9 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Nodelled	22.0	35.9
oad limits	N/A	N/A

#### Features determining load limits

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

## Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

#### Verification

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



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 9, 34-36 Light Street and 42 Walker Street, Casino, NSW, 2470

## About the ratings

#### Thermal performance rating

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

#### Whole of Home performance rating

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

## Heating & Cooling Load Limits

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

## Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

## Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 9, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 6.6 Star Rating as of 29 Jan 2024

					HOUSE
Certificate check	Approva	I Stage	Construe Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	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		ſı	ſı	<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		ñ	ñ	ñ	
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					

0008938334-02 NatHERS Certificate6.6 Star Rating as of 29 Jan 2024					NATION WIRE HOUSE
	Approva	I Stage	Construe Stage	ction	
Certificate check	lecked	thority/ ecked	cked	thority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	RS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e 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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	29.22
Entry Hall	Daytime	4.58
Bedroom 1	Bedroom	10.76
Bathroom	Daytime	7.14
Stair 3	Glazed Common Area	20.13

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

#### Custom windows\*

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

## Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	W1	2400	2400	Awning	45	W	No
Kitchen/Living	ALM-001-01 A	W2	1200	1090	Awning	10	E	No
Bedroom 1	ALM-001-01 A	W3	1200	1570	Awning	10	E	No
Stair 3	ALM-001-01 A	W7	2400	970	Awning	45	E	No
Stair 3	ALM-002-01 A	W8	2400	610	Awning	00	E	No
Stair 3	ALM-001-01 A	W4	2400	970	Awning	45	W	No
Stair 3	ALM-002-01 A	W5	2400	500	Awning	00	W	No
Stair 3	ALM-002-01 A	W6	1540	900	Awning	00	W	No

## HOUSE

## Roof window\* type and performance value

Default roof windows\*

Window ID Window		Maximum		Substitution tolerance ranges		
	dow ID Description U-value* SHGC*		SHGC	SHGC lower limit	SHGC upper limit	
No Data Avai	lable					
Custom roof v	vindows*					
		Maximum		Substitution to	lerance ranges	
All and a second D	Window	in a start and a start				
Window ID	Window Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit	

## Roof window\* schedule

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

## Skylight\* type and performance

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

## Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser
Bathroom	GEN-04-006a	S1	50	0.09	S	None	No

### External door schedule

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

## External wall type

Wall ID	Wall type	Solar absorptance	 Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0	Bulk Insulation R0.7	No
EW-2	Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	3645	W	3300	Yes
Kitchen/Living	EW-1	2700	600	Ν	100	No
Kitchen/Living	EW-1	2700	1945	E	1300	No
Kitchen/Living	EW-1	2700	1100	E	1300	Yes
Kitchen/Living	EW-1	2700	650	E	1300	No
Kitchen/Living	EW-1	2700	2100	S	500	No
Bedroom 1	EW-1	2700	3695	Ν	300	No
Bedroom 1	EW-1	2700	800	Е	500	No
Bedroom 1	EW-1	2700	1600	E	500	Yes
Bedroom 1	EW-1	2700	800	Е	500	No
Bedroom 1	EW-1	2700	2100	S	4200	No
Stair 3	EW-2	2700	2145	E	0	Yes
Stair 3	EW-1	2700	5500	W	0	Yes
Stair 3	EW-1	2700	200	Ν	3800	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Cavity brick	46.44	No Insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	43.47	No insulation

## Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	29.22	None	No Insulation	Ceramic Tiles 8mm
Entry Hall	Concrete Slab, Unit Below 150mm	4.58	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	10.76	None	No Insulation	Carpet 10mm
Bathroom	Concrete Slab, Unit Below 150mm	7.14	None	No Insulation	Ceramic Tiles 8mm
Stair 3	Concrete Slab, Unit Below 150mm	20.13	None	No Insulation	Ceramic Tiles 8mm

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 9, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R2.5	
Entry Hall	Plasterboard on Timber	Bulk Insulation R2.5	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R2.5	
Bathroom	Plasterboard on Timber	Bulk Insulation R2.5	
Stair 3	Plasterboard on Timber	Bulk Insulation R2.5	

## **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Kitchen/Living	13	Exhaust Fans	150	Sealed
Entry Hall	1	Downlights - LED	150	Sealed
Bedroom 1	4	Downlights - LED	150	Sealed
Bathroom	3	Downlights - LED	150	Sealed
Bathroom	3	Exhaust Fans	150	Sealed

## **Ceiling** fans

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

## Roof type

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

## Thermal bridging schedule for steel frame elements

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

## Appliance schedule

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

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



#### Cooling system

Appliance/ system type	Lo	cation I	Fuel type	Minimum efficiency/ performance		Recommended capacity	
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	<sup>-</sup> 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		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.

#### 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

Council required for heating and cooling, based on standard occupancy assumptions. offware for the purpose of the NatHERS assessment. Note, this may not be consistent with the nts. on to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. e ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and expected to require heating and cooling based on standard occupancy assumptions. In some ages. ware that are available on the market in Australia and have a WERS (Window Energy Rating of a specific type of window product and whose properties have been derived by statistical re of how much cooling can be achieved by an air conditioner for a single kWh of electricity ut solar or batteries. g, but not limited to, costs to the building user, the environment and energy networks (as ovisions Standard). in the modelling software and must not be modelled as a door when opening to a minimally uilding.
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in the modelling software and must not be modelled as a door when opening to a minimally puilding.
flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with ad bush blocks, elevated units (e.g. above 3 floors).
paced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
paced obstructions over 10 m e.g. city and industrial areas.
in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies
eir function and use, and assigns a classification code. NatHERS software models NCC ached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
energy value*.
berable (moveable) area of doors or windows that is used in ventilation calculations.
r represent an actual value. For example, if the wall colour is unspecified in the documentation, must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note rs.gov.au
uipment that is recommended by NatHERS to achieve the desired comfort conditions in the a recommendation and the final selection sizing should be confirmed by a suitably qualified
nd ceilings. When combined with an appropriate airgap and emissivity value, it provides
operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic ave a diffuser.
, fences, and wing walls, but excludes eaves.
noulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
iation admitted through a window, both directly transmitted as well as absorbed and SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar
ates, certificates created by the REC registry for renewable energy technologies that may be mall-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)
eater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, ich as timber battens greater than or equal to 20mm thick or continuous thermal breaks such ng or plastic strips
a window. The lower the U-value, the better the insulating ability.
assumed to not require heating and cooling based on standard occupancy assumptions.
in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes he building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
vides shading e.g. window awnings or screens but excludes horizontal* or vertical shading es)

## Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938375-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

## Property

Address

Lot/DP NCC class\* Floor/all Floors Type Casino , NSW , 2470 Lot C,D,E DP 35927 2 G of 1 floors New Home

## Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

## Construction and environment

## Assessed floor area [m2]\*

Conditioned\* 68.0 Unconditioned\* 0.0 Total 68.0 Garage 0.0 Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 10, 34-36 Light Street and 42 Walker Street,



## Accredited assessor

 Name
 Dean Gorman

 Business name
 Greenview Consulting Pty Ltd

 Email
 dean@greenview.net.au

 Phone
 8544 1683

 Accreditation No.
 DMN/13/1645

 Assessor Accrediting Organisation
 Design Matters National

 Declaration of interest
 Declaration completed: no conflicts

Deciaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

#### National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars the more energy efficient

## NATIONWIDE HOUSE ENERGY RATING SCHEME

## 51.0 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Nodelled	18.9	32.1
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=mNKQjZZph . When using either link, ensure you are visiting hstar.com.au



\* Refer to glossary Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



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## **Heating & Cooling Load Limits**

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

## Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

## Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 7.1 Star Rating as of 29 Jan 2024

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



1.1 Star Rating as of 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	lecked	:hority/ ecked	ked	hority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	essment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance asse	ssment is i	not conduc	ted)
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS- stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the	NatHERS	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Cartificate only source the anargy officiancy requirements in the NCC Add	itional requi	romonto the	t must also	be estisfied	include

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

#### Additional notes



## Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	33.38
Hall	Daytime	4.23
Bedroom 2	Bedroom	11.07
Bedroom 1	Bedroom	12.7
Bathroom	Daytime	6.63
Glazed Common A	Glazed Common Area	18.54

## Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

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

## Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	W3	2400	2400	Awning	45	W	No
Kitchen/Living	ALM-001-01 A	W1	1200	1090	Awning	10	Ν	No
Kitchen/Living	ALM-001-01 A	W2	1200	1570	Awning	10	E	No
Bedroom 2	ALM-001-01 A	W5	1200	1570	Awning	10	E	No
Bedroom 1	ALM-001-01 A	W4	1200	1570	Awning	10	W	No
Glazed Common A	ALM-002-01 A	W10	2400	970	Awning	00	E	No
Glazed Common A	ALM-002-01 A	W9	2400	610	Awning	00	E	No
Glazed Common A	ALM-001-01 A	W6	2375	970	Awning	45	W	No
Glazed Common A	ALM-002-01 A	W7	1840	920	Awning	00	W	No
Glazed Common A	ALM-002-01 A	W8	2400	610	Awning	00	W	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

## Roof window\* type and performance value

#### Default roof windows\*

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value* SHGC <sup>*</sup>		SHGC lower limit	SHGC upper limit
No Data Availat	ble				
Custom roof wir	ndows*				
Window ID	Window	Maximum	SHGC*	Substitution tolerance rang	
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit
No Data Availat	hle				

## Roof window\* schedule

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

## Skylight\* type and performance

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

## Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser
Bathroom	GEN-04-006a	S1	50	0.09	Ν	None	No

## External door schedule

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

## External wall type

Wall Wall ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Cavity Brick	0	Bulk Insulation R0.7	No
EW-2 Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470



## 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	3995	W	3350	Yes
Kitchen/Living	EW-1	2700	3450	Ν	700	No
Kitchen/Living	EW-1	2700	1200	Ν	700	Yes
Kitchen/Living	EW-1	2700	4100	Ν	700	No
Kitchen/Living	EW-1	2700	750	E	1000	No
Kitchen/Living	EW-1	2700	1600	E	1000	Yes
Kitchen/Living	EW-1	2700	1645	E	1000	No
Bedroom 2	EW-1	2700	600	Ν	4700	No
Bedroom 2	EW-1	2700	750	E	400	No
Bedroom 2	EW-1	2700	1600	E	400	Yes
Bedroom 2	EW-1	2700	850	E	400	No
Bedroom 2	EW-1	2700	3695	S	300	No
Bedroom 1	EW-1	2700	750	W	400	No
Bedroom 1	EW-1	2700	1650	W	400	Yes
Bedroom 1	EW-1	2700	800	W	400	No
Bedroom 1	EW-1	2700	1500	S	300	No
Bathroom	EW-1	2700	195	S	300	No
Glazed Common A	EW-2	2700	1945	E	100	Yes
Glazed Common A	EW-1	2700	5145	W	100	Yes

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	57.92	No insulation
IW-002	Cavity brick	25.38	No Insulation

## Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	33.38	None	No Insulation	Ceramic Tiles 8mm

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

#### 0008938375-02 NatHERS Certificate



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Hall	Concrete Slab, Unit Below 150mm	4.23	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab, Unit Below 150mm	11.07	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1	Concrete Slab, Unit Below 150mm	12.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Bathroom	Concrete Slab, Unit Below 150mm	6.63	None	No Insulation	Ceramic Tiles 8mm
Glazed Common A	Concrete Slab, Unit Below 150mm	18.54	None	No Insulation	Ceramic Tiles 8mm

## Ceiling type

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

## **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Hall	1	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Bathroom	2	Downlights - LED	150	Sealed
Bathroom	2	Exhaust Fans	150	Sealed

## **Ceiling** fans

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

\* Refer to glossary. Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22) for Unit 10, 34-36 Light Street and 42 Walker Street , Casino , NSW , 2470

0008938375-02 NatHERS Certificate	7.1 Star Rating as of 29 Jan 2024		HOUVSE
Location	Quantity	Diameter [mm]	
Bedroom 1	1	900	

# Roof type

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

# Thermal bridging schedule for steel frame elements

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

# Appliance schedule

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

Note: A flat assumption of 5W/m<sup>2</sup> 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		<b>ibstitution</b> 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 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.
<b>Reflective wrap</b> (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)

\* Refer to glossary.

# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938268-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

#### Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 2 floors New Home

#### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

#### Assessed floor area [m2]\*

Conditioned\* 52.2 Unconditioned\* 6.6 58.8 Total Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 11, 34-36 Light Street and 42 Walker Street,



#### Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

#### National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating

The more stars the more energy efficient

# NATIONWIDE

# 62.8 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	29.4	33.4
oad limits	N/A	N/A

#### Features determining load limits

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

# Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

#### Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate? p=qBOZYTCfA 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:
- NCC Climate Zone 1 of 2
  - Yes No

NA – Not Applicable

Outdoor Living Area:

- Yes No
- NA Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA - Not Applicable

# Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

# Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

#### 6.3 Star Rating as of 29 Jan 2024

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



0008938268-02 NatHERS Certificate6.3 Star Rating as of 29 Jan 2024					HOUSE	
	Approva	Il 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 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 Cartificate only anyong the energy officiancy requirements in the NCC Add	tional rage:	romonto the	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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	26.67
Bedroom 1	Bedroom	12.29
Hallway	Daytime	3.95
Bath	Unconditioned	6.56
Entry	Daytime	1.89
Stair G	Daytime	7.43

# Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

Window ID	Window Maximum		m 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-001-01 A	W8	1200	1570	Awning	10	S	No
Kitchen/Living	ALM-002-01 A	W5	2400	2400	Awning	45	Ν	No
Bedroom 1	ALM-001-01 A	W7	1200	1570	Awning	10	S	No
Bath	ALM-001-01 A	W6	1200	970	Awning	10	Ν	No
Entry	ALM-001-01 A	W4	2400	730	Awning	10	Ν	No
Entry	ALM-002-01 A	W10	1200	1815	Awning	00	E	No
Entry	ALM-002-01 A	W4	1200	1090	Awning	00	E	No
Stair G	ALM-001-01 A	W12	2340	920	Awning	90	S	No
Stair G	ALM-002-01 A	W11	1200	1090	Awning	00	E	No

# Roof window\* type and performance value

Default roof windows\*

Window ID         Mindow Description         U-value*         SHGC*         SHGC lower limit           No Data Available         Custom roof windows*         SHGC*         SHGC*	SHGC upper limi
Custom roof windows*	
Window Maximum Supert Substitution toler	rance ranges
Window ID Description U-value* SHGC* SHGC lower limit	SHGC upper limi
No Data Available	

#### Root window" schedule

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

#### Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

# Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m <sup>2</sup> ] 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 ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Cavity Brick	0	Bulk Insulation R0.7	No
EW-2 Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	700	E	600	No
Kitchen/Living	EW-1	2700	450	S	500	No
Kitchen/Living	EW-1	2700	1650	S	500	No
Kitchen/Living	EW-1	2700	1595	S	500	No
Kitchen/Living	EW-1	2700	400	W	3200	No
Kitchen/Living	EW-1	2700	3645	Ν	3400	Yes
Bedroom 1	EW-1	2700	200	E	4300	No
Bedroom 1	EW-1	2700	800	S	300	No
Bedroom 1	EW-1	2700	1650	S	300	Yes
Bedroom 1	EW-1	2700	750	S	300	No
Bedroom 1	EW-1	2700	4095	W	0	No
Bath	EW-1	2700	1450	Ν	400	No
Bath	EW-1	2700	1000	Ν	400	Yes
Bath	EW-1	2700	745	Ν	400	No
Entry	EW-2	2700	1445	Ν	200	Yes
Entry	EW-1	2700	200	E	0	No
Entry	EW-1	2700	1850	E	0	No
Entry	EW-1	2700	3250	E	0	No
Entry	EW-1	2700	1100	E	0	No
Entry	EW-1	2700	700	E	0	No
Entry	EW-2	2700	1445	S	0	No
Stair G	EW-2	2700	1500	S	1300	No
Stair G	EW-1	2700	3500	E	0	No
Stair G	EW-1	2700	1100	E	0	No
Stair G	EW-1	2700	800	E	0	No

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Cavity Brick	0.00	No insulation
IW-002	Timber Stud Frame, Direct Fix Plasterboard	26.73	No insulation

Cavity brick

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			HOUSE
A	krea [m²]	Bulk insulation	

No Insulation

24.57

Floor type

Wall ID

IW-003

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	26.67	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	12.29	None	No Insulation	Carpet+Rubber Underlay 18mm
Hallway	Concrete Slab, Unit Below 150mm	3.95	None	No Insulation	Ceramic Tiles 8mm
Bath	Concrete Slab, Unit Below 150mm	6.56	None	No Insulation	Ceramic Tiles 8mm
Entry / Stair G	Concrete Timber Framed Above Plasterboard 150mm	-9.62		No Insulation	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 150mm	1.89	None	No Insulation	Ceramic Tiles 8mm
Stair G	Concrete Slab on Ground 100mm	7.43	None	No Insulation	Ceramic Tiles 8mm

# Ceiling type

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

# Ceiling penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Kitchen/Living	11	Downlights - LED	150	Sealed	
Kitchen/Living	11	Exhaust Fans	150	Sealed	
Bedroom 1	5	Downlights - LED	150	Sealed	
Hallway	1	Downlights - LED	150	Sealed	
Bath	2	Downlights - LED	150	Sealed	
Bath	2	Exhaust Fans	150	Sealed	

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Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed	
Entry	4	Downlights - LED	150	Sealed	

# **Ceiling** fans

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

# Roof type

Construction	Added insulation [R-value]	Solar absorptanc	e Roof shade[colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, Anti-glare Up R1.3	30	Light
Corrugated Iron Timber Frame	No Insulation, Only an Air Gap	50	Medium

# Thermal bridging schedule for steel frame elements

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

# Appliance schedule

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

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

#### Cooling system

Appliance/ system type	Lo	cation	Fuel type	eff	inimum iciency/ formance		mended acity	
No Data Available								
Heating system								
Appliance/ system type	Lo	cation	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		ubstitution e ranges upper limit	Assessed daily load [litres]	
No Data Available							[]	



#### Pool/spa equipment

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

# Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

# **Battery** Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



#### Explanatory notes

#### About this report

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

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

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 floor area in the design documents.           Ceiling penetrations         features that require a penetration to the ceiling including downlights, vents, exhaust fans, range hoods, chimneys and fluores that design documents.           COP         Coefficient of performance           Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In soi circumstances it will include garages.           Custom windows         windows lated in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) fraing.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistica methods.           Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ASCE Housing Provisions Standard).           Exposure category – exposed         terrain with no obstructions e.g. Juilding, but not limited to, costs to the building user, the environment and energy networks (as def	
Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with floor area in the design documents.           Ceiling penetrations         features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flu Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights, an heading and cooling ducts.           COP         Coefficient of performance         Coefficient of performance         Coefficient of performance           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) rating.         Default windows indows hat are representative of a specific type of window product and whose properties have been derived by statistic methods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input           Energy value         The sits your homes rating without solar or batteries.           Energy value         The sets on ociety including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure         see exposure categories below.           Exposure         see exposure categories below.           Exposure         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).	
Instant and cooling ducts.           COP         Coefficient of performance           Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In sor circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistica windows.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input           Energy use         This is your homes rating without solar or batteries.           Energy value         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           Exposure         see exposure categories below.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – popen         terrain with numerous, closely spaced obstructions over 10 m e.g. subtrahan housing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 310 m e.g. subrahan, pergolas, carports, or overhangs or balcor from upper levels.	the
Conditioned         a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In soci circumstances it will include garages.           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) rating.           Default windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by 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 minima ventilated corridor in a Class 2 building.           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Exposure category – protected	es.
Custom windows         circumstances it will include garagies.         reference           Custom windows         windows tisted in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rati Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statistica 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 minima ventilated corridor in a Class 2 building.           Exposure         see exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Morizontal shading feature         provides shading to the	
Custom windowsScheme) rating.Default windowswindows that are representative of a specific type of window product and whose properties have been derived by statistical methods.EEREnergy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity. inputEnergy useThis is your homes rating without solar or batteries.Energy valueThe 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 doorthese signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minima ventilated corridor in a Class 2 building.Exposuresee exposure category – exposedExposure category – openterrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).Exposure category – openterrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas. terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas. provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balcor from upper levels.National Construction Code (NCC) Classthe openability percentage or openability percentage or openable (moveable) area of doors or windows that is used in ventilation calculations. an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the ACC groups buildings. Derinitions can be found at www.nathers.gov.auAbore targer of home to a home that achieves a net zero ene	ıe
Default windows         methods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity including, but not limited to costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).           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 minima ventilated corridor in a Class 2 building.           Exposure         see exposure category – exposed           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland v scattered dystructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – protected         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Provisional Shading feature         provides shading to the 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 v	ıg
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 minima 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 no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. eaves, verandahs, pergolas, carports, or overhangs or balcor 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 (mov	1
Energy valueThe 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 doorthese signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minima ventilated corridor in a Class 2 building.Exposuresee exposure categories below.Exposure category – exposedterrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).Exposure category – openterrain with no obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland v scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).Exposure category – suburbanterrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.Provides shading featureprovides shading to the buildings by their function and use, and assigns a classification code. NatHERS software models NCC 	
Linetgy value         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 minima ventilated corridor in a Class 2 building.           Exposure         see exposure category – exposed         terrain with no obstructions e.g. fat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with no obstructions e.g. fat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.           Exposure category – suburban         terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.           Provides shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balcor 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           Opening percentage         the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.	
Entraince door       ventilated córridor 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 v scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).         Exposure category – open       terrain with numerous, closely spaced obstructions over 10 m e.g. suburban housing, heavily vegetated bushland areas.         Exposure category – suburban       terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.         Provisional shading feature       provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balcor from upper levels.         National Construction Code (NCC) Class       the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.         Net zero home       a home that achieves a net zero energy value*.         Opening percentage       the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.         an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documenta a provisional value of	
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Recommended capacity this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably gualifiered to the desired comfort.	ote
person.	
Reflective wrap (also known as foil) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.	
Roof window for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an space, and generally does not have a diffuser.	ittic
Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves.	
Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.	
Solar heat gain coefficient (SHGC) the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less the still transmits.	olar
STCs Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulator (CER)	
Thermal breaks are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This inclu but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal breaks su as polystyrene insulation sheeting or plastic strips	les, ch
U-value the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.	
<b>Unconditioned</b> a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.	
Vertical shading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Incluing privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage tree)	ies es).
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)	

\* Refer to glossary.

# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938284-02

Unit 12, 34-36 Light Street and 42 Walker Street,

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

### Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

#### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

#### Assessed floor area [m2]\* Conditioned\* 48.2 Unconditioned\* 8.3

56.6 0.0



Total

Garage

#### Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation **Design Matters National** Declaration completed: no conflicts

Dean Gorman Greenview Consulting Pty Ltd dean@greenview.net.au 8544 1683 DMN/13/1645

Exposure type

NatHERS climate zone

Suburban

9 Amberlev

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

# 34.4 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
lodelled	12.0	22.4
oad limits	N/A	N/A

#### Features determining load limits

Floor Type	NU 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=rGdTDBVtP 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



\* Refer to glossary.

#### 8.3 Star Rating as of 29 Jan 2024

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



0008938284-02 NatHERS Certificate8.3 Star Rating as of 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	lecked	thority/ ecked	cked	thority ecked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	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 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	S assessi	ment)		
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Cartificate only covers the energy efficiency requirements in the NCC. Add	tional roqui	romonte the	t must also	he estisfied	Linclude

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 <sup>2</sup> ]
Stair 1	Glazed Common Area	35.61
Kitchen/Living	Kitchen/Living	28.58
Bedroom 1	Bedroom	15.18
Hallway	Daytime	4.47
Bath	Unconditioned	8.32

# Window and glazed door type and performance

#### Default windows\*

Window ID	Window	Maximum SHGC*		Substitution to	lerance ranges
	Description	U-value*	3660	SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

#### Custom windows\*

Window ID	Window	Maximum	SHGC* -	Substitution tolerance ranges		
WINGOW ID	Description	U-value*	3160	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*
Stair 1	ALM-001-01 A	W2	2400	1940	Awning	45	Ν	No
Stair 1	ALM-001-01 A	W1	2400	1940	Awning	45	S	No
Kitchen/Living	ALM-001-01 A	W4	1200	1570	Awning	10	S	No
Kitchen/Living	ALM-002-01 A	W3	2400	2400	Awning	45	Ν	No
Bedroom 1	ALM-001-01 A	W6	1200	1570	Awning	10	S	No
Bath	ALM-001-01 A	W5	1200	970	Awning	90	Ν	No

# Roof window\* type and performance value

#### Default roof 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						



Default roof windows\*

Window ID	Window	Maximum SHGC* -		Substitution tolerance range		
Window ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
Custom roof w	the states *					
Custom roor w	/INDOWS"					
Window ID	Windows	Maximum	SHGC*	Substitution to	lerance ranges	

# Roof window\* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data 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]	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 Wall sl absorptance [colou		Reflective wall wrap*
EW-1	Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No
EW-2	Cavity Brick	0	Bulk Insulation R0.7	No



# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Stair 1	EW-1	2700	2600	Ν	0	Yes
Stair 1	EW-1	2700	5900	Е	4100	No
Stair 1	EW-1	2700	2845	S	0	Yes
Kitchen/Living	EW-2	2700	795	S	400	No
Kitchen/Living	EW-2	2700	1600	S	400	Yes
Kitchen/Living	EW-2	2700	1400	S	400	No
Kitchen/Living	EW-2	2700	700	W	400	No
Kitchen/Living	EW-2	2700	3740	Ν	3600	Yes
Bedroom 1	EW-2	2700	600	E	200	No
Bedroom 1	EW-2	2700	800	S	300	No
Bedroom 1	EW-2	2700	1600	S	300	Yes
Bedroom 1	EW-2	2700	1000	S	300	No
Bedroom 1	EW-2	2700	600	W	4200	No
Bath	EW-2	2700	995	Ν	400	No
Bath	EW-2	2700	1050	Ν	400	Yes
Bath	EW-2	2700	1350	Ν	400	No
Bath	EW-2	2700	600	Е	200	No

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Cavity brick	49.95	No Insulation
IW-002	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-003	Timber Stud Frame, Direct Fix Plasterboard	33.21	No insulation

# Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Stair 1	Concrete Slab, Unit Below 150mm	35.61	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab, Unit Below 150mm	28.58	None	No Insulation	Ceramic Tiles 8mm

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Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1	Concrete Slab, Unit Below	15.18	None	No	Carpet+Rubber Underlay
Degroom I	150mm	13.10	NONE	Insulation	18mm
Hallway	Concrete Slab, Unit Below	4.47	None	No	Ceramic Tiles 8mm
	150mm	4.47	NOTE	Insulation	
Bath	Concrete Slab, Unit Below	8.32	None	No	Ceramic Tiles 8mm
	150mm	0.32	NONE	Insulation	

Addad

# Ceiling type

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

# Ceiling penetrations\*

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

# **Ceiling** fans

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

# Roof type

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



# Thermal bridging schedule for steel frame elements

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

Appliance schedule

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

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

#### Cooling system

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

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

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#### Glossary

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

\* Refer to glossary.

# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938318-01

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

# Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

#### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

#### Assessed floor area [m2]\*

Conditioned\* 71.3 Unconditioned\* 0.0 Total 71.3 Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberley

Unit 13, 34-36 Light Street and 42 Walker Street,



#### Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

# 46.6 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Adelled	22.6	24.0
oad limits	N/A	N/A

#### Features determining load limits

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

# Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

#### Verification

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

ICC Climate Zone 1 of 2

Yes No

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

# Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

# Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

#### 7.4 Star Rating as of 29 Jan 2024

Certificate check	Approva	Il Stage	Constru Stage	ction	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Note: The boxes indicate when and by whom each item should be checked. It is not mandatory to complete this checklist.	Assesso	Consent Surveyo	Builder	Consent Surveyo	Occupai
Genuine certificate check	<u> </u>			·	
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
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					



0008938318-01 Nathers Certificate 7.4 Star Rating as of 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	ecked	hority/ ecked	ked	hority scked	Other
Continued	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
Additional NCC requirements for thermal performance (not inclu	uded in t	he NatHE	ERS asse	ssment)	
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e perform	ance 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	·	n	ň	ň	

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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	35.14
Hall/LDY	Daytime	5.09
Bedroom 1	Bedroom	13.76
Bedroom 2	Bedroom	11.38
Bathroom	Daytime	5.91
Stair 1	Glazed Common Area	36.86

# Window and glazed door type and performance

#### Default windows\*

Window ID Window		Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description	U-value*	3660	SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

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

# Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-001-01 A	W10	1200	1570	Awning	10	W	No
Kitchen/Living	ALM-002-01 A	n/a	2400	2400	Awning	45	S	No
Bedroom 1	ALM-001-01 A	W11	1200	1570	Awning	10	S	No
Bedroom 2	ALM-001-01 A	W9	1200	1570	Awning	10	W	No
Stair 1	ALM-001-01 A	W7	2400	1940	Awning	45	Ν	No
Stair 1	ALM-001-01 A	W6	2400	1940	Awning	45	S	No

# Roof window\* type and performance value

#### Default roof windows\*

Window ID	Description			Substitution to	lerance ranges
	ndow ID Description U-value* SHGC* –		SHGC lower limit	SHGC upper limit	
No Data Availab	ble				
Custom roof win	ndows*				
	Window	Maximum	Maximum Substitut	Substitution tolerance range	
Window ID	Description	U-value*	SHGC*	SHGC lower limit	SHGC upper limit

#### Roof window\* schedule

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

# Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame	0.5

# Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orientation	Outdoor shade	Diffuser
Bathroom	GEN-04-008a	S1	50	0.09	W	None	No

#### External door schedule

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

# External wall type

Wall ID	Wall type	Solar absorptance	 Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Cavity Brick	0	Bulk Insulation R0.7	No
EW-2	Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	1900	W	700	No
Kitchen/Living	EW-1	2701	1700	W	700	Yes
Kitchen/Living	EW-1	2700	895	W	700	No
Kitchen/Living	EW-1	2700	4200	S	4900	Yes
Bedroom 1	EW-1	2700	4395	W	4900	No
Bedroom 1	EW-1	2700	1200	Е	250	No
Bedroom 1	EW-1	2700	1000	S	450	No
Bedroom 1	EW-1	2701	1600	S	475	No
Bedroom 1	EW-1	2700	1000	S	500	No
Bedroom 2	EW-1	2700	195	W	700	No
Bedroom 2	EW-1	2701	1650	W	700	Yes
Bedroom 2	EW-1	2700	1350	W	700	No
Stair 1	EW-2	2700	2500	Ν	100	Yes
Stair 1	EW-2	2700	5800	Е	0	No
Stair 1	EW-2	2700	2945	S	200	Yes

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	68.31	No insulation
IW-002	Cavity brick	46.17	No Insulation

# Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	35.14	None	No Insulation	Ceramic Tiles 8mm
Hall/LDY	Concrete Slab, Unit Below 150mm	5.09	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	13.76	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab, Unit Below 150mm	11.38	None	No Insulation	Carpet 10mm

0008938318-01 NatHERS Certificate



Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering	
Bathroom	Concrete Slab, Unit Below 150mm	5.91	None	No Insulation	Ceramic Tiles 8mm	
Stair 1	Concrete Slab, Unit Below 150mm	36.86	None	No Insulation	Ceramic Tiles 8mm	

# Ceiling type

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

# **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Hall/LDY	1	Downlights - LED	150	Sealed
Hall/LDY	1	Exhaust Fans	150	Sealed
Bedroom 1	5	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bathroom	2	Downlights - LED	150	Sealed
Bathroom	2	Exhaust Fans	150	Sealed

# **Ceiling** fans

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



#### Roof type

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

### Thermal bridging schedule for steel frame elements

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

# Appliance schedule

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

Note: A flat assumption of 5W/m<sup>2</sup> 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				
	Hot	Minimum	Zone 3 Sub	stitution Assess

Zone 3 Water Appliance/ system type Fuel type tolerance ranges daily load efficiency STC [litres] **CER Zone** /STC lower limit upper limit No Data Available Pool/spa equipment Minimum Recommended Appliance/ system type **Fuel type** efficiency/ capacity performance No Data Available

\* Refer to glossary.



# **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

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 in the design documents.           Ceiling penetrations         features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys an Exoludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans, pendant lights hating 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 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 Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by statimethods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of elect input           Entrace door         The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (a defined in the ABCB Housing Provisions Standard).           Exposure         see exposure category or poen           Exposure         see exposure category uselolow.	I flues. and some Rating stical icity
Assessed floor area         the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent floor area in the design documents.           Ceiling penetrations         features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys an Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights healing and cooling ducts.           COP         Coefficient of performance           Custom windows         windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by stati methods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of elect input           Energy value         The net cost to society including, but not limited to costs to the building user, the environment and energy networks (a defined in the ABCB Housing Provisions Standard).           Exposure category – open         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 100 floor defined in the obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmla scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland	I flues. and some Rating stical icity
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Custom windows         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 Scheme) rating.           Default windows         windows that are representative of a specific type of window product and whose properties have been derived by stati methods.           EER         Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of elect 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 (a 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 min ventilated corridor in a Class 2 building.           Exposure category – exposed         terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floc terrain with new obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmla 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 area.           Morizontal shading feature         provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or ove	Rating stical icity
Custom windowsScheme) rating.Default windowsScheme) rating.Default windowswindows that are representative of a specific type of window product and whose properties have been derived by statiEEREnergy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electEnergy useThis is your homes rating without solar or batteries.Energy valueThe net cost to society including, but not limited to, costs to the building user, the environment and energy networks (a defined in the ABCB Housing Provisions Standard).Entrance doorthese signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a min ventilated corridor in a Class 2 building.Exposuresee exposure categories below.Exposure category – exposedterrain with no obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmla scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).Exposure category – protectedterrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland are terrain with numerous, closely spaced obstructions over 10 m e.g. eaves, verandahs, pergolas, carports, or overhangs or ba from upper levels.National Construction Code (NCC) Classthe NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.Net zero homea home that achieves a net zero energy value*.Opening percentagethe openability percentage or operable (moveable) are	icity
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Link         input <sup>2</sup> 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 (a 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 min 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 floc terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmla scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).           Exposure category – open         terrain with numerous, closely spaced obstructions over 10 m e.g. suburban housing, heavily vegetated bushland are terrain with numerous, closely spaced obstructions over 10 m e.g. eaves, verandahs, pergolas, carports, or overhangs or barrow 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 windo	6
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an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the docum	
an assumed value that does not represent an actual value. For example, if the wall colour is unspectified in the docum	<u></u>
Provisional value a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technic and can be found at www.nathers.gov.au	al Note
Recommended capacity this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably quarter of the service	the ified
Reflective wrap (also known as foil) can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provide 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 space, and generally does not have a diffuser.	an attic
Shading features includes neighbouring buildings, fences, and wing walls, but excludes eaves.	
Skylight (also known as roof lights) for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.	
Solar heat gain coefficient (SHGC) the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the least it transmits.	ss solar
STCs Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that n 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 is but is not limited to, materials such as timber battens greater than or equal to 20mm thick or continuous thermal break as polystyrene insulation sheeting or plastic strips	cludes, such
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 assumption	
Vertical shading features provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. In privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage)	` <u> </u>
Window shading device device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.g. window awnings or screens but excludes horizontal* or vertical shading e.	cludes

\* Refer to glossary.

# Nationwide House Energy Rating Scheme<sup>®</sup> NatHERS<sup>®</sup> Certificate No. 0008938342-02

Generated on 29 Jan 2024 using BERS Pro v5.1.5 (3.22)

#### Property

Address

Lot/DP NCC class\* Floor/all Floors Type

Casino, NSW, 2470 Lot C.D.E DP 35927 2 G of 1 floors New Home

#### Plans

Main plan Prepared by Rev: H Date: 12/01/2024 Brewster Murray Pty Ltd

# Construction and environment

#### Assessed floor area [m2]\*

Conditioned\* 63.9 Unconditioned\* 7.5 Total 714 Garage 0.0

Exposure type Suburban NatHERS climate zone 9 Amberlev

Unit 14, 34-36 Light Street and 42 Walker Street,



#### Accredited assessor

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

Declaration of interest

NCC Requirements

NCC provisions Strate/Territory variation Volume One

Yes

National Construction Code (NCC) requirements

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

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

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

# 39.7 MJ/m<sup>2</sup>

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/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Nodelled	10.9	28.8
oad limits	N/A	N/A

#### Features determining load limits

Floor Type	N/A
(lowest conditioned area)	1907
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=MbtWfRZhB. When using either link, ensure you are visiting hstar.com.au





#### Thermal performance rating

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

#### Whole of Home performance rating

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

#### **Heating & Cooling Load Limits**

#### Additional information

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

#### Setting Options:

Floor Type:

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

NA – Not Applicable

Outdoor Living Area:

Yes No

NA – Not Applicable

Outdoor Living Area Ceiling Fan:

Yes No

NA – Not Applicable

# Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

# Predicted Whole of Home annual impact by appliance

#### Energy use



Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

Cost



\* Refer to glossary.

#### 7.9 Star Rating as of 29 Jan 2024

Certificate check	Approva	I Stage	Constru Stage	ction	HOUVE AREA (
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	Conser Survey	Builder	Conser Survey	Occupa
Genuine certificate check	<u> </u>	^		^	
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
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					



0008938342-02 NatHERS Certificate       7.9 Star Rating as of 29 Jan 2024					HOUSE
	Approva	al Stage	Constru Stage	ction	
Certificate check	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	Occupancy/Other
	Ass	Con Sur	Buil	Con Sur	Occ
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 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 <sup>2</sup> ]
Kitchen/Living	Kitchen/Living	33.47
Hall	Daytime	4.74
Bedroom 1	Bedroom	14.81
Bedroom 2	Bedroom	10.87
Bathroom	Unconditioned	7.49
Glazed Common A	Glazed Common Area	5.9

# Window and glazed door type and performance

#### Default windows\*

Window ID Window Maximu		Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description	U-value*		SHGC lower limit	SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74	

#### Custom windows\*

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

# Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-002-01 A	W3	2400	2400	Awning	45	Ν	No
Kitchen/Living	ALM-001-01 A	W4	1200	1570	Awning	10	E	No
Bedroom 1	ALM-001-01 A	W6	1200	1570	Awning	10	Ν	No
Bedroom 2	ALM-001-01 A	W1	1200	1570	Awning	10	W	No
Bathroom	ALM-001-01 A	W2	1200	970	Awning	10	W	No
Glazed Common A	ALM-001-01 A	W5	2400	1940	Awning	45	Ν	No

# Roof window\* type and performance value

#### Default roof windows\*

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

#### Roof window\* schedule

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

# Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

# Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m <sup>2</sup> ] 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 ID type	Solar Wall shade absorptance [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1 Cavity Brick	0	Bulk Insulation R0.7	No
EW-2 Metal Clad Timber Stud Frame Direct Fix	0	Bulk Insulation R2.5	No



# External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-1	2700	4145	Ν	3500	Yes
Kitchen/Living	EW-1	2700	6200	E	300	No
Bedroom 1	EW-1	2700	4195	W	750	No
Bedroom 1	EW-1	2700	1100	Ν	1200	No
Bedroom 1	EW-1	2700	1650	Ν	1200	Yes
Bedroom 1	EW-1	2700	1000	Ν	1200	No
Bedroom 1	EW-1	2700	2300	E	4450	No
Bedroom 2	EW-1	2700	1000	W	750	No
Bedroom 2	EW-1	2700	1650	W	750	Yes
Bedroom 2	EW-1	2700	445	W	750	No
Bathroom	EW-1	2700	1045	W	750	No
Bathroom	EW-1	2700	1000	W	750	Yes
Bathroom	EW-1	2700	1445	W	750	No
Glazed Common A	EW-2	2700	2645	Ν	100	No
Glazed Common A	EW-2	2700	2300	E	100	No

# Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	TimberStud Frame, Brick Veneer	0.00	No insulation
IW-002	Cavity brick	17.42	No Insulation
IW-003	Timber Stud Frame, Direct Fix Plasterboard	44.28	No insulation

# Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living	Concrete Slab, Unit Below 150mm	33.47	None	No Insulation	Ceramic Tiles 8mm
Hall	Concrete Slab, Unit Below 150mm	4.74	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab, Unit Below 150mm	14.81	None	No Insulation	Carpet 10mm
Bedroom 2	Concrete Slab, Unit Below 150mm	10.87	None	No Insulation	Carpet 10mm

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Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]		UNITY OF AN ACCOUNT
Bathroom	Concrete Slab, Unit Below 150mm	7.49	None	No Insulation	Ceramic Tiles 8mm	
Glazed Common A	Concrete Slab, Unit Below 150mm	5.90	None	No Insulation	Ceramic Tiles 8mm	

# Ceiling type

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

# **Ceiling** penetrations\*

Location	Quantity	Туре	Diameter [mm]	Sealed/unsealed
Kitchen/Living	14	Downlights - LED	150	Sealed
Kitchen/Living	14	Exhaust Fans	150	Sealed
Hall	2	Downlights - LED	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Bathroom	3	Downlights - LED	150	Sealed
Bathroom	3	Exhaust Fans	150	Sealed

# **Ceiling** fans

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

# Roof type

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



#### Thermal bridging schedule for steel frame elements

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

#### Appliance schedule

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

Note: A flat assumption of 5W/m<sup>2</sup> 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 ïciency/ formance		mended acity
No Data Available							
Heating system							
Appliance/ system type	Lo	cation F	uel 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							
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 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.
<b>Reflective wrap</b> (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)

\* Refer to glossary.