

Nationwide House Energy Rating Scheme® Class 2 Summary

NatHERS® Certificate No. #HR-RE8UU4-01

Generated on 30 Sep 2024 using Hero 4.1

Property

Address 69 Trafalgar st & 2-6 Gover street, Peakhurst,
NSW, 2210
Lot/DP 121,162,163 & 164/DP36317
NatHERS climate zone 56 - Mascot AMO



Accredited assessor

Name Nermein Loka
Business name Loka Consulting Engineers
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Phone +61 297488742
Accreditation No. 101399
Assessor Accrediting Organisation ABSA

Verification

To verify this certificate,
scan the QR code or visit
<http://www.hero-software.com.au/pdf/HR-RE8UU4-01>.
When using either link,
ensure you are visiting
<http://www.hero-software.com.au>



National Construction Code (NCC) requirements

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

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

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

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

Thermal performance Star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

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

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

NCC heating and cooling maximum loads MJ/m².yr

Limits taken from ABCB Standard 2022

	Heating	Cooling
Average load	18.5	6.2
Maximum load	31.7	15.3
Average limit	29.7	21.2
Maximum limit	32.9	20.4

Whole of Home performance rating

No Whole of Home
performance rating
generated for this
certificate or not
completed for all
dwellings.

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-OAMIE4-01	U01	5.8 (33)	6.5 (20)	12.3	8.9	n/a
HR-COLIH6-01	U02	10.8 (33)	10.9 (20)	21.7	7.9	n/a
HR-DI179K-01	U03	18.2 (33)	6.5 (20)	24.7	7.5	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-JWRZ6E-01	U04	7.5 (33)	3.5 (20)	11.0	9.2	n/a
HR-CE0IR3-01	U05	15.1 (33)	4.9 (20)	19.9	8.1	n/a
HR-OUWB2K-01	U06	26.4 (33)	2.3 (20)	28.7	7.1	n/a
HR-FUZB8Q-01	U07	31.2 (33)	3.0 (20)	34.2	6.4	n/a
HR-5J2D3Z-01	U08	8.4 (33)	3.9 (20)	12.3	8.9	n/a
HR-8PHI80-01	U09	1.8 (33)	5.9 (20)	7.7	9.7	n/a
HR-NWC6ML-01	U10	30.3 (33)	2.1 (20)	32.4	6.7	n/a
HR-0GNCIU-01	U11	23.4 (33)	3.0 (20)	26.4	7.4	n/a
HR-TEFTRK-01	U12	9.5 (33)	8.3 (20)	17.8	8.3	n/a
HR-1E33U5-01	U13	15.8 (33)	11.2 (20)	26.9	7.3	n/a
HR-D8PHQY-01	U14	22.5 (33)	8.7 (20)	31.1	6.9	n/a
HR-Q4H8AC-01	U15	22.8 (33)	4.3 (20)	27.1	7.3	n/a
HR-YA3O41-01	U16	20.8 (33)	6.4 (20)	27.2	7.3	n/a
HR-5C1OTX-01	U17	27.5 (33)	3.0 (20)	30.5	6.9	n/a
HR-U41ZTB-01	U18	31.7 (33)	4.4 (20)	36.2	6.2	n/a
HR-KGD7O3-01	U19	7.3 (33)	4.6 (20)	11.9	9.0	n/a
HR-MUQUIR-01	U20	7.2 (33)	5.1 (20)	12.3	8.9	n/a
HR-Q0NU6I-01	U21	25.0 (33)	4.9 (20)	29.8	7.0	n/a
HR-SFKU9F-01	U22	25.9 (33)	3.5 (20)	29.4	7.1	n/a
HR-HMZ2GP-01	U23	14.7 (33)	10.2 (20)	24.9	7.5	n/a
HR-DFVZTR-01	U24	22.2 (33)	15.3 (20)	37.4	6.1	n/a
HR-BOR8P6-01	U25	25.6 (33)	8.5 (20)	34.1	6.4	n/a
HR-JL9RCW-01	U26	13.5 (33)	6.0 (20)	19.5	8.2	n/a
HR-HMK9D6-01	U27	15.1 (33)	10.2 (20)	25.3	7.4	n/a
HR-L37LQC-01	U28	19.7 (33)	5.1 (20)	24.8	7.5	n/a
HR-P2SY7Q-01	U29	31.3 (33)	2.8 (20)	34.1	6.4	n/a
HR-KWRL4B-01	U30	5.2 (33)	7.3 (20)	12.4	8.9	n/a
HR-2996L6-01	U31	10.1 (33)	7.0 (20)	17.1	8.4	n/a
HR-620R0J-01	U32	27.1 (33)	8.3 (20)	35.4	6.3	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-U5VHG5-01	U33	31.1 (33)	5.6 (20)	36.7	6.2	n/a
Averages	33x (Total)	18.5	6.2	24.7	7.6	n/a
Maximum Loads and Minimum Ratings		31.7	15.3	37.4	6.1	n/a

Explanatory notes

About the ratings

The thermal performance star rating in this Certificate is the average rating of all NCC Class 2 dwellings in an apartment block. The Whole of Home performance rating in this Certificate is the lowest rating for the 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. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes societal cost. 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.

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

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

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-OAMIE4-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U01, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)* **Exposure Type**

Conditioned* 69.2 Suburban

Unconditioned* 6.4 **NatHERS climate zone**

Total 75.6 56 - Mascot AMO

Garage 0.0



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

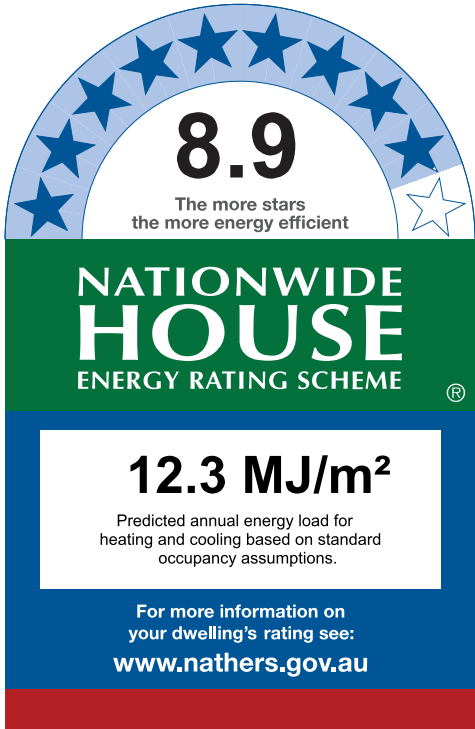
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	5.8	6.5
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-OAMIE4-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom 2	Bedroom	11.39
Bedroom 1	Bedroom	13.68
Kitchen/living	Kitchen/Living	44.17
Bathroom	Unconditioned	6.41

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-001-01 A	W05-B	600	835	Awning	90	E	None
Bedroom 1	ALM-002-01 A	W05-A	600	835	Fixed	0	E	None
Bedroom 1	ALM-001-01 A	W04	2200	980	Awning	60	N	None
Bedroom 2	ALM-001-01 A	W17	2200	980	Awning	60	E	None
Kitchen/living	ALM-001-01 A	W08-B	2200	600	Awning	60	N	None
Kitchen/living	ALM-002-01 A	W08-A	2200	1160	Fixed	0	N	None
Kitchen/living	ALM-001-01 A	W12	2400	1000	Hinged Door	90	E	None
Kitchen/living	ALM-002-01 A	W23	2440	2410	Sliding Door	45	N	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/living	ALM-001-01 A	W16-B	2200	600	Awning	60	E	None
Kitchen/living	ALM-002-01 A	W16-A	2200	1160	Fixed	0	E	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/living	2100	920	90	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11-A	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.30	Light	2.00	No

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11-B	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	0.00	No
AAC-200-NONREFL-CAV11-C	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	2.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11-B	2900	2176	S		No
Bedroom 1	AAC-200-NONREFL-CAV11-C	2900	3083	E		Yes
Bedroom 1	AAC-200-NONREFL-CAV11-C	2900	1388	S		Yes
Bedroom 1	AAC-200-NONREFL-CAV11-C	2900	1280	N		Yes
Bedroom 2	AAC-200-NONREFL-CAV11-A	2900	2968	E		Yes
Bedroom 2	AAC-200-NONREFL-CAV11-A	2900	594	S		Yes
Bedroom 2	AAC-200-NONREFL-CAV11-B	2900	3249	S		No
Kitchen/living	AAC-200-NONREFL-CAV11-A	2900	3408	N		Yes
Kitchen/living	AAC-200-NONREFL-CAV11-A	2900	1551	E	3881	Yes
Kitchen/living	AAC-200-NONREFL-CAV11-A	2900	3969	N	2829	Yes
Kitchen/living	AAC-200-NONREFL-CAV11-A	2900	4038	E		Yes
Kitchen/living	AAC-200-NONREFL-CAV11-B	2900	1122	S		No
Kitchen/living	AAC-200-NONREFL-CAV11-B	2900	3224	W		No

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	24.0	0.00
INT-PB	Internal Plasterboard Stud Wall	35.0	0.00
INT-PB	Internal Plasterboard Stud Wall	12.8	2.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	10.2	Enclosed (Disc.)	2.00	Carpet
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.4	N/A	2.00	Carpet
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	11.4	Enclosed (Disc.)	2.00	Carpet
Kitchen/living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	44.2	Enclosed (Disc.)	2.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorbptance	Roof Colour
None			

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)
None				



Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy schedule

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery schedule

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

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 home's energy value*.

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

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

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-COLIH6-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U02, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*

Conditioned*	43.9	Exposure Type	Suburban
Unconditioned*	6.5	NatHERS climate zone	
Total	50.4		56 - Mascot AMO
Garage	0.0		



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

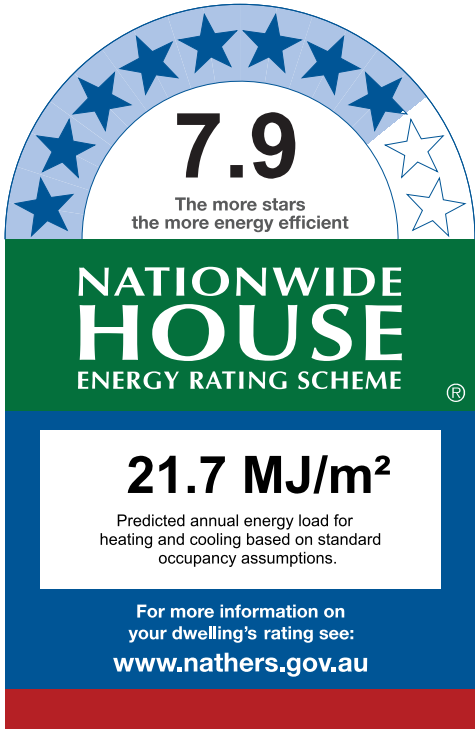
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	10.8	10.9
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-COLIH6-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	15.90
Bathroom	Unconditioned	6.50
Kitchen/living	Kitchen/Living	28.02

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-001-01 A	W07	2200	980	Awning	60	N	None
Bedroom	ALM-001-01 A	W02	2200	980	Awning	60	W	None
Kitchen/living	ALM-001-01 A	W13	2200	1760	Awning	30	W	None
Kitchen/living	ALM-001-01 A	W09-B	1300	800	Awning	90	W	None
Kitchen/living	ALM-002-01 A	W09-A	1300	800	Fixed	0	W	None
Kitchen/living	ALM-002-01 A	W24	2440	2410	Sliding Door	45	N	None



Roof window type and performance value

Default* roof windows

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

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/living	2100	920	90	E

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.30	Light	0.00	No

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	3020	S		No
Bedroom	BV-REFL-CAV-A	2900	3063	N		Yes
Bedroom	BV-REFL-CAV-A	2900	2417	W	3736	Yes
Bedroom	BV-REFL-CAV-A	2900	2794	W		Yes
Kitchen/living	AAC-200-NONREFL-CAV11	2900	3291	E		No
Kitchen/living	BV-REFL-CAV-B	2900	6689	W		No
Kitchen/living	BV-REFL-CAV-B	2900	3648	N	2471	Yes
Kitchen/living	BV-REFL-CAV-B	2900	3664	S		Yes
Kitchen/living	BV-REFL-CAV-B	2900	177	N	2578	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	24.0	0.00
INT-PB	Internal Plasterboard Stud Wall	13.4	2.00
INT-PB	Internal Plasterboard Stud Wall	6.8	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	15.9	Enclosed (Disc.)	2.00	Carpet
Kitchen/living	CSOG-200: Concrete Slab on Ground (200mm)	24.4	N/A	2.00	Tile (8mm)

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.7	Enclosed (Disc.)	2.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

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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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-DI179K-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U03, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	47.7	Suburban
Unconditioned*	6.1	NatHERS climate zone
Total	53.9	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

24.7 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	18.2	6.5
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-DI179K-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	6.15
Bedroom	Bedroom	12.86
Kitchen/Living	Kitchen/Living	34.84

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
BRD-028-08 A	ESS Awning Window (52mm) DG 4-6-4	4.62	0.55	0.52	0.58
BRD-101-09 A	Signature Sliding Door 100TB DG 4mmET/12Ar/4mmET	2.08	0.47	0.45	0.49
BRD-108-09 A	Signature Fixed Lite INT 100TB DG 4mmET/12Ar/4mmET	1.78	0.51	0.48	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	BRD-101-09 A	W21	2440	2410	Sliding Door	45	S	None
Bedroom	BRD-028-08 A	W18	2200	980	Awning	60	W	None
Bedroom	BRD-028-08 A	W19	2200	980	Awning	60	W	None
Kitchen/Living	BRD-028-08 A	W20-A	1430	600	Awning	90	S	None
Kitchen/Living	BRD-108-09 A	W20-B	1430	1160	Fixed	0	S	None
Kitchen/Living	BRD-101-09 A	W22	2440	2410	Sliding Door	45	W	None
Kitchen/Living	BRD-028-08 A	W06-B	600	835	Awning	90	E	None
Kitchen/Living	BRD-108-09 A	W06-A	600	835	Fixed	0	E	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	BRD-108-09 A	W14	1400	900	Fixed	0	SW	None
Kitchen/Living	BRD-028-08 A	W15	1400	980	Awning	90	SW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	N

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11-A	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	0.00	No



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11-B	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	2.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11-A	2900	2092	N		No
Bathroom	AAC-200-NONREFL-CAV11-A	2900	2963	E		No
Bedroom	AAC-200-NONREFL-CAV11-A	2900	3862	N		No
Bedroom	BV-REFL-CAV	2900	3765	S	3473	Yes
Bedroom	BV-REFL-CAV	2900	3423	W		Yes
Kitchen/Living	BV-REFL-CAV	2900	2677	S		Yes
Kitchen/Living	BV-REFL-CAV	2900	3413	W	3923	Yes
Kitchen/Living	AAC-200-NONREFL-CAV11-A	2900	1091	N		No
Kitchen/Living	AAC-200-NONREFL-CAV11-A	2900	2726	N		No
Kitchen/Living	BV-REFL-CAV	2900	3646	E		Yes
Kitchen/Living	BV-REFL-CAV	2900	875	NE		Yes
Kitchen/Living	AAC-200-NONREFL-CAV11-B	2900	3395	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	590	N		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	12.0	0.00
INT-PB	Internal Plasterboard Stud Wall	12.7	2.00
INT-PB	Internal Plasterboard Stud Wall	8.0	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.1	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	12.9	Enclosed (Disc.)	2.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	34.8	Enclosed (Disc.)	2.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
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Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
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Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-JWRZ6E-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U04, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	2 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 52.4	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 60.2	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

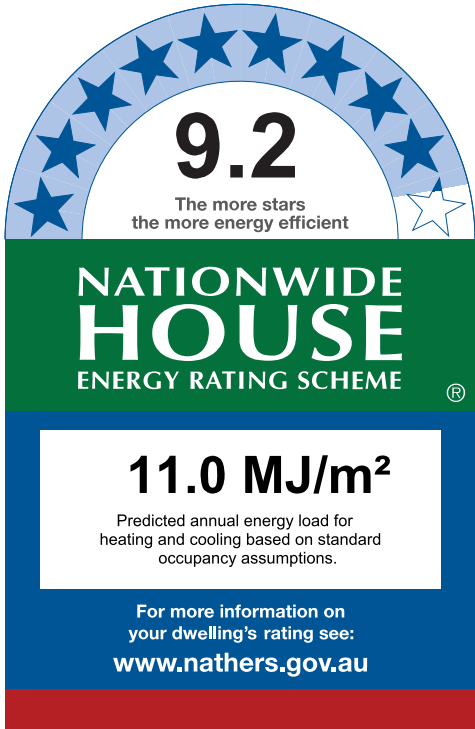
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	7.5	3.5
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-JWRZ6E-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

* Refer to glossary.

Room schedule

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	7.80
Bedroom	Bedroom	16.35
Kitchen/Living	Kitchen/Living	36.04

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	ALM-003-03 A	W33	600	1200	Awning	90	NE	None
Bedroom	ALM-003-03 A	W34	1600	980	Awning	90	SW	None
Bedroom	ALM-003-03 A	W35	1600	980	Awning	90	SW	None
Bedroom	ALM-003-03 A	W32-B	600	835	Awning	90	NW	None
Bedroom	ALM-004-03 A	W32-A	600	835	Fixed	0	NW	None
Bedroom	ALM-003-03 A	D02	2400	1000	Hinged Door	90	SE	None
Kitchen/Living	ALM-003-03 A	W231-B	1300	800	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W231-A	1300	800	Fixed	0	SW	None
Kitchen/Living	ALM-004-03 A	W41	2440	2410	Sliding Door	45	NE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	BV-REFL-CAV	2900	3287	NE		Yes
Bedroom	BV-REFL-CAV	2900	3681	SW		No
Bedroom	BV-REFL-CAV	2900	4187	NW		Yes
Bedroom	BV-REFL-CAV	2900	1845	SE	3478	Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	7717	SE		No
Kitchen/Living	BV-REFL-CAV	2900	3596	SW	1871	Yes
Kitchen/Living	BV-REFL-CAV	2900	1345	NW		Yes
Kitchen/Living	BV-REFL-CAV	2900	592	NW		Yes
Kitchen/Living	BV-REFL-CAV	2900	3242	NE		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	738	NE		No

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	12.4	0.00
INT-PB	Internal Plasterboard Stud Wall	18.5	0.00
INT-PB	Internal Plasterboard Stud Wall	14.6	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	7.8	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.6	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	9.7	N/A	2.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	33.2	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	2.8	N/A	2.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
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Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-CE0IR3-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U05, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	2 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 42.9	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 49.4	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

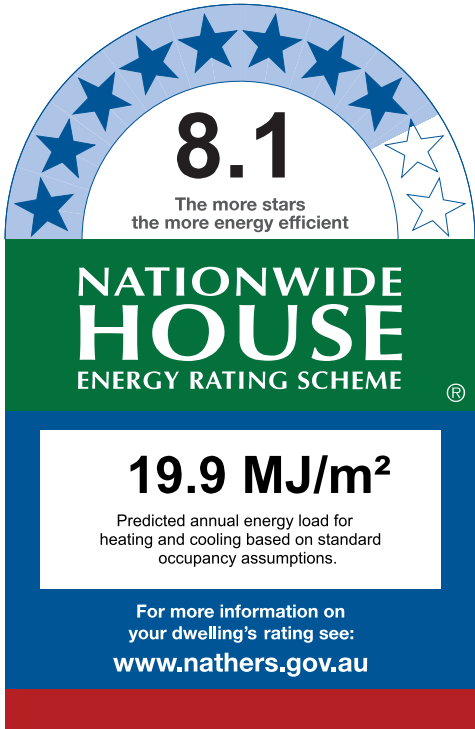
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NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	4.9
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-CE0IR3-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

* Refer to glossary.



Room *schedule*

Room	Zone Type	Area (m²)
Bedroom	Bedroom	13.55
Bathroom	Unconditioned	6.47
Kitchen/Living	Kitchen/Living	29.34

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-001-01 A	D10	2400	1000	Hinged Door	90	SE	None
Bedroom	ALM-002-01 A	W30	2440	600	Fixed	0	SE	None
Bedroom	ALM-001-01 A	W31-B	600	835	Awning	90	NW	None
Bedroom	ALM-002-01 A	W31-A	600	835	Fixed	0	NW	None
Bedroom	ALM-001-01 A	W28	1600	980	Awning	90	NE	None
Bedroom	ALM-001-01 A	W29	1600	980	Awning	90	NE	None
Kitchen/Living	ALM-002-01 A	W43	2440	2410	Sliding Door	45	NE	None

* Refer to glossary.



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	960	90	NW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
----------	---------	-------------	------------	--------------	---------------------------------------------	--------------------------

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2115	NW		No
Bathroom	AAC-200-REFL-CAV1	2900	2662	SW		No
Bedroom	BV-REFL-CAV	2940	2032	SE	3649	Yes
Bedroom	BV-REFL-CAV	2900	3688	NW		Yes
Bedroom	BV-REFL-CAV	2900	3345	NE		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	1382	NW		No
Kitchen/Living	BV-REFL-CAV	2900	3641	NE	2668	Yes
Kitchen/Living	BV-REFL-CAV	2900	4863	SE	4239	Yes
Kitchen/Living	BV-REFL-CAV	2900	793	NW		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	16.1	0.00
INT-PB	Internal Plasterboard Stud Wall	18.1	0.00
INT-PB	Internal Plasterboard Stud Wall	13.0	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	0.7	N/A	2.00	Carpet
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	12.8	Enclosed (Disc.)	2.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	29.3	Enclosed (Disc.)	2.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-OUWB2K-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U06, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	2 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 70.7	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 78.5	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

28.7 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	26.4	2.3
Load limits	33	20

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-OUWB2K-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	10.87
Bathroom	Unconditioned	7.82
Bedroom 2	Bedroom	14.43
Hallway	Day Time	8.66
Kitchen/Living	Kitchen/Living	36.71

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-003-03 A	W38	1600	980	Awning	90	SW	None
Bedroom 2	ALM-003-03 A	D10	2400	1000	Hinged Door	90	SE	None
Bedroom 2	ALM-003-03 A	W36	1600	980	Awning	90	SW	None
Bedroom 2	ALM-003-03 A	W37	1600	980	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W42	2440	2410	Sliding Door	45	NE	None
Kitchen/Living	ALM-003-03 A	W183-B	1300	800	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W183-A	1300	800	Fixed	0	SW	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	ALM-003-03 A	W25	1400	980	Awning	90	SE	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	NW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2375	NW		No
Bedroom 1	BV-REFL-CAV	2900	2998	SW		No
Bedroom 1	BV-REFL-CAV	2900	1527	NW		Yes
Bedroom 1	AAC-200-REFL-CAV1	2900	2100	NW		No
Bedroom 2	BV-REFL-CAV	2900	595	SW	1871	Yes
Bedroom 2	BV-REFL-CAV	2900	1845	SE	4425	Yes
Bedroom 2	BV-REFL-CAV	2900	3685	SW		No
Hallway	AAC-200-REFL-CAV1	2900	1550	NW		No
Hallway	AAC-200-REFL-CAV1	2900	2662	NE		No
Kitchen/Living	BV-REFL-CAV	2900	4100	NE	3024	Yes
Kitchen/Living	BV-REFL-CAV	2900	94	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	3202	SE		Yes
Kitchen/Living	BV-REFL-CAV	2900	3887	SW	1817	Yes
Kitchen/Living	BV-REFL-CAV	2900	1247	SE		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	30.1	0.00
INT-PB	Internal Plasterboard Stud Wall	33.2	0.00
INT-PB	Internal Plasterboard Stud Wall	13.4	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	7.8	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	2.8	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom 1	CSOG-200: Concrete Slab on Ground (200mm)	8.1	N/A	2.00	Tile (8mm)



Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.9	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom 2	CSOG-200: Concrete Slab on Ground (200mm)	10.5	N/A	2.00	Tile (8mm)
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.7	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	33.2	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	3.6	N/A	2.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				



Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-FUZH8Q-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U07, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	77.5	Suburban
Unconditioned*	6.2	NatHERS climate zone
Total	83.7	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

34.2 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	31.2	3.0
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-FUZH8Q-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 2	Bedroom	15.14
Bedroom 1	Bedroom	10.78
Bathroom	Unconditioned	6.23
Storage	Day Time	3.72
Kitchen/Living	Kitchen/Living	38.65
Hallway	Day Time	9.17

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-003-03 A	W57	1600	980	Awning	90	SSW	None
Bedroom 2	ALM-003-03 A	W55	1600	980	Awning	90	SSW	None
Bedroom 2	ALM-003-03 A	W56	1600	980	Awning	90	SSW	None
Bedroom 2	ALM-003-03 A	W58	1600	980	Awning	90	WNW	None
Kitchen/Living	ALM-004-03 A	W69	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-003-03 A	W61-B	2200	600	Awning	60	WNW	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	ALM-004-03 A	W61-A	2200	1160	Fixed	0	WNW	None
Kitchen/Living	ALM-003-03 A	W62-B	600	835	Awning	90	SW	OP-50%
Kitchen/Living	ALM-004-03 A	W62-A	600	835	Fixed	0	SW	OP-50%
Kitchen/Living	ALM-004-03 A	W64	2440	2410	Sliding Door	45	NNE	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	ESE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2095	ESE		No
Bedroom 1	AAC-200-REFL-CAV1	2900	930	ESE		No
Bedroom 1	BV-REFL-CAV	2900	3007	SSW		Yes
Bedroom 1	BV-REFL-CAV	2900	2655	ESE		Yes
Bedroom 2	BV-REFL-CAV	2900	4246	SSW		Yes
Bedroom 2	BV-REFL-CAV	2900	2035	WNW	3861	Yes
Hallway	AAC-200-REFL-CAV1	2900	1119	ESE		No
Hallway	AAC-200-REFL-CAV1	2900	1098	NNE		No
Kitchen/Living	BV-REFL-CAV	2900	3681	SSW	2103	Yes
Kitchen/Living	BV-REFL-CAV	2900	3139	WNW		Yes
Kitchen/Living	FC-NOCAV	2900	3863	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	1411	NE		Yes
Kitchen/Living	BV-REFL-CAV	2900	5094	NNE	3085	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	43.3	0.00
INT-PB	Internal Plasterboard Stud Wall	40.7	0.00
INT-PB	Internal Plasterboard Stud Wall	12.5	2.00



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.2	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.6	Enclosed (Disc.)	2.00	Carpet
Bedroom 1	CSOG-200: Concrete Slab on Ground (200mm)	7.2	N/A	2.00	Carpet
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.0	Enclosed (Disc.)	2.00	Carpet
Bedroom 2	CSOG-200: Concrete Slab on Ground (200mm)	10.1	N/A	2.00	Carpet
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	9.2	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	37.4	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	1.2	N/A	2.00	Tile (8mm)
Storage	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.7	Enclosed (Disc.)	2.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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



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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-5J2D3Z-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U08, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	47.6	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	53.9	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

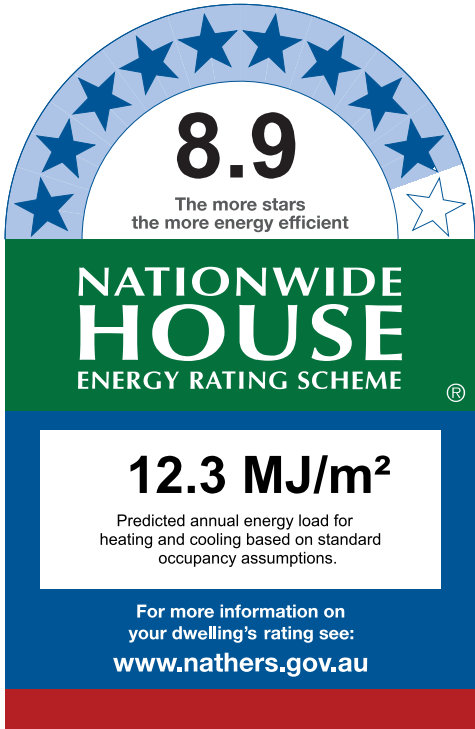
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	8.4	3.9
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-5J2D3Z-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.28
Bathroom	Unconditioned	6.36
Bedroom	Bedroom	16.22
Store	Day Time	1.10
Hallway	Day Time	3.95

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W45	2200	980	Awning	60	NNE	None
Bedroom	ALM-003-03 A	W46	2200	980	Awning	60	NNE	None
Bedroom	ALM-004-03 A	W47	2440	600	Fixed	0	WNW	None
Bedroom	ALM-003-03 A	D10	2400	1000	Hinged Door	90	WNW	None
Kitchen/Living	ALM-004-03 A	W51	2440	2410	Sliding Door	45	NNE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	ESE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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* Refer to glossary.



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2108	ESE		No
Bathroom	AAC-200-REFL-CAV1	4400	1102	SSW		No
Bedroom	BV-REFL-CAV	2900	3072	NNE		Yes
Bedroom	BV-REFL-CAV	2900	2973	ESE		Yes
Bedroom	BV-REFL-CAV	2940	2250	WNW	3703	Yes
Bedroom	AAC-200-REFL-CAV1	2900	3022	ESE		No
Hallway	AAC-200-REFL-CAV1	2900	1097	ESE		No
Kitchen/Living	BV-REFL-CAV	2900	3631	NNE	2516	Yes
Kitchen/Living	BV-REFL-CAV	2900	5742	WNW	5875	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	30.0	0.00
INT-PB	Internal Plasterboard Stud Wall	22.1	0.00
INT-PB	Internal Plasterboard Stud Wall	13.1	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	Enclosed (Disc.)	2.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	16.2	Enclosed (Disc.)	2.00	Carpet
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.0	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	26.3	Enclosed (Disc.)	2.00	Tile (8mm)
Store	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	1.1	Enclosed (Disc.)	2.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
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Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-8PHI80-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U09, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*

Conditioned*	50.0	Exposure Type	Suburban
Unconditioned*	6.6	NatHERS climate zone	
Total	56.6		56 - Mascot AMO
Garage	0.0		



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

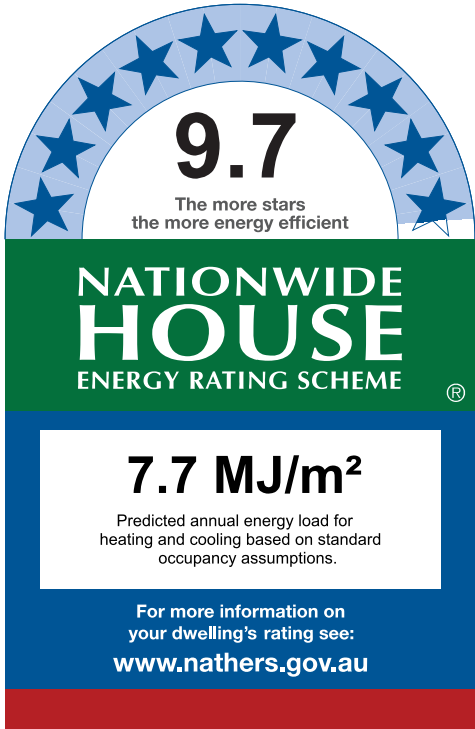
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	1.8	5.9
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-8PHI80-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	13.62
Bathroom	Unconditioned	6.64
Kitchen/Living	Kitchen/Living	36.40

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W44	1600	980	Awning	90	NNE	None
Bedroom	ALM-003-03 A	W50	1600	980	Awning	90	NNE	None
Kitchen/Living	ALM-004-03 A	W52	2440	2410	Sliding Door	45	NNE	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					



Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	SSW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	1624	WNW		No
Bedroom	BV-REFL-CAV	2900	3057	NNE		Yes
Bedroom	BV-REFL-CAV	2900	5173	ESE	3818	Yes
Kitchen/Living	BV-REFL-CAV	2900	620	ESE		Yes
Kitchen/Living	BV-REFL-CAV	2900	1057	ESE	3822	Yes

* Refer to glossary.



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	AAC-200-REFL-CAV1	2900	3966	SSW		No
Kitchen/Living	AAC-200-REFL-CAV1	2900	799	WNW		No
Kitchen/Living	BV-REFL-CAV	2900	4070	NNE		Yes
Kitchen/Living	BV-REFL-CAV	2900	6813	WNW	3066	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	21.9	0.00
INT-PB	Internal Plasterboard Stud Wall	8.5	2.00
INT-PB	Internal Plasterboard Stud Wall	21.2	0.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.7	Enclosed (Disc.)	2.00	Tile (8mm)
Bathroom	CSOG-200: Concrete Slab on Ground (200mm)	1.9	N/A	2.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.9	Enclosed (Disc.)	2.00	Carpet
Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	4.7	N/A	2.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	35.4	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	1.0	N/A	2.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed

* Refer to glossary.



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-NWC6ML-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address ■ ■ ■ U10, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	44.2	■ ■ ■ Suburban
Unconditioned*	6.4	■ ■ ■ NatHERS climate zone
Total	50.6	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name	■ ■ ■ Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	■ ■ ■ ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

32.4 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	30.3	2.1
Load limits	33	20

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-NWC6ML-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	29.76
Bedroom	Bedroom	14.47
Bathroom	Unconditioned	6.39

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W53	1600	980	Awning	90	SSW	None
Bedroom	ALM-003-03 A	W54	1600	980	Awning	90	SSW	None
Bedroom	ALM-003-03 A	D10	2400	1000	Hinged Door	90	WNW	None
Kitchen/Living	ALM-004-03 A	W72	2440	2410	Sliding Door	45	SSW	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	NNE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bedroom	BV-REFL-CAV-B	2900	3073	SSW		Yes
Bedroom	BV-REFL-CAV-A	2900	2299	WNW	3676	Yes
Bedroom	BV-REFL-CAV-B	2900	3790	ESE		Yes
Kitchen/Living	BV-REFL-CAV-A	2900	3650	SSW	2331	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	BV-REFL-CAV-A	2900	2664	WNW		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	3641	NNE		No
Kitchen/Living	AAC-200-REFL-CAV1	2900	3945	WNW		No

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	22.8	0.00
INT-PB	Internal Plasterboard Stud Wall	12.9	2.00
INT-PB	Internal Plasterboard Stud Wall	15.2	0.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	5.3	Enclosed (Disc.)	2.00	Tile (8mm)
Bathroom	CSOG-200: Concrete Slab on Ground (200mm)	1.1	N/A	2.00	Tile (8mm)
Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	13.5	N/A	2.00	Carpet
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	1.0	Enclosed (Disc.)	2.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	19.3	Enclosed (Disc.)	2.00	Tile (8mm)
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	10.4	N/A	2.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed



Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy schedule

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		



Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-0GNCIU-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U11, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 2 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*

Conditioned*	52.1	Exposure Type	Suburban
Unconditioned*	6.9	NatHERS climate zone	
Total	59.0		56 - Mascot AMO
Garage	0.0		



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

26.4 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	23.4	3.0
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-0GNCIU-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	14.46
Bathroom	Unconditioned	6.90
Kitchen/Living	Kitchen/Living	37.64

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-004-03 A	W66	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-004-03 A	W70	2440	2410	Sliding Door	45	NNE	None
Kitchen/Living	ALM-003-03 A	W60-B	2200	600	Awning	60	ESE	OP-50%
Kitchen/Living	ALM-004-03 A	W60-A	2200	1160	Fixed	0	ESE	OP-50%
Kitchen/Living	ALM-003-03 A	W228-B	600	835	Awning	90	ESE	OP-50%
Kitchen/Living	ALM-004-03 A	W228-A	600	835	Fixed	0	ESE	OP-50%



Roof window type and performance value

Default* roof windows

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

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	WNW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2095	WNW		No
Bedroom	BV-REFL-CAV	2900	3534	ESE		Yes
Bedroom	BV-REFL-CAV	2900	4096	SSW	1719	Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	1854	WNW		No
Kitchen/Living	BV-REFL-CAV	2900	3681	NNE	2713	Yes
Kitchen/Living	BV-REFL-CAV	2900	3713	ESE		Yes
Kitchen/Living	BV-REFL-CAV	2900	652	NNE		Yes
Kitchen/Living	BV-REFL-CAV	2900	3954	ESE		Yes
Kitchen/Living	BV-REFL-CAV	2900	620	SSW		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	46.0	0.00
INT-PB	Internal Plasterboard Stud Wall	13.7	2.00
INT-PB	Internal Plasterboard Stud Wall	9.8	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.6	Enclosed (Disc.)	2.00	Tile (8mm)
Bathroom	CSOG-200: Concrete Slab on Ground (200mm)	2.3	N/A	2.00	Tile (8mm)
Bedroom	CSOG-200: Concrete Slab on Ground (200mm)	14.5	N/A	2.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.1	Enclosed (Disc.)	2.00	Tile (8mm)



Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	33.6	N/A	2.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorbptance	Roof Colour
None			

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

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Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-TEFTRK-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U12, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	69.1	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	75.5	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

17.8 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	9.5	8.3
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-TEFTRK-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 2	Bedroom	11.28
Bedroom 1	Bedroom	13.64
Kitchen/living	Kitchen/Living	44.17
Bathroom	Unconditioned	6.39

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-001-01 A	W74-B	600	835	Awning	90	E	None
Bedroom 1	ALM-002-01 A	W74-A	600	835	Fixed	0	E	None
Bedroom 1	ALM-001-01 A	W73	2200	980	Awning	60	N	None
Bedroom 2	ALM-001-01 A	W84	2200	980	Awning	60	E	None
Kitchen/living	ALM-001-01 A	W77-B	2200	600	Awning	60	N	None
Kitchen/living	ALM-002-01 A	W77-A	2200	1160	Fixed	0	N	None
Kitchen/living	ALM-001-01 A	W11	2200	1000	Hinged Door	90	E	None
Kitchen/living	ALM-002-01 A	W94	2440	2410	Sliding Door	45	N	None

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/living	ALM-001-01 A	W83-B	2200	600	Awning	60	E	None
Kitchen/living	ALM-002-01 A	W83-A	2200	1160	Fixed	0	E	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/living	2100	920	90	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	0.00	No



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	2176	S		No
Bedroom 1	BV-REFL-CAV-B	2900	3085	E		Yes
Bedroom 1	BV-REFL-CAV-B	2900	1385	S		Yes
Bedroom 1	BV-REFL-CAV-B	2900	1257	N		Yes
Bedroom 2	BV-REFL-CAV-A	2900	2928	E		Yes
Bedroom 2	BV-REFL-CAV-A	2900	560	S		Yes
Bedroom 2	AAC-200-NONREFL-CAV11	2900	3300	S		No
Kitchen/living	BV-REFL-CAV-A	2900	3408	N		Yes
Kitchen/living	BV-REFL-CAV-A	2900	1551	E	3949	Yes
Kitchen/living	BV-REFL-CAV-A	2900	3969	N	2995	Yes
Kitchen/living	BV-REFL-CAV-A	2900	4085	E		Yes
Kitchen/living	AAC-200-NONREFL-CAV11	2900	1090	S		No
Kitchen/living	AAC-200-NONREFL-CAV11	2900	3196	W		No

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	24.5	0.00
INT-PB	Internal Plasterboard Stud Wall	34.9	0.00
INT-PB	Internal Plasterboard Stud Wall	12.8	2.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.7	N/A	0.00	Carpet
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	11.3	N/A	0.00	Carpet
Kitchen/living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	44.2	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

* Refer to glossary.



Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
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Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
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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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-1E33U5-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U13, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)* **Exposure Type**

Conditioned* 43.7 Suburban

Unconditioned* 6.5 **NatHERS climate zone**

Total 50.2 56 - Mascot AMO

Garage 0.0



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

26.9 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.8	11.2
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-1E33U5-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	15.84
Bathroom	Unconditioned	6.50
Kitchen/living	Kitchen/Living	27.90

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-001-01 A	W76	2200	980	Awning	60	N	None
Bedroom	ALM-001-01 A	W71	2200	980	Awning	60	W	None
Kitchen/living	ALM-001-01 A	W78-B	1300	800	Awning	90	W	None
Kitchen/living	ALM-001-01 A	W79-B	2200	600	Awning	60	W	None
Kitchen/living	ALM-002-01 A	W79-A	2200	1160	Fixed	0	W	None
Kitchen/living	ALM-002-01 A	W78-A	1300	800	Fixed	0	W	None
Kitchen/living	ALM-002-01 A	W87	2440	2410	Sliding Door	45	N	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/living	2100	920	90	E

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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* Refer to glossary.



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	3020	S		No
Bedroom	BV-REFL-CAV-A	2900	3063	N		Yes
Bedroom	BV-REFL-CAV-A	2900	5211	W	3787	Yes
Kitchen/living	AAC-200-NONREFL-CAV11	2900	3302	E		No
Kitchen/living	BV-REFL-CAV-B	2900	6664	W		No
Kitchen/living	BV-REFL-CAV-B	2900	3675	S		Yes
Kitchen/living	BV-REFL-CAV-B	2900	3794	N	2501	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	24.5	0.00
INT-PB	Internal Plasterboard Stud Wall	13.4	2.00
INT-PB	Internal Plasterboard Stud Wall	6.8	0.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	15.8	N/A	0.00	Carpet
Kitchen/living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	27.9	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Kitchen/living	1	Exhaust Fan	400	Sealed

Ceiling *fans*

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

Roof *type*

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

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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-D8PHQY-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U14, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)* **Exposure Type**

Conditioned* 47.5 Suburban

Unconditioned* 6.1 **NatHERS climate zone**

Total 53.7 56 - Mascot AMO

Garage 0.0



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

31.1 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	22.5	8.7
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-D8PHQY-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	6.15
Bedroom	Bedroom	12.86
Kitchen/Living	Kitchen/Living	34.64

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
BRD-028-08 A	ESS Awning Window (52mm) DG 4-6-4	4.62	0.55	0.52	0.58
BRD-101-09 A	Signature Sliding Door 100TB DG 4mmET/12Ar/4mmET	2.08	0.47	0.45	0.49
BRD-108-09 A	Signature Fixed Lite INT 100TB DG 4mmET/12Ar/4mmET	1.78	0.51	0.48	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	BRD-101-09 A	W92	2440	2410	Sliding Door	45	S	None
Bedroom	BRD-028-08 A	W85	2200	980	Awning	60	W	None
Bedroom	BRD-028-08 A	W86	2200	980	Awning	60	W	None
Kitchen/Living	BRD-108-09 A	W80-A	2200	1160	Fixed	0	S	None
Kitchen/Living	BRD-028-08 A	W80-B	2200	600	Awning	60	S	None
Kitchen/Living	BRD-101-09 A	W93	2440	2410	Sliding Door	45	W	None
Kitchen/Living	BRD-028-08 A	W75-B	600	835	Awning	90	E	None
Kitchen/Living	BRD-108-09 A	W75-A	600	835	Fixed	0	E	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	BRD-108-09 A	W81	1400	900	Fixed	0	SW	None
Kitchen/Living	BRD-028-08 A	W82	1400	980	Awning	90	SW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	N

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	0.00	No

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	2092	N		No
Bathroom	AAC-200-NONREFL-CAV11	2900	2963	E		No
Bedroom	AAC-200-NONREFL-CAV11	2900	3862	N		No
Bedroom	BV-REFL-CAV	2900	3765	S	3473	Yes
Bedroom	BV-REFL-CAV	2900	3423	W		Yes
Kitchen/Living	BV-REFL-CAV	2900	2713	S		Yes
Kitchen/Living	BV-REFL-CAV	2900	3413	W	3922	Yes
Kitchen/Living	AAC-200-NONREFL-CAV11	2900	1091	N		No
Kitchen/Living	AAC-200-NONREFL-CAV11	2900	2693	N		No
Kitchen/Living	BV-REFL-CAV	2900	3652	E		Yes
Kitchen/Living	BV-REFL-CAV	2900	868	NE		Yes
Kitchen/Living	FC-NOCAV	2900	3361	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	581	N		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	12.2	0.00
INT-PB	Internal Plasterboard Stud Wall	12.7	2.00
INT-PB	Internal Plasterboard Stud Wall	8.0	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.2	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	12.8	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	34.7	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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* Refer to glossary.



Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
------	-----------	--------------------	--------------------------	------------------------------

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-Q4H8AC-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U15, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	3 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 52.4	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 60.2	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

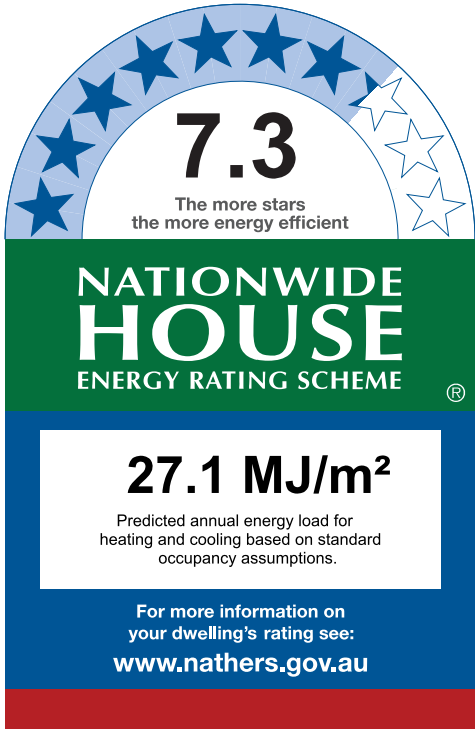
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	22.8	4.3
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-Q4H8AC-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	7.80
Bedroom	Bedroom	16.35
Kitchen/Living	Kitchen/Living	36.04

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	ALM-003-03 A	W107	600	1200	Awning	90	NE	None
Bedroom	ALM-003-03 A	W108	2200	980	Awning	60	SW	None
Bedroom	ALM-003-03 A	W109	2200	980	Awning	60	SW	None
Bedroom	ALM-003-03 A	W106-B	600	835	Awning	90	NW	None
Bedroom	ALM-004-03 A	W106-A	600	835	Fixed	0	NW	None
Bedroom	ALM-003-03 A	D02	2400	1000	Hinged Door	90	SE	None
Kitchen/Living	ALM-003-03 A	W230-A	1300	800	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W230-B	1300	800	Fixed	0	SW	None
Kitchen/Living	ALM-004-03 A	W113	2440	2410	Sliding Door	45	NE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	BV-REFL-CAV	2900	3287	NE		Yes
Bedroom	BV-REFL-CAV	2900	3681	SW		No
Bedroom	BV-REFL-CAV	2900	4187	NW		Yes
Bedroom	BV-REFL-CAV	2900	1845	SE	3638	Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	7717	SE		No
Kitchen/Living	BV-REFL-CAV	2900	3596	SW	1833	Yes
Kitchen/Living	BV-REFL-CAV	2900	1345	NW		Yes
Kitchen/Living	BV-REFL-CAV	2900	592	NW		Yes
Kitchen/Living	BV-REFL-CAV	2900	3242	NE	2684	Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	738	NE		No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	12.4	0.00
INT-PB	Internal Plasterboard Stud Wall	18.5	0.00
INT-PB	Internal Plasterboard Stud Wall	14.6	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	7.8	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	16.4	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	36.0	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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* Refer to glossary.



Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-YA3O41-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U16, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	3 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 42.9	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 49.4	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

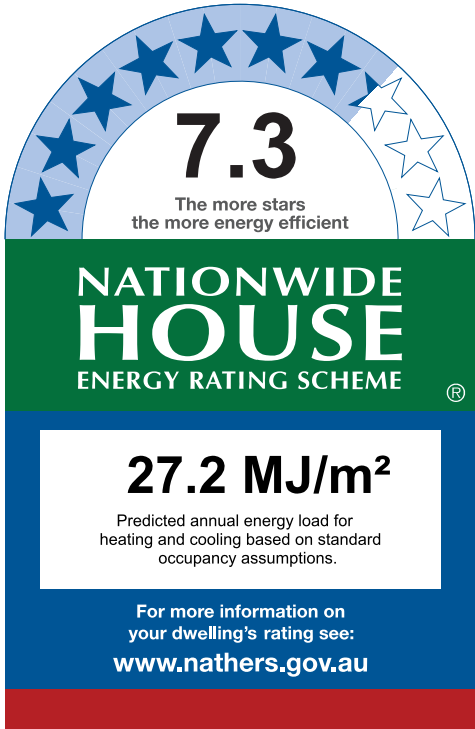
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	20.8	6.4
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-YA3O41-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	13.55
Bathroom	Unconditioned	6.47
Kitchen/Living	Kitchen/Living	29.34

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-001-01 A	D10	2400	1000	Hinged Door	90	SE	None
Bedroom	ALM-002-01 A	W104	2440	600	Fixed	0	SE	None
Bedroom	ALM-002-01 A	W105-B	600	835	Awning	90	NW	None
Bedroom	ALM-002-01 A	W105-A	600	835	Fixed	0	NW	None
Bedroom	ALM-001-01 A	W102	2200	980	Awning	60	NE	None
Bedroom	ALM-001-01 A	W103	2200	980	Awning	60	NE	None
Kitchen/Living	ALM-002-01 A	W114	2440	2410	Sliding Door	45	NE	None

* Refer to glossary.



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	960	90	NW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2115	NW		No
Bathroom	AAC-200-REFL-CAV1	2900	2662	SW		No
Bedroom	BV-REFL-CAV	2940	2032	SE	3653	Yes
Bedroom	BV-REFL-CAV	2900	3688	NW		Yes
Bedroom	BV-REFL-CAV	2900	3347	NE		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	1382	NW		No
Kitchen/Living	BV-REFL-CAV	2900	3641	NE	2800	Yes
Kitchen/Living	BV-REFL-CAV	2900	4863	SE	4164	Yes
Kitchen/Living	BV-REFL-CAV	2900	793	NW		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	16.1	0.00
INT-PB	Internal Plasterboard Stud Wall	18.1	0.00
INT-PB	Internal Plasterboard Stud Wall	13.0	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.6	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	29.3	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				



Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-5C1OTX-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U17, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	3 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 70.7	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 78.5	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

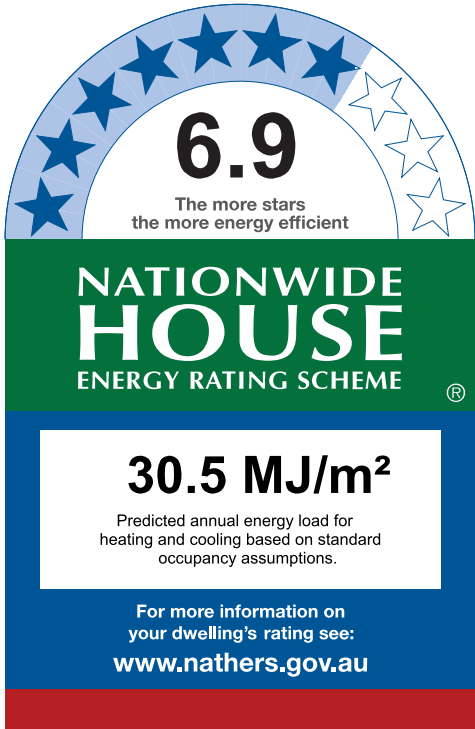
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	27.5	3.0
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-5C1OTX-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

* Refer to glossary.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	10.87
Bathroom	Unconditioned	7.82
Bedroom 2	Bedroom	14.43
Hallway	Day Time	8.66
Kitchen/Living	Kitchen/Living	36.71

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-003-03 A	W112	2200	980	Awning	60	SW	None
Bedroom 2	ALM-003-03 A	D10	2400	1000	Hinged Door	90	SE	None
Bedroom 2	ALM-003-03 A	W110	2200	980	Awning	60	SW	None
Bedroom 2	ALM-003-03 A	W111	2200	980	Awning	60	SW	None
Kitchen/Living	ALM-004-03 A	W115	2440	2410	Sliding Door	45	NE	None
Kitchen/Living	ALM-003-03 A	W184-A	1300	800	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W184-B	1300	800	Fixed	0	SW	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	ALM-003-03 A	W98	2200	980	Awning	60	SE	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	NW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2375	NW		No
Bedroom 1	BV-REFL-CAV	2900	2998	SW		No
Bedroom 1	BV-REFL-CAV	2900	1527	NW		Yes
Bedroom 1	AAC-200-REFL-CAV1	2900	2100	NW		No
Bedroom 2	BV-REFL-CAV	2900	595	SW	1871	Yes
Bedroom 2	BV-REFL-CAV	2900	1845	SE	4600	Yes
Bedroom 2	BV-REFL-CAV	2900	3685	SW		No
Hallway	AAC-200-REFL-CAV1	2900	1550	NW		No
Hallway	AAC-200-REFL-CAV1	2900	2662	NE		No
Kitchen/Living	BV-REFL-CAV	2900	4100	NE	3032	Yes
Kitchen/Living	BV-REFL-CAV	2900	94	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	3202	SE		Yes
Kitchen/Living	BV-REFL-CAV	2900	3887	SW	1817	Yes
Kitchen/Living	BV-REFL-CAV	2900	1247	SE		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	30.1	0.00
INT-PB	Internal Plasterboard Stud Wall	33.2	0.00
INT-PB	Internal Plasterboard Stud Wall	13.4	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	7.8	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	10.9	N/A	0.00	Tile (8mm)
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	14.5	N/A	0.00	Tile (8mm)



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.7	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	36.7	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------



Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
------	-----------	--------------------	--------------------------	------------------------------

No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

* Refer to glossary.

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-U41ZTB-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U18, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	77.5	Suburban
Unconditioned*	6.2	NatHERS climate zone
Total	83.7	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

36.2 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	31.7	4.4
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-U41ZTB-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom 2	Bedroom	15.14
Bedroom 1	Bedroom	10.78
Bathroom	Unconditioned	6.23
Storage	Day Time	3.72
Kitchen/Living	Kitchen/Living	38.65
Hallway	Day Time	9.17

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-003-03 A	W133	2200	980	Awning	60	SSW	None
Bedroom 2	ALM-003-03 A	W135	2200	980	Awning	60	SSW	None
Bedroom 2	ALM-003-03 A	W134	2200	980	Awning	60	SSW	None
Bedroom 2	ALM-003-03 A	W56	1600	980	Awning	90	WNW	None
Kitchen/Living	ALM-004-03 A	W151	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-003-03 A	W137-B	2200	600	Awning	60	WNW	None

* Refer to glossary.



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	ALM-004-03 A	W137-A	2200	1160	Fixed	0	WNW	None
Kitchen/Living	ALM-003-03 A	W138-B	600	835	Awning	90	SW	OP-50%
Kitchen/Living	ALM-004-03 A	W138-A	600	835	Fixed	0	SW	OP-50%
Kitchen/Living	ALM-004-03 A	W152	2440	2410	Sliding Door	45	NNE	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	ESE



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2095	ESE		No
Bedroom 1	AAC-200-REFL-CAV1	2900	930	ESE		No
Bedroom 1	BV-REFL-CAV	2900	3007	SSW		Yes
Bedroom 1	BV-REFL-CAV	2900	2655	ESE		Yes
Bedroom 2	BV-REFL-CAV	2900	4246	SSW		Yes
Bedroom 2	BV-REFL-CAV	2900	2035	WNW	3849	Yes
Hallway	AAC-200-REFL-CAV1	2900	1119	ESE		No
Hallway	AAC-200-REFL-CAV1	2900	1098	NNE		No
Kitchen/Living	BV-REFL-CAV	2900	3681	SSW	2106	Yes
Kitchen/Living	BV-REFL-CAV	2900	3139	WNW		Yes
Kitchen/Living	FC-NOCAV	2900	3863	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	1411	NE		Yes
Kitchen/Living	BV-REFL-CAV	2900	5094	NNE	3085	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	43.3	0.00
INT-PB	Internal Plasterboard Stud Wall	40.7	0.00
INT-PB	Internal Plasterboard Stud Wall	12.5	2.00

* Refer to glossary.



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.2	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	10.8	N/A	0.00	Carpet
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	15.1	N/A	0.00	Carpet
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	9.2	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	38.6	N/A	0.00	Tile (8mm)
Storage	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.7	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
------------------	-----------------------------------------------	--------------------	--------------------------	-------------------------

* Refer to glossary.



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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.

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Disclaimer

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

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

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

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-KGD7O3-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U19, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	47.6	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	53.9	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

11.9 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	7.3	4.6
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-KGD7O3-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.28
Bathroom	Unconditioned	6.36
Bedroom	Bedroom	16.22
Store	Day Time	1.10
Hallway	Day Time	3.95

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W124	2200	980	Awning	60	NNE	None
Bedroom	ALM-003-03 A	W125	2200	980	Awning	60	NNE	None
Bedroom	ALM-004-03 A	W126	2440	600	Fixed	0	WNW	None
Bedroom	ALM-003-03 A	D10	2400	1000	Hinged Door	90	WNW	None
Kitchen/Living	ALM-004-03 A	W131	2440	2410	Sliding Door	45	NNE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	ESE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2108	ESE		No
Bathroom	AAC-200-REFL-CAV1	4400	1102	SSW		No
Bedroom	BV-REFL-CAV	2900	3072	NNE		Yes
Bedroom	BV-REFL-CAV	2940	2250	WNW	3661	Yes
Bedroom	AAC-200-REFL-CAV1	2900	2787	ESE		No
Hallway	AAC-200-REFL-CAV1	2900	1097	ESE		No
Kitchen/Living	BV-REFL-CAV	2900	3631	NNE	2541	Yes
Kitchen/Living	BV-REFL-CAV	2900	5742	WNW		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	39.3	0.00
INT-PB	Internal Plasterboard Stud Wall	22.1	0.00
INT-PB	Internal Plasterboard Stud Wall	13.1	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	16.2	N/A	0.00	Carpet
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.0	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	26.3	N/A	0.00	Tile (8mm)
Store	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	1.1	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling *fans*

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

Roof *type*

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

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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity



Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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No Whole of Home Data

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Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-MUQUIR-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U20, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*

Conditioned*	61.1	Exposure Type	Suburban
Unconditioned*	6.5	NatHERS climate zone	
Total	67.6		56 - Mascot AMO
Garage	0.0		



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

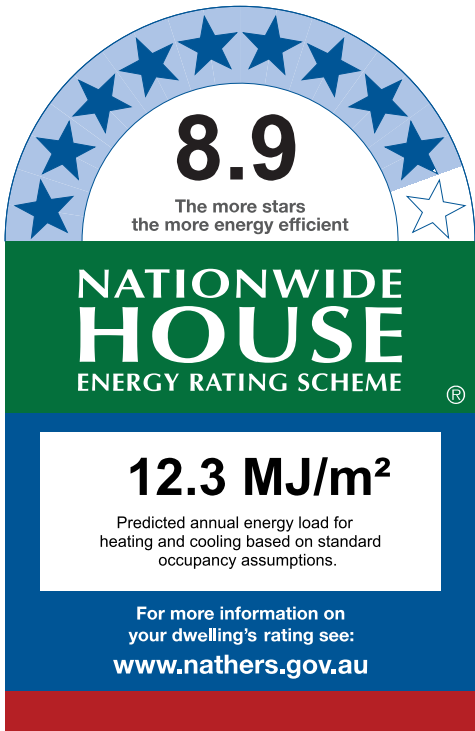
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	7.2	5.1
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-MUQUIR-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.



Room *schedule*

Room	Zone Type	Area (m²)
bedroom 02	Bedroom	11.52
kitchen / living	Kitchen/Living	30.84
bathroom	Unconditioned	6.53
corridor	Day Time	3.32
store	Day Time	1.87
bedroom 01	Bedroom	13.53

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
bedroom 01	ALM-003-03 A	W123	2200	980	Awning	60	NNE	None
bedroom 01	ALM-003-03 A	W122	2200	980	Awning	60	NNE	None
bedroom 02	ALM-003-03 A	W129-B	1300	800	Awning	90	NNE	None
bedroom 02	ALM-004-03 A	W129-A	1300	800	Fixed	0	NNE	None
kitchen / living	ALM-003-03 A	W127	2200	980	Awning	60	NNE	None
kitchen / living	ALM-003-03 A	W128	2200	980	Awning	60	NNE	None

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
kitchen / living	ALM-004-03 A	W130	2440	2410	Sliding Door	45	WNW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
kitchen / living	2200	920	90	SSW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
bathroom	AAC-200-REFL-CAV1	4400	1622	WNW		No
bedroom 01	BV-REFL-CAV	2900	3043	NNE		Yes
bedroom 01	BV-REFL-CAV	2900	5156	ESE		Yes
bedroom 02	BV-REFL-CAV	2900	3182	NNE	3240	Yes
bedroom 02	AAC-200-REFL-CAV1	2900	3167	SSW		No
bedroom 02	BV-REFL-CAV	2900	410	WNW		Yes
corridor	BV-REFL-CAV	2900	1077	ESE		Yes
kitchen / living	BV-REFL-CAV	2900	620	ESE		Yes
kitchen / living	AAC-200-REFL-CAV1	2900	3980	SSW		No
kitchen / living	AAC-200-REFL-CAV1	2900	788	WNW		No
kitchen / living	BV-REFL-CAV	2900	4055	NNE		No
kitchen / living	BV-REFL-CAV	2900	3202	WNW	3185	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	32.3	0.00
INT-PB	Internal Plasterboard Stud Wall	35.6	0.00
INT-PB	Internal Plasterboard Stud Wall	8.3	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	N/A	0.00	Tile (8mm)
bedroom 01	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.5	N/A	0.00	Carpet
bedroom 02	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	11.5	N/A	2.00	Carpet
corridor	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.3	N/A	0.00	Tile (8mm)
kitchen / living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	30.8	N/A	0.00	Tile (8mm)



Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
store	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	1.9	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
bathroom	1	Exhaust Fan	400	Sealed
kitchen / living	1	Exhaust Fan	400	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
bedroom 01	1	900
bedroom 02	1	900
kitchen / living	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorbance	Roof Colour
None			

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------



Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
------	----------	-----------	----------------------------------	----------------------

No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
------	---------------	--------------------------

No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
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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.
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.
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U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a 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®

NatHERS® Certificate No. #HR-Q0NU6I-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U21, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	44.2	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	50.6	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

29.8 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	25.0	4.9
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-Q0NU6I-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	29.76
Bedroom	Bedroom	14.47
Bathroom	Unconditioned	6.39

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W142	2200	980	Awning	60	SSW	None
Bedroom	ALM-003-03 A	W143	2200	980	Awning	60	SSW	None
Bedroom	ALM-003-03 A	D10	2400	1000	Hinged Door	90	WNW	None
Kitchen/Living	ALM-004-03 A	W149	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-003-03 A	W132	2200	980	Awning	60	WNW	None

Roof window type and performance value

Default* roof windows

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



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	NNE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bedroom	BV-REFL-CAV-B	2900	3073	SSW		No
Bedroom	BV-REFL-CAV-A	2900	2299	WNW	3677	Yes
Bedroom	BV-REFL-CAV-B	2900	3790	ESE		Yes
Kitchen/Living	BV-REFL-CAV-A	2900	3650	SSW	2331	Yes
Kitchen/Living	BV-REFL-CAV-A	2900	2664	WNW		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	3641	NNE		No
Kitchen/Living	AAC-200-REFL-CAV1	2900	3945	WNW		No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	22.8	0.00
INT-PB	Internal Plasterboard Stud Wall	12.9	2.00
INT-PB	Internal Plasterboard Stud Wall	15.2	0.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	14.5	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	29.8	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-SFKU9F-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U22, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 3 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*

Conditioned*	52.0	Exposure Type	Suburban
Unconditioned*	6.9	NatHERS climate zone	
Total	58.9		56 - Mascot AMO
Garage	0.0		



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

29.4 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	25.9	3.5
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-SFKU9F-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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 *ABC Standard: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	14.41
Bathroom	Unconditioned	6.86
Kitchen/Living	Kitchen/Living	37.60

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-004-03 A	W150	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-004-03 A	W148	2440	2410	Sliding Door	45	NNE	None
Kitchen/Living	ALM-003-03 A	W136-B	2200	600	Awning	60	ESE	OP-50%
Kitchen/Living	ALM-004-03 A	W136-A	2200	1160	Fixed	0	ESE	OP-50%
Kitchen/Living	ALM-003-03 A	W229-B	600	835	Awning	90	ESE	OP-50%
Kitchen/Living	ALM-004-03 A	W229-A	600	835	Fixed	0	ESE	OP-50%



Roof window type and performance value

Default* roof windows

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

None

Custom* roof windows

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

None

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
----------	-----------	------------	-----------	-------------	------------	--------------	---------------	--------------

None

Skylight type and performance

Skylight ID	Skylight description
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None

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
----------	-------------	--------------	----------------------------	-----------	--------------	---------------	----------	-------------------

None

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
----------	-------------	------------	-----------	-------------

Kitchen/Living	2100	920	90	WNW
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External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
---------	-----------	-------------------	-------------	---------------------------	-----------------------

AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
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External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2095	WNW		No
Bedroom	BV-REFL-CAV	2900	3525	ESE		Yes
Bedroom	BV-REFL-CAV	2900	4080	SSW	1740	Yes
Kitchen/Living	BV-REFL-CAV	2900	3673	NNE	2749	Yes
Kitchen/Living	BV-REFL-CAV	2900	3713	ESE		Yes
Kitchen/Living	BV-REFL-CAV	2900	652	NNE		Yes
Kitchen/Living	BV-REFL-CAV	2900	3945	ESE		No
Kitchen/Living	BV-REFL-CAV	2900	616	SSW		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	1854	WNW		No

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	46.6	0.00
INT-PB	Internal Plasterboard Stud Wall	13.7	2.00
INT-PB	Internal Plasterboard Stud Wall	9.8	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.9	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	14.3	N/A	0.00	Carpet
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	0.1	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	37.6	N/A	0.00	Tile (8mm)

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
None			

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

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

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-HMZ2GP-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U23, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*

Conditioned*	69.0	Exposure Type	Suburban
Unconditioned*	6.4	NatHERS climate zone	
Total	75.4		56 - Mascot AMO
Garage	0.0		



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

24.9 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.7	10.2
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-HMZ2GP-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room *schedule*

Room	Zone Type	Area (m²)
Bedroom 2	Bedroom	11.16
Bedroom 1	Bedroom	13.68
Kitchen/living	Kitchen/Living	44.17
Bathroom	Unconditioned	6.39

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-001-01 A	W173-B	600	835	Awning	90	E	None
Bedroom 1	ALM-002-01 A	W173-A	600	835	Fixed	0	E	None
Bedroom 1	ALM-001-01 A	W172	2200	980	Awning	60	N	None
Bedroom 2	ALM-001-01 A	W158	2200	980	Awning	60	E	None
Kitchen/living	ALM-001-01 A	W168-B	2200	600	Awning	60	N	None
Kitchen/living	ALM-002-01 A	W168-A	2200	1160	Fixed	0	N	None
Kitchen/living	ALM-001-01 A	W10	2200	1000	Hinged Door	90	E	None
Kitchen/living	ALM-002-01 A	W155	2440	2410	Sliding Door	45	N	None

* Refer to glossary.



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/living	ALM-001-01 A	W174-B	2200	600	Awning	60	E	None
Kitchen/living	ALM-002-01 A	W174-A	2200	1160	Fixed	0	E	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/living	2100	920	90	S

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	0.00	No



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	2176	S		No
Bedroom 1	BV-REFL-CAV-B	2900	3100	E		No
Bedroom 1	BV-REFL-CAV-B	2900	1388	S		Yes
Bedroom 1	BV-REFL-CAV-B	2900	1274	N		Yes
Bedroom 2	BV-REFL-CAV-A	2900	2909	E		Yes
Bedroom 2	BV-REFL-CAV-A	2900	550	S		Yes
Bedroom 2	AAC-200-NONREFL-CAV11	2900	3254	S		No
Kitchen/living	BV-REFL-CAV-A	2900	3408	N	392	Yes
Kitchen/living	BV-REFL-CAV-A	2900	1551	E	3900	Yes
Kitchen/living	BV-REFL-CAV-A	2900	3969	N	2996	Yes
Kitchen/living	BV-REFL-CAV-A	2900	4085	E		Yes
Kitchen/living	AAC-200-NONREFL-CAV11	2900	1112	S		No
Kitchen/living	AAC-200-NONREFL-CAV11	2900	3181	W		No

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	24.5	0.00
INT-PB	Internal Plasterboard Stud Wall	34.8	0.00
INT-PB	Internal Plasterboard Stud Wall	12.8	2.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.7	N/A	0.00	Carpet
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	11.2	N/A	0.00	Carpet
Kitchen/living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	44.2	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom 1	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom 2	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

* Refer to glossary.



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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-DFVZTR-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U24, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)* **Exposure Type**

Conditioned* 43.9 Suburban

Unconditioned* 6.5 **NatHERS climate zone**

Total 50.4 56 - Mascot AMO

Garage 0.0



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

37.4 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	22.2	15.3
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-DFVZTR-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	15.84
Bathroom	Unconditioned	6.50
Kitchen/living	Kitchen/Living	28.04

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-001-01 A	W167	2200	980	Awning	60	N	None
Bedroom	ALM-001-01 A	W169	2200	980	Awning	60	W	None
Kitchen/living	ALM-001-01 A	W160-B	1300	800	Awning	90	W	None
Kitchen/living	ALM-001-01 A	W161-B	2200	600	Awning	60	W	None
Kitchen/living	ALM-002-01 A	W161-A	2200	1160	Fixed	0	W	None
Kitchen/living	ALM-002-01 A	W160-A	1300	800	Fixed	0	W	None
Kitchen/living	ALM-002-01 A	W180	2440	2410	Sliding Door	45	N	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/living	2100	920	90	E

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	3020	S		No
Bedroom	BV-REFL-CAV-A	2900	3063	N	363	Yes
Bedroom	BV-REFL-CAV-A	2900	5211	W	3783	Yes
Kitchen/living	AAC-200-NONREFL-CAV11	2900	3274	E		No
Kitchen/living	BV-REFL-CAV-B	2900	6694	W		No
Kitchen/living	BV-REFL-CAV-B	2900	3675	S		Yes
Kitchen/living	BV-REFL-CAV-B	2900	3825	N	2468	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	24.5	0.00
INT-PB	Internal Plasterboard Stud Wall	13.4	2.00
INT-PB	Internal Plasterboard Stud Wall	6.8	0.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	15.8	N/A	0.00	Carpet
Kitchen/living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	28.1	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-BOR8P6-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U25, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	47.5	Suburban
Unconditioned*	6.1	NatHERS climate zone
Total	53.7	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

34.1 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	25.6	8.5
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-BOR8P6-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Room schedule

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	6.15
Bedroom	Bedroom	12.86
Kitchen/Living	Kitchen/Living	34.65

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
BRD-028-08 A	ESS Awning Window (52mm) DG 4-6-4	4.62	0.55	0.52	0.58
BRD-101-09 A	Signature Sliding Door 100TB DG 4mmET/12Ar/4mmET	2.08	0.47	0.45	0.49
BRD-108-09 A	Signature Fixed Lite INT 100TB DG 4mmET/12Ar/4mmET	1.78	0.51	0.48	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	BRD-101-09 A	W175	2440	2410	Sliding Door	45	S	None
Bedroom	BRD-028-08 A	W170	2200	980	Awning	60	W	None
Bedroom	BRD-028-08 A	W171	2200	980	Awning	60	W	None
Kitchen/Living	BRD-101-09 A	W179	2440	2410	Sliding Door	45	W	None
Kitchen/Living	BRD-028-08 A	W159-B	600	835	Awning	90	E	None
Kitchen/Living	BRD-108-09 A	W159-A	600	835	Fixed	0	E	None
Kitchen/Living	BRD-108-09 A	W163	1400	900	Fixed	0	SW	None
Kitchen/Living	BRD-028-08 A	W164	1400	980	Awning	90	SW	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	BRD-028-08 A	W162-B	2200	600	Awning	60	S	None
Kitchen/Living	BRD-108-09 A	W162-A	2200	1160	Fixed	0	S	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	N

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	0.50	Medium	0.00	No



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-NONREFL-CAV11	2900	2092	N		No
Bathroom	AAC-200-NONREFL-CAV11	2900	2963	E		No
Bedroom	AAC-200-NONREFL-CAV11	2900	3862	N		No
Bedroom	BV-REFL-CAV	2900	3765	S	4079	Yes
Bedroom	BV-REFL-CAV	2900	3423	W	469	Yes
Kitchen/Living	BV-REFL-CAV	2900	3380	W	4329	Yes
Kitchen/Living	AAC-200-NONREFL-CAV11	2900	1091	N		No
Kitchen/Living	AAC-200-NONREFL-CAV11	2900	2753	N		No
Kitchen/Living	BV-REFL-CAV	2900	3628	E		Yes
Kitchen/Living	BV-REFL-CAV	2900	883	NE		Yes
Kitchen/Living	FC-NOCAV	2900	3395	SW	498	Yes
Kitchen/Living	BV-REFL-CAV	2900	563	N		Yes
Kitchen/Living	BV-REFL-CAV	2900	2628	S	608	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-NONREFL-CAV11	Copy of AAC (200mm) Clad (Non-Refl Cavity) Stud Wall	12.3	0.00
INT-PB	Internal Plasterboard Stud Wall	12.7	2.00
INT-PB	Internal Plasterboard Stud Wall	8.0	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.1	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	12.9	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	34.6	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				



Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-JL9RCW-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U26, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	4 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 52.4	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 60.2	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

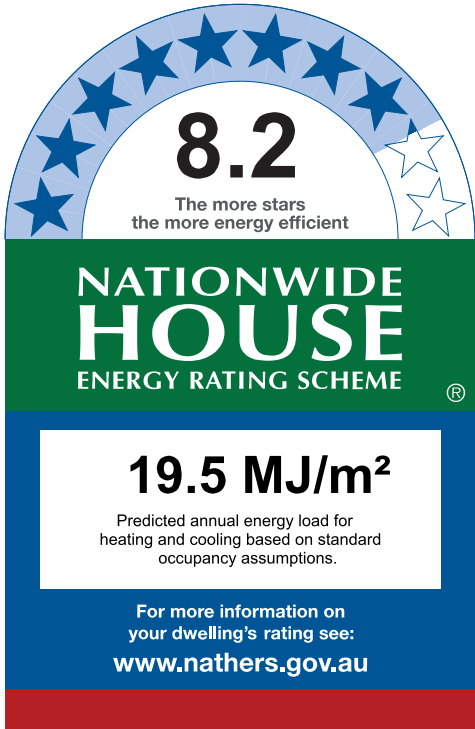
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	13.5	6.0
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-JL9RCW-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	7.80
Bedroom	Bedroom	16.35
Kitchen/Living	Kitchen/Living	36.04

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	ALM-003-03 A	W199	600	1200	Awning	90	NE	None
Bedroom	ALM-003-03 A	W196	2200	980	Awning	60	SW	None
Bedroom	ALM-003-03 A	W197	2200	980	Awning	60	SW	None
Bedroom	ALM-003-03 A	W198-B	600	835	Awning	90	NW	None
Bedroom	ALM-004-03 A	W198-A	600	835	Fixed	0	NW	None
Bedroom	ALM-003-03 A	D02	2400	1000	Hinged Door	90	SE	None
Kitchen/Living	ALM-003-03 A	W233-A	1300	800	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W233-B	1300	800	Fixed	0	SW	None
Kitchen/Living	ALM-004-03 A	W209	2440	2410	Sliding Door	45	NE	None

* Refer to glossary.



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	BV-REFL-CAV	2900	3287	NE		Yes
Bedroom	BV-REFL-CAV	2900	3681	SW	392	No
Bedroom	BV-REFL-CAV	2900	4187	NW		Yes
Bedroom	BV-REFL-CAV	2900	1845	SE		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	7717	SE		No
Kitchen/Living	BV-REFL-CAV	2900	3596	SW	2237	Yes
Kitchen/Living	BV-REFL-CAV	2900	1345	NW		Yes
Kitchen/Living	BV-REFL-CAV	2900	592	NW		Yes
Kitchen/Living	BV-REFL-CAV	2900	3242	NE	2688	Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	738	NE		No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	12.4	0.00
INT-PB	Internal Plasterboard Stud Wall	18.5	0.00
INT-PB	Internal Plasterboard Stud Wall	14.6	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	7.8	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	16.3	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	36.0	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-HMK9D6-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U27, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	4 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 42.9	Suburban
Unconditioned* 6.5	NatHERS climate zone
Total 49.4	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

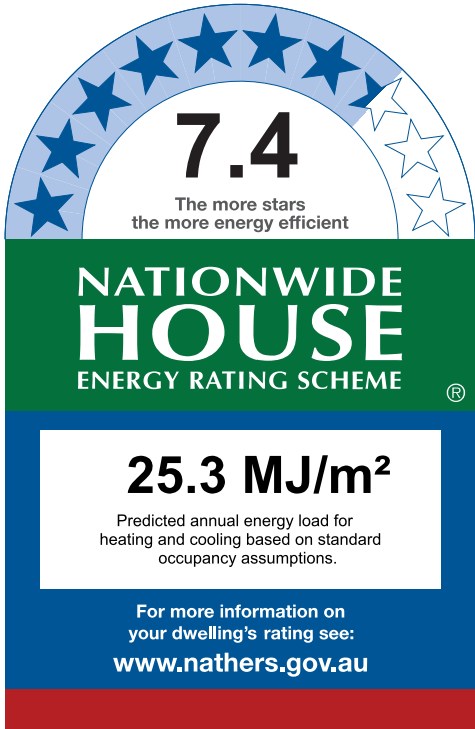
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.1	10.2
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-HMK9D6-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	13.55
Bathroom	Unconditioned	6.47
Kitchen/Living	Kitchen/Living	29.34

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.70	0.70	0.66	0.73

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-001-01 A	D10	2400	1000	Hinged Door	90	SE	None
Bedroom	ALM-002-01 A	W194	2440	600	Fixed	0	SE	None
Bedroom	ALM-001-01 A	W195-B	600	835	Awning	90	NW	None
Bedroom	ALM-002-01 A	W195-A	600	835	Fixed	0	NW	None
Bedroom	ALM-001-01 A	W192	2200	980	Awning	60	NE	None
Bedroom	ALM-001-01 A	W193	2200	980	Awning	60	NE	None
Kitchen/Living	ALM-002-01 A	W210	2440	2410	Sliding Door	45	NE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	960	90	NW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2115	NW		No
Bathroom	AAC-200-REFL-CAV1	2900	2662	SW		No
Bedroom	BV-REFL-CAV	2940	2032	SE	3624	Yes
Bedroom	BV-REFL-CAV	2900	3688	NW		Yes
Bedroom	BV-REFL-CAV	2900	3347	NE		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	1382	NW		No
Kitchen/Living	BV-REFL-CAV	2900	3641	NE	2786	Yes
Kitchen/Living	BV-REFL-CAV	2900	4863	SE		Yes
Kitchen/Living	BV-REFL-CAV	2900	793	NW		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	16.1	0.00
INT-PB	Internal Plasterboard Stud Wall	18.1	0.00
INT-PB	Internal Plasterboard Stud Wall	13.0	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.6	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	29.3	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.

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

Disclaimer

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

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

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

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-L37LQC-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address	U28, 69 Trafalgar St & 2-6 Gover St, Peakhurst, NSW, 2210
Lot/DP	121,162,163 & 164/DP36317
NCC Class*	2
Floor/all Floors	4 of 1 floors
Type	New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 70.7	Suburban
Unconditioned* 7.8	NatHERS climate zone
Total 78.5	56 - Mascot AMO
Garage 0.0	



Accredited assessor

Name	Nermein Loka
Business name	Loka Consulting Engineers
Email	info@lceng.com.au
Phone	+61 297488742
Accreditation No.	101399
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 1
State/Territory variation	Yes

National Construction Code (NCC) requirements

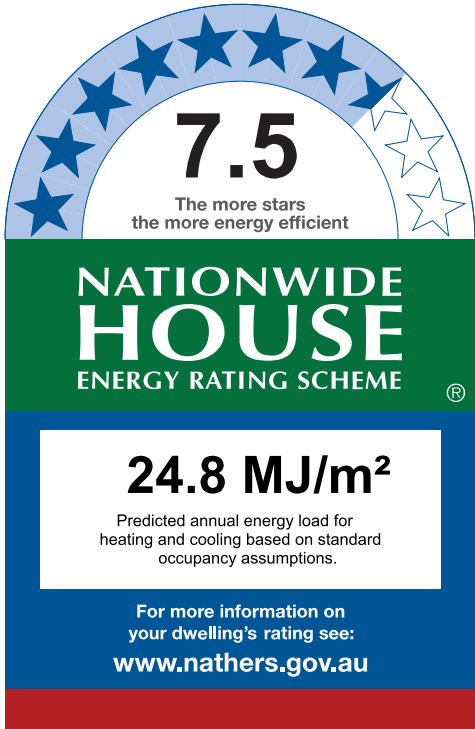
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	19.7	5.1
Load limits	33	20

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

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

<http://www.hero-software.com.au/pdf/HR-L37LQC-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

* Refer to glossary.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 1	Bedroom	10.87
Bathroom	Unconditioned	7.82
Bedroom 2	Bedroom	14.43
Hallway	Day Time	8.66
Kitchen/Living	Kitchen/Living	36.71

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	ALM-003-03 A	W187	2200	980	Awning	60	SW	None
Bedroom 2	ALM-003-03 A	D10	2400	1000	Hinged Door	90	SE	None
Bedroom 2	ALM-003-03 A	W182	2200	980	Awning	60	SW	None
Bedroom 2	ALM-003-03 A	W186	2200	980	Awning	60	SW	None
Kitchen/Living	ALM-004-03 A	W211	2440	2410	Sliding Door	45	NE	None
Kitchen/Living	ALM-003-03 A	W185-A	1300	800	Awning	90	SW	None
Kitchen/Living	ALM-004-03 A	W185-B	1300	800	Fixed	0	SW	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	ALM-003-03 A	W191	2200	980	Awning	60	SE	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	NW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2375	NW		No
Bedroom 1	BV-REFL-CAV	2900	2998	SW	392	No
Bedroom 1	BV-REFL-CAV	2900	1527	NW		Yes
Bedroom 1	AAC-200-REFL-CAV1	2900	2100	NW		No
Bedroom 2	BV-REFL-CAV	2900	595	SW		Yes
Bedroom 2	BV-REFL-CAV	2900	1845	SE		Yes
Bedroom 2	BV-REFL-CAV	2900	3685	SW	392	No
Hallway	AAC-200-REFL-CAV1	2900	1550	NW		No
Hallway	AAC-200-REFL-CAV1	2900	2662	NE		No
Kitchen/Living	BV-REFL-CAV	2900	4100	NE	3041	Yes
Kitchen/Living	BV-REFL-CAV	2900	94	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	3202	SE	341	Yes
Kitchen/Living	BV-REFL-CAV	2900	3887	SW	2183	Yes
Kitchen/Living	BV-REFL-CAV	2900	1247	SE	247	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	30.1	0.00
INT-PB	Internal Plasterboard Stud Wall	33.2	0.00
INT-PB	Internal Plasterboard Stud Wall	13.4	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	7.8	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	10.9	N/A	0.00	Tile (8mm)
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	14.4	N/A	0.00	Tile (8mm)

* Refer to glossary.



Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	8.7	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	36.7	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom 1	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom 2	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Hallway	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
------------------	-----------------------------------------------	--------------------	--------------------------	-------------------------



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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-P2SY7Q-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U29, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)* **Exposure Type**

Conditioned* 77.5 Suburban

Unconditioned* 6.2 **NatHERS climate zone**

Total 83.7 56 - Mascot AMO

Garage 0.0



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

34.1 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	31.3	2.8
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-P2SY7Q-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.

Room schedule

Room	Zone Type	Area (m²)
Bedroom 2	Bedroom	15.14
Bedroom 1	Bedroom	10.78
Bathroom	Unconditioned	6.23
Storage	Day Time	3.72
Kitchen/Living	Kitchen/Living	38.65
Hallway	Day Time	9.17

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
BRD-097-26 A	Signature Awning Window 100TB DG DuoUltraClr L1_638TransClr-12-6mm	2.26	0.31	0.29	0.33
BRD-101-19 A	Signature Sliding Door 100TB DG FGIOptEma+Clr_4mm_16Ar_4mm	2.18	0.48	0.46	0.50
BRD-108-09 A	Signature Fixed Lite INT 100TB DG 4mmET/12Ar/4mmET	1.78	0.51	0.48	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom 1	BRD-097-26 A	W225	2200	980	Awning	60	SSW	None
Bedroom 2	BRD-097-26 A	W227	2200	980	Awning	60	SSW	None
Bedroom 2	BRD-097-26 A	W226	2200	980	Awning	60	SSW	None
Bedroom 2	BRD-097-26 A	W57	1600	980	Awning	90	WNW	None
Kitchen/Living	BRD-101-19 A	W243	2440	2410	Sliding Door	45	SSW	None



Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	BRD-097-26 A	W235-B	2200	600	Awning	60	WNW	None
Kitchen/Living	BRD-108-09 A	W235-A	2200	1160	Fixed	0	WNW	None
Kitchen/Living	BRD-097-26 A	W236-B	600	835	Awning	90	SW	OP-50%
Kitchen/Living	BRD-108-09 A	W236-A	600	835	Fixed	0	SW	OP-50%
Kitchen/Living	BRD-101-19 A	W244	2440	2410	Sliding Door	45	NNE	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	ESE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2095	ESE		No
Bedroom 1	AAC-200-REFL-CAV1	2900	930	ESE		No
Bedroom 1	BV-REFL-CAV	2900	3007	SSW	622	Yes
Bedroom 1	BV-REFL-CAV	2900	2655	ESE		Yes
Bedroom 2	BV-REFL-CAV	2900	4246	SSW	616	Yes
Bedroom 2	BV-REFL-CAV	2900	2035	WNW	4071	Yes
Hallway	AAC-200-REFL-CAV1	2900	1119	ESE		No
Hallway	AAC-200-REFL-CAV1	2900	1098	NNE		No
Kitchen/Living	BV-REFL-CAV	2900	3681	SSW	2648	Yes
Kitchen/Living	BV-REFL-CAV	2900	3139	WNW	260	Yes
Kitchen/Living	FC-NOCAV	2900	3863	SW		Yes
Kitchen/Living	BV-REFL-CAV	2900	1411	NE		Yes
Kitchen/Living	BV-REFL-CAV	2900	5094	NNE	3078	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	43.3	0.00
INT-PB	Internal Plasterboard Stud Wall	53.2	2.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.2	N/A	0.00	Tile (8mm)
Bedroom 1	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	10.8	N/A	0.00	Carpet
Bedroom 2	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	15.1	N/A	0.00	Carpet
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	9.2	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	38.6	N/A	0.00	Tile (8mm)
Storage	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.7	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom 1	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom 2	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Hallway	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Storage	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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



Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-KWRL4B-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U30, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	47.6	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	53.9	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

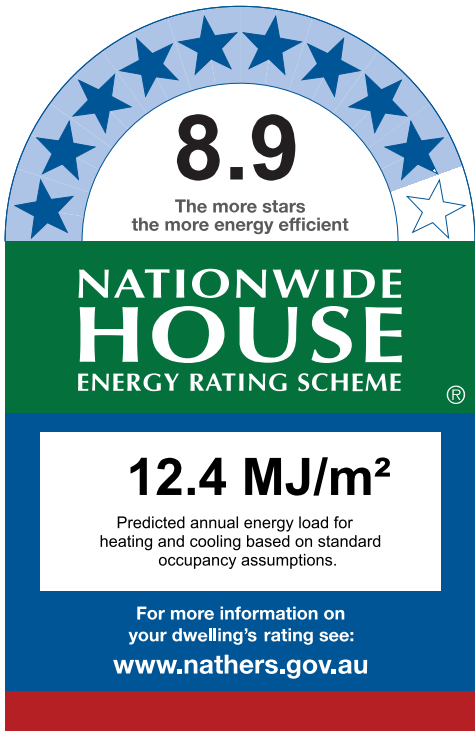
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	5.2	7.3
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-KWRL4B-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.28
Bathroom	Unconditioned	6.36
Bedroom	Bedroom	16.22
Store	Day Time	1.10
Hallway	Day Time	3.95

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W214	2200	980	Awning	60	NNE	None
Bedroom	ALM-003-03 A	W215	2200	980	Awning	60	NNE	None
Bedroom	ALM-004-03 A	W216	2440	600	Fixed	0	WNW	None
Bedroom	ALM-003-03 A	D10	2400	1000	Hinged Door	90	WNW	None
Kitchen/Living	ALM-004-03 A	W221	2440	2410	Sliding Door	45	NNE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Hallway	2100	920	90	ESE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2108	ESE		No
Bathroom	AAC-200-REFL-CAV1	4400	1102	SSW		No
Bedroom	BV-REFL-CAV	2900	3072	NNE		Yes
Bedroom	BV-REFL-CAV	2940	2250	WNW		Yes
Bedroom	AAC-200-REFL-CAV1	2900	2787	ESE		No
Hallway	AAC-200-REFL-CAV1	2900	1097	ESE		No
Kitchen/Living	BV-REFL-CAV	2900	3631	NNE	2624	Yes
Kitchen/Living	BV-REFL-CAV	2900	5742	WNW		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	39.3	0.00
INT-PB	Internal Plasterboard Stud Wall	22.1	0.00
INT-PB	Internal Plasterboard Stud Wall	13.1	2.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	16.2	N/A	0.00	Carpet
Hallway	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	4.0	N/A	0.00	Tile (8mm)
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	26.3	N/A	0.00	Tile (8mm)
Store	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	1.1	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Hallway	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Store	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
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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.
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.
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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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-2996L6-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U31, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	61.1	Suburban
Unconditioned*	6.5	NatHERS climate zone
Total	67.6	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

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Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation Yes

National Construction Code (NCC) requirements

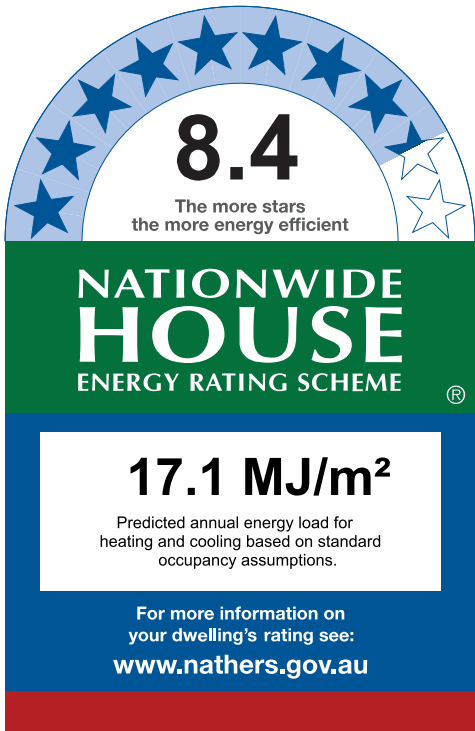
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	10.1	7.0
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-2996L6-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------	--	--	--------------------------	--------------------------	--------------------------

Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

* Refer to glossary.



Room *schedule*

Room	Zone Type	Area (m²)
bedroom 02	Bedroom	11.52
kitchen / living	Kitchen/Living	30.84
bathroom	Unconditioned	6.53
corridor	Day Time	3.32
store	Day Time	1.87
bedroom 01	Bedroom	13.53

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
bedroom 01	ALM-003-03 A	W213	2200	980	Awning	60	NNE	None
bedroom 01	ALM-003-03 A	W212	2200	980	Awning	60	NNE	None
bedroom 02	ALM-003-03 A	W219-B	1300	800	Awning	90	NNE	None
bedroom 02	ALM-004-03 A	W219-A	1300	800	Fixed	0	NNE	None
kitchen / living	ALM-003-03 A	W217	2200	980	Awning	60	NNE	None
kitchen / living	ALM-003-03 A	W218	2200	980	Awning	60	NNE	None

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
kitchen / living	ALM-004-03 A	W220	2440	2410	Sliding Door	45	WNW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
kitchen / living	2200	920	90	SSW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes



External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
bedroom 01	BV-REFL-CAV	2900	3043	NNE		Yes
bedroom 01	BV-REFL-CAV	2900	5156	ESE		Yes
bedroom 02	BV-REFL-CAV	2900	3182	NNE	3232	Yes
bedroom 02	AAC-200-REFL-CAV1	2900	3167	SSW		No
bedroom 02	BV-REFL-CAV	2900	410	WNW		Yes
corridor	BV-REFL-CAV	2900	1077	ESE		Yes
kitchen / living	BV-REFL-CAV	2900	620	ESE		Yes
kitchen / living	AAC-200-REFL-CAV1	2900	3980	SSW		No
kitchen / living	AAC-200-REFL-CAV1	2900	788	WNW		No
kitchen / living	BV-REFL-CAV	2900	4055	NNE		No
kitchen / living	BV-REFL-CAV	2900	3202	WNW	3154	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	39.4	0.00
INT-PB	Internal Plasterboard Stud Wall	35.6	0.00
INT-PB	Internal Plasterboard Stud Wall	8.3	2.00

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.5	N/A	0.00	Tile (8mm)
bedroom 01	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	13.5	N/A	0.00	Carpet
bedroom 02	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	11.5	N/A	0.00	Carpet
corridor	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	3.3	N/A	0.00	Tile (8mm)
kitchen / living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	30.8	N/A	0.00	Tile (8mm)
store	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	1.9	N/A	0.00	Tile (8mm)

* Refer to glossary.



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
bedroom 01	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
bedroom 02	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
corridor	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
kitchen / living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
store	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
bathroom	1	Exhaust Fan	400	Sealed
kitchen / living	1	Exhaust Fan	400	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
bedroom 01	1	900
bedroom 02	1	900
kitchen / living	1	900

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

* Refer to glossary.



Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
------	-----------	----------------------------------	----------------------

No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
------	------------------------

No Whole of Home Data

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-620R0J-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U32, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	44.2	Suburban
Unconditioned*	6.4	NatHERS climate zone
Total	50.6	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

35.4 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	27.1	8.3
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-620R0J-01>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.



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 and 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: 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 Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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 on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
----------------------------------------------------------------------------------	--	--------------------------	--------------------------	--------------------------	--------------------------

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
--------------------------------------------------------------------------------------------------------------------	--------------------------	--------------------------	--	--	--

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.

* Refer to glossary.



Room schedule

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	29.76
Bedroom	Bedroom	14.47
Bathroom	Unconditioned	6.39

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-003-03 A	W222	2200	980	Awning	60	SSW	None
Bedroom	ALM-003-03 A	W223	2200	980	Awning	60	SSW	None
Bedroom	ALM-003-03 A	D10	2400	1000	Hinged Door	90	WNW	None
Kitchen/Living	ALM-004-03 A	W241	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-003-03 A	W224	2200	980	Awning	60	WNW	None

Roof window type and performance value

Default* roof windows

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

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	29	920	90	NNE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.50	Medium	0.00	No
BV-REFL-CAV-A	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes
BV-REFL-CAV-B	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bedroom	BV-REFL-CAV-B	2900	3073	SSW		No
Bedroom	BV-REFL-CAV-A	2900	2299	WNW	3677	Yes
Bedroom	BV-REFL-CAV-B	2900	3790	ESE		Yes
Kitchen/Living	BV-REFL-CAV-A	2900	3650	SSW	2331	Yes
Kitchen/Living	BV-REFL-CAV-A	2900	2664	WNW		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	3641	NNE		No
Kitchen/Living	AAC-200-REFL-CAV1	2900	3945	WNW		No

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	22.8	0.00
INT-PB	Internal Plasterboard Stud Wall	12.9	2.00
INT-PB	Internal Plasterboard Stud Wall	15.2	0.00

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.4	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	14.5	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	29.8	N/A	0.00	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No



Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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®

NatHERS® Certificate No. #HR-U5VHG5-01

Generated on 30 Sep 2024 using Hero 4.1 (Chenath v3.23)

Property

Address U33, 69 Trafalgar st & 2-6 Gover street,
Peakhurst, NSW, 2210

Lot/DP 121,162,163 & 164/DP36317

NCC Class* 2

Floor/all Floors 4 of 1 floors

Type New

Plans

Main Plan

Prepared by

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	52.0	Suburban
Unconditioned*	6.9	NatHERS climate zone
Total	58.9	56 - Mascot AMO
Garage	0.0	



Accredited assessor

Name Nermein Loka

Business name Loka Consulting Engineers

Email info@lceng.com.au

Phone +61 297488742

Accreditation No. 101399

Assessor Accrediting Organisation ABSA

Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 1

State/Territory variation 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 J2D2(2)(a) and (3) of NCC Volume One.

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

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

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

Thermal performance star rating



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME

36.7 MJ/m²

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

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

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	31.1	5.6
Load limits	33	20

Features determining load limits

Floor type
(lowest conditioned area) CSOG

NCC climate zone 1 or 2 N

Outdoor living area N

Outdoor living area ceiling fan N

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

<http://www.hero-software.com.au/pdf/HR-U5VHG5-01>.

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

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 and 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: 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

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
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Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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* Refer to glossary.



Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

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

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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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.



Room schedule

Room	Zone Type	Area (m²)
Bedroom	Bedroom	14.41
Bathroom	Unconditioned	6.86
Kitchen/Living	Kitchen/Living	37.60

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.30	0.47	0.45	0.49
ALM-004-03 A	Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.30	0.53	0.50	0.56
ALM-004-04 A	Aluminium B DG Air Fill Low Solar Gain low-E -Clear	4.90	0.33	0.31	0.35

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bedroom	ALM-004-03 A	W242	2440	2410	Sliding Door	45	SSW	None
Kitchen/Living	ALM-003-03 A	W234-B	2200	600	Awning	60	ESE	OP-50%
Kitchen/Living	ALM-004-03 A	W234-A	2200	1160	Fixed	0	ESE	OP-50%
Kitchen/Living	ALM-003-03 A	W232-B	600	835	Awning	90	ESE	OP-50%
Kitchen/Living	ALM-004-03 A	W232-A	600	835	Fixed	0	ESE	OP-50%
Kitchen/Living	ALM-004-04 A	W240	2440	2410	Sliding Door	45	NNE	None



Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	WNW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	0.30	Light	0.00	No
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.30	Light	2.00	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
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* Refer to glossary.

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-200-REFL-CAV1	2900	2095	WNW		No
Bedroom	BV-REFL-CAV	2900	3528	ESE	1170	No
Bedroom	BV-REFL-CAV	2900	4083	SSW	2342	Yes
Kitchen/Living	BV-REFL-CAV	2900	3713	ESE		Yes
Kitchen/Living	BV-REFL-CAV	2900	652	NNE		Yes
Kitchen/Living	BV-REFL-CAV	2900	3945	ESE	618	No
Kitchen/Living	BV-REFL-CAV	2900	620	SSW		Yes
Kitchen/Living	AAC-200-REFL-CAV1	2900	1854	WNW		No
Kitchen/Living	BV-REFL-CAV	2900	3673	NNE	2749	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
AAC-200-REFL-CAV1	AAC (200mm) Clad (Refl Cavity) Stud Wall	46.6	0.00
INT-PB	Internal Plasterboard Stud Wall	13.7	2.00
INT-PB	Internal Plasterboard Stud Wall	9.8	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	6.9	N/A	0.00	Tile (8mm)
Bedroom	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	14.4	N/A	0.00	Carpet
Kitchen/Living	SUSP-CONC-200: Suspended Concrete Slab Floor (200mm)	37.6	N/A	0.00	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No
Bedroom	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	4.00	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Exhaust Fan	400	Sealed
Kitchen/Living	1	Exhaust Fan	400	Sealed

Ceiling fans

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

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
SLAB-200-CEIL-01: Concrete Slab (200mm) with Suspended PB Ceiling	1.30	0.25	Light (White)

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)
None				

Appliance schedule

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				



Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

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 home's 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.
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, 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.
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.
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 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 home's 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 - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
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.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
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 Regulatory
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, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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	a 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.