Nationwide House Energy Rating Scheme
NatHERS Certificate No. SA7NACDZL9

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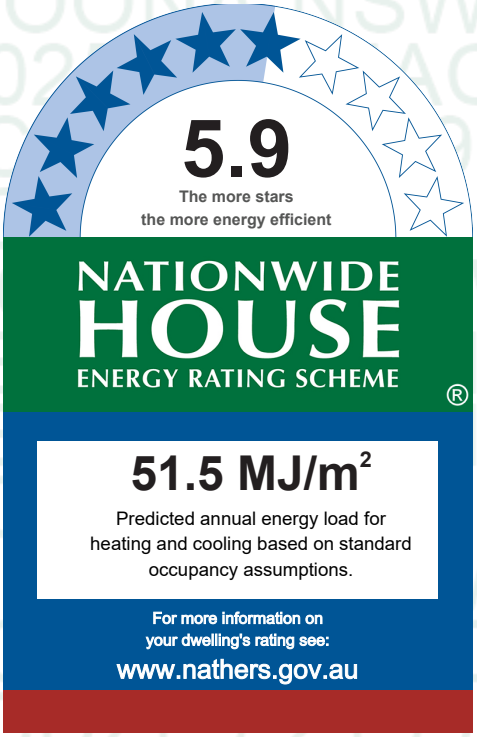

Property

Address	9 Wilkins Street, Yagoona, NSW, 2199
Lot/DP	8/364866
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	2023-105, Rev.B, Nov 2024
Prepared by	BOSS DESIGN

Construction and environment

Assessed floor area (m²)*	
Conditioned*	188.7
Unconditioned*	46.1
Total	234.8
Garage	36

Exposure type
suburban

NatHERS climate zone
56 Mascot AMO

Thermal performance

Heating	Cooling
37.8 MJ/m²	13.7 MJ/m²

About the rating
NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Accredited assessor

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Accreditation No.	HERA10042
Assessor Accrediting Organisation	HERA
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=SA7NACDZL9 When using either link, ensure you are visiting www.FR5.com.au.

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate Check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional Notes

Default ceiling penetration density calculated as lighting plan has not been provided. All openable windows are assumed to be fully openable as per NCC 2022 > Volume 2 > H5P2 (fall prevention barriers) are in place. North Pointer shown on the plans has been calculated to be the True North. No trees have been modelled as no relevant information has been provided. Prime Panel External wall insulation 40mm = R1.90 declared product value has been nominated (primepanel.com.au). For all insulation installed the rating called out in the NatHERS is the primary factor and not its description. If these are not in place then this Nathers must be revised.

Window and glazed door *type and performance*

Default* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.6
ATB-006-01 B	Al Thermally Broken B DG Argon Fill Clear-Clear	3.5	0.64	0.61	0.67
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74

Custom* windows

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

Window and glazed door *Schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-001-01 A	W01	400	1400	awning	90.0	SSW	No
Garage	ALM-001-01 A	W01	400	1400	awning	90.0	SSW	No
PWD	ALM-001-01 A	W09	450	800	awning	90.0	NNE	No
PWD	ALM-001-01 A	W09	450	800	awning	90.0	NNE	No
LOUNGE	ATB-006-01 B	D03	2100	4000	sliding	75.0	SSW	No
Kitchen/Living	ALM-002-01 A	W03	350	4360	sliding	45.0	SSW	No
Kitchen/Living	ALM-002-01 A	D04	2100	3355	sliding	75.0	ESE	No
Kitchen/Living	ALM-002-01 A	D04	2100	3355	sliding	75.0	ESE	No
Kitchen/Living	ALM-002-01 A	W07	2100	1310	fixed	0.0	WNW	No
ENTRY - CORRIDOR	ALM-002-01 A	D01	2400	600	fixed	0.0	WNW	No
ENTRY - CORRIDOR	ALM-002-01 A	D01	2400	600	fixed	0.0	WNW	No
ENTRY - CORRIDOR	ALM-001-01 A	D15	2100	1090	casement	90.0	NNE	Yes
ENTRY - CORRIDOR	ALM-002-01 A	D15	2100	1090	fixed	0.0	NNE	Yes
ENTRY - CORRIDOR	ALM-002-01 A	D15	2100	1090	fixed	0.0	NNE	Yes
ENTRY - CORRIDOR	ALM-002-01 A	D15	2100	1090	fixed	0.0	NNE	Yes
Bedroom M	ALM-002-01 A	D11	2100	3000	sliding	66.0	ESE	No
Bedroom M	ALM-001-01 A	W13	450	750	awning	90.0	NNE	No
Bedroom M	ALM-002-01 A	W13	450	1500	fixed	0.0	NNE	No
Bedroom M	ALM-001-01 A	W13	450	750	awning	90.0	NNE	No
ENS M	ALM-001-01 A	W12	450	1000	awning	90.0	SSW	No
ENS M	ALM-002-01 A	W15	600	2000	sliding	45.0	SSW	No
ENS M	ALM-001-01 A	W12	450	1000	awning	90.0	SSW	No
ENS M	ALM-002-01 A	W14	300	1400	fixed	0.0	ESE	No
Bedroom 3	ALM-002-01 A	W16	600	3000	sliding	45.0	SSW	No
BATH	ALM-001-01 A	W17	450	700	awning	90.0	SSW	No
WC	ALM-001-01 A	W17	450	700	awning	90.0	SSW	No
Bedroom 1	ALM-001-01 A	W19	1100	800	awning	90.0	WNW	No
Bedroom 1	ALM-002-01 A	W19	1100	1150	fixed	0.0	WNW	No
Bedroom 1	ALM-001-01 A	W19	1100	800	awning	90.0	WNW	No
Bedroom 1	ALM-002-01 A	W18	450	2500	fixed	0.0	SSW	No
Bedroom 2	ALM-001-01 A	W11	450	500	awning	90.0	NNE	No
Bedroom 2	ALM-002-01 A	W11	450	1000	fixed	0.0	NNE	No
Bedroom 2	ALM-001-01 A	W11	450	500	awning	90.0	NNE	No
Bedroom 2	ALM-002-01 A	D12	2100	2500	sliding	45.0	WNW	No
ENS 2	ALM-001-01 A	W12	450	1000	awning	90.0	NNE	No

* Refer to glossary.

LANDING	ALM-002-01 A	W08	450	4360	fixed	0.0	NNE	Yes

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Area (m²)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	5000	100.0	WNW
ENTRY - CORRIDOR	2400	1000	45.0	WNW

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	AENEC - CAVITY BRICK FOILBOARD	0.5	Medium		No
2	FR5 - Brick Cavity	0.7	Dark	Polystyrene extruded (k = 0.028) (R1.9)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	1	2800	6000	WNW	0	Yes
Garage	1	2800	6000	SSW	484	No

* Refer to glossary.

Garage	1	2800	2502	ESE	4387	Yes
Garage	1	2800	1591	NNE	3997	Yes
PWD	2	2700	1499	ESE	0	Yes
PWD	2	2700	2811	NNE	0	Yes
LOUNGE	2	2700	4641	SSW	2973	Yes
Kitchen/Living	2	2700	5602	SSW	471	No
Kitchen/Living	2	2700	6299	ESE	5570	Yes
Kitchen/Living	2	2700	3711	ESE	1587	Yes
Kitchen/Living	2	2700	5602	NNE	475	Yes
Kitchen/Living	2	2700	1609	WNW	0	Yes
Kitchen/Living	2	2700	2502	WNW	4446	Yes
ENTRY - CORRIDOR	2	2700	3900	WNW	2568	Yes
ENTRY - CORRIDOR	2	2700	4747	NNE	0	Yes
ENTRY - CORRIDOR	2	2700	1487	NNE	0	Yes
Bedroom M	2	2700	4378	ESE	1327	Yes
Bedroom M	2	2700	5741	NNE	475	Yes
ENS M	2	2700	5602	SSW	467	No
ENS M	2	2700	2714	ESE	1327	Yes
ENS M	2	2700	1304	WNW	10843	Yes
Bedroom 3	2	2700	3929	SSW	484	Yes
BATH	2	2700	1078	SSW	484	Yes
BATH	2	2700	425	SSW	484	Yes
WC	2	2700	898	SSW	484	Yes
Bedroom 1	2	2700	140	WNW	0	Yes
Bedroom 1	2	2700	999	NNE	3979	Yes
Bedroom 1	2	2700	3497	WNW	992	Yes
Bedroom 1	2	2700	3950	SSW	484	Yes
Bedroom 2	2	2700	3502	NNE	467	No
Bedroom 2	2	2700	3764	WNW	1991	Yes
ENS 2	2	2700	1613	ESE	4324	Yes
ENS 2	2	2700	1389	NNE	467	No
LANDING	2	2700	4501	NNE	2080	Yes

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Single Brick Finished	21.3	Glass fibre batt: R1.5 (R1.5)
2	FR5 - Single Brick Finished	95.1	
3	FR5 - Internal Plasterboard Stud Wall	42.9	

Floor *type*

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

Garage	FR5 - CSOG: Slab on Ground	14.2	Enclosed	R0.0	none
Garage	FR5 - CSOG: Slab on Ground	21.8	Enclosed	R0.0	none
PWD	FR5 - CSOG: Slab on Ground	4	Enclosed	R0.0	Tiles
LOUNGE	FR5 - CSOG: Slab on Ground	16.2	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	8.4	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	6.1	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	41.5	Enclosed	R0.0	Tiles
ENTRY - CORRIDOR	FR5 - CSOG: Slab on Ground	23.6	Enclosed	R0.0	Tiles
Bedroom M	FR5 - 200mm concrete slab Lined	25.1	Enclosed	R0.0	Timber
ENS M	FR5 - 200mm concrete slab Lined	15.2	Enclosed	R0.0	Tiles
Bedroom 3	FR5 - 200mm concrete slab Lined	14.3	Enclosed	R0.0	Timber
BATH	FR5 - 200mm concrete slab Lined	3.5	Enclosed	R0.0	Tiles
WC	FR5 - 200mm concrete slab Lined	2.6	Enclosed	R0.0	Tiles
Bedroom 1	FR5 - 200mm concrete slab Lined	14.2	Enclosed	R0.0	Timber
Bedroom 2	FR5 - 200mm concrete slab Lined	1.8	Elevated	R0.0	Timber
Bedroom 2	FR5 - 200mm concrete slab Lined	11.9	Enclosed	R0.0	Timber
ENS 2	FR5 - 200mm concrete slab Lined	3.5	Enclosed	R0.0	Tiles
LANDING	FR5 - 200mm concrete slab Lined	13.6	Enclosed	R0.0	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	R0.0	No
Garage	FR5 - 200mm concrete slab Lined	R0.0	No
PWD	FR5 - 200mm concrete slab Lined	R0.0	No
LOUNGE	FR5 - 200mm concrete slab Lined	R0.0	No
Kitchen/Living	Plasterboard	R2.0	No
Kitchen/Living	Plasterboard	R2.0	No
Kitchen/Living	FR5 - 200mm concrete slab Lined	R0.0	No
ENTRY - CORRIDOR	FR5 - 200mm concrete slab Lined	R0.0	No
Bedroom M	Plasterboard	R4.0	Yes
ENS M	Plasterboard	R4.0	Yes
Bedroom 3	Plasterboard	R4.0	Yes
BATH	Plasterboard	R0.0	No
WC	Plasterboard	R4.0	Yes
Bedroom 1	Plasterboard	R4.0	Yes
Bedroom 2	Plasterboard	R4.0	Yes
Bedroom 2	Plasterboard	R4.0	Yes
ENS 2	Plasterboard	R4.0	Yes
LANDING	Plasterboard	R4.0	Yes

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Garage	6	Downlights	90	Sealed
PWD	1	Exhaust Fans	250	Sealed
PWD	1	Downlights	90	Sealed
LOUNGE	3	Downlights	90	Sealed
Kitchen/Living	11	Downlights	90	Sealed
Kitchen/Living	1	Exhaust Fans	250	Sealed
ENTRY - CORRIDOR	4	Downlights	90	Sealed
Bedroom M	5	Downlights	90	Sealed
ENS M	3	Downlights	90	Sealed
ENS M	1	Exhaust Fans	250	Sealed
Bedroom 3	2	Downlights	90	Sealed
BATH	1	Downlights	90	Sealed
BATH	1	Exhaust Fans	250	Sealed
WC	1	Downlights	90	Sealed
WC	1	Exhaust Fans	250	Sealed
Bedroom 1	2	Downlights	90	Sealed
Bedroom 2	2	Downlights	90	Sealed
ENS 2	1	Downlights	90	Sealed
ENS 2	1	Exhaust Fans	250	Sealed
LANDING	2	Downlights	90	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Slab:Slab - Suspended Slab : 125mm: 125mm Suspended Slab	0.0	0.5	Medium
Cont:Attic-Continuous	0.0	0.5	Medium
Disc:Attic-Discontinuous	0.0	0.5	Medium

* Refer to glossary.

Explanatory Notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERSAdministrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

Not all assumptions that may have been 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.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area 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, rangehoods, 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.
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.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with 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.
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
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 device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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.
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).