Nationwide House Energy Rating Scheme
NatHERS Certificate No. 64V9DY2FPJ

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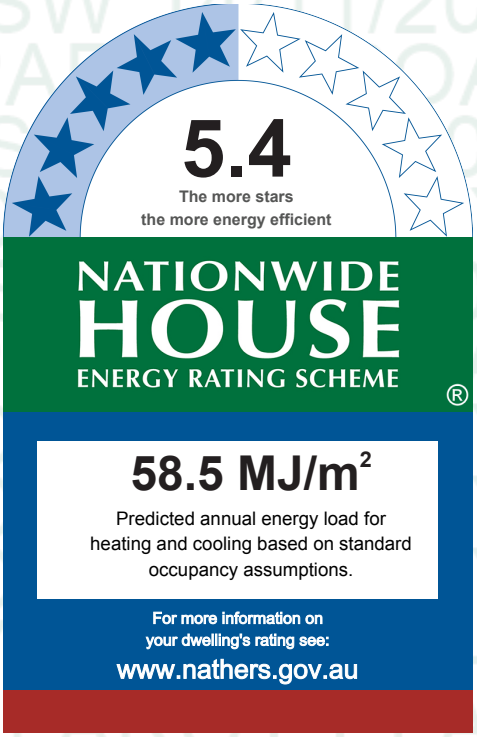

Property

Address	83 PARKES ROAD, COLLAROY PLATEAU, NSW, 2097
Lot/DP	101/27885
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	D/01.11.22
Prepared by	js

Construction and environment

Assessed floor area (m²)*	
Conditioned*	223.3
Unconditioned*	51.9
Total	275.2
Garage	34.9

Exposure type
suburban

NatHERS climate zone
56 Mascot AMO

Thermal performance

Heating	Cooling
36.5 MJ/m²	22 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

Name	Nasrin Moradi Eskandari
Business name	ecomaxhomes
Email	ecomaxhomes@gmail.com
Phone	0406184087
Accreditation No.	HERA10095
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=64V9DY2FPJ 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

Assessor assumed ceiling penetration (exhaust fan/DownlightS)

Assessor assumed fencing

Assessor assumed floor covering

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
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***
MEDIA	ALM-001-01 A	W219	1800	2400	awning	60.0	S	No

* Refer to glossary.

MEDIA	ALM-001-01 A	W220	1800	600	awning	60.0	S	No
Bedroom 3	ALM-002-01 A	W204	1200	1810	sliding	45.0	N	No
BATH	ALM-002-01 A	W205	600	1200	sliding	45.0	N	No
Bedroom 2	ALM-001-01 A	W203	2400	2100	awning	60.0	S	No
Kitchen/Living	ALM-002-01 A	W201	2400	600	sliding	45.0	S	No
Kitchen/Living	ALM-001-01 A	W202	2400	600	awning	60.0	S	No
Kitchen/Living	ALM-002-01 A	W207	600	2400	fixed	0.0	E	No
Kitchen/Living	ALM-002-01 A	W206	600	1800	other	90.0	N	No
Kitchen/Living	ALM-002-01 A	ED	2400	2000	sliding	45.0	E	No
Kitchen/Living	ALM-001-01 A	W216	1800	600	awning	60.0	N	No
Kitchen/Living	ALM-001-01 A	W217	1800	600	awning	60.0	N	No
Bedroom 4	ALM-002-01 A	W213	1800	2400	sliding	45.0	N	No
Bedroom 5	ALM-002-01 A	W212	600	2400	sliding	45.0	N	No
Bedroom 6	ALM-002-01 A	W218	1800	2400	sliding	45.0	N	No
ens	ALM-002-01 A	W211	600	1200	sliding	45.0	W	No
wir	ALM-001-01 A	W210	1800	600	awning	10.0	S	No
Bedroom Master	ALM-001-01 A	W209	1800	2400	awning	60.0	S	No
bath	ALM-002-01 A	W214	1000	1510	sliding	45.0	E	No
Living up	ALM-002-01 A	ED	2400	2400	sliding	30.0	S	No
Living up	ALM-001-01 A	W208	2400	2100	awning	10.0	S	No
Living up	ALM-002-01 A	ED	2400	2400	sliding	30.0	E	No

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	

* Refer to glossary.

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	2340	4800	100.0	S
Garage	2340	820	100.0	W
LDRY	2340	720	100.0	N
Kitchen/Living	2340	1200	100.0	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	FR5 - Double Brick	0.5	Medium		No
2	FR5 - Earth Retaining Wall	0.5	Medium		No
3	FR - Brick Vaneer Rendered	0.2	Light	Glass fibre batt: R2.5 (R2.5)	Yes
4	FR5 - Brick Veneer	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	Yes
5	FR - Brick Vaneer Rendered	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	Yes
6	FR5 - Brick Veneer	0.7	Dark	Glass fibre batt: R2.5 (R2.5)	Yes
7	FR - Brick Vaneer Rendered	0.7	Dark	Glass fibre batt: R2.5 (R2.5)	Yes
8	FR - Rendered FC Cladding	0.7	Dark	Glass fibre batt: R2.5 (R2.5)	No
9	FR - Rendered FC Cladding	0.2	Light	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	1	2610	5332	S	0	Yes
Garage	2	2610	900	E	0	No
Garage	2	2610	1256	S	0	No
Garage	2	2610	4572	E	0	No
Garage	2	2610	6585	N	0	No
Garage	1	2610	5472	W	0	No
MEDIA	3	2740	5508	S	0	Yes
MEDIA	4	2740	5481	W	0	Yes
Bedroom 3	4	2740	3925	W	0	Yes
Bedroom 3	4	2740	3244	N	0	Yes
BATH	4	2740	1635	N	0	Yes
LDRY	4	2740	1643	N	0	Yes
PANTRY	4	2740	1574	E	0	Yes
Bedroom 2	3	2740	3000	S	360	Yes

* Refer to glossary.

Bedroom 2	5	2740	2884	W	0	Yes
Kitchen/Living	3	2740	4071	S	360	Yes
Kitchen/Living	5	2740	3897	E	0	Yes
Kitchen/Living	4	2740	3853	E	0	Yes
Kitchen/Living	4	2740	2464	N	3000	Yes
Kitchen/Living	4	2740	2996	E	2455	Yes
Kitchen/Living	4	2740	3420	N	0	Yes
Bedroom 4	4	2740	4190	N	600	Yes
Bedroom 4	6	2740	3892	E	600	No
Bedroom 5	4	2740	4311	N	600	Yes
Bedroom 6	4	2740	3978	N	601	Yes
Bedroom 6	6	2740	3166	W	600	No
ens	6	2740	1666	W	600	No
wir	6	2740	2274	W	600	No
wir	7	2740	2149	W	600	No
wir	8	2740	1499	S	350	Yes
Bedroom Master	8	2740	3939	S	350	Yes
bath	9	2740	1366	S	0	Yes
bath	6	2740	2233	E	600	No
Living up	8	2740	1614	W	0	Yes
Living up	9	2740	5767	S	1490	Yes
Living up	8	2740	4841	E	1490	Yes

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	229.8	

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	FR5 - 100mm concrete slab	34.9	Enclosed	R0.0	none
MEDIA	FR5- - TIM-300	30.2	Enclosed	R0.0	Tiles
Bedroom 3	FR5 - CSOG: Slab on Ground	12.7	Enclosed	R0.0	Carpet
BATH	FR5 - CSOG: Slab on Ground	4.5	Enclosed	R0.0	Tiles
LDRY	FR5 - CSOG: Slab on Ground	4.5	Enclosed	R0.0	Tiles
PANTRY	FR5 - CSOG: Slab on Ground	1	Enclosed	R0.0	Tiles
PANTRY	FR5 - CSOG: Slab on Ground	2.2	Enclosed	R0.0	Tiles
Bedroom 2	FR5 - CSOG: Slab on Ground	5.4	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - CSOG: Slab on Ground	3.7	Enclosed	R0.0	Carpet
Day 8	FR5 - CSOG: Slab on Ground	2.5	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - Timber	4.5	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	8.8	Enclosed	R0.0	Tiles

Kitchen/Living	FR5 - CSOG: Slab on Ground	50.3	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	0.6	Enclosed	R0.0	Tiles
Bedroom 4	FR5 - Timber Lined	8.5	Enclosed	R0.0	Carpet
Bedroom 4	FR5 - Timber Lined	7	Elevated	R0.0	Carpet
Bedroom 5	FR5 - Timber Lined	14.8	Enclosed	R0.0	Carpet
Bedroom 6	FR5 - Timber Lined	12.6	Enclosed	R0.0	Carpet
ens	FR5 - Timber Lined	4.8	Enclosed	R0.0	Tiles
wir	FR5 - Timber Lined	3.4	Enclosed	R0.0	Carpet
wir	FR5 - Timber Lined	3.2	Enclosed	R0.0	Carpet
Bedroom Master	FR5 - Timber Lined	17.7	Enclosed	R0.0	Carpet
bath	FR5 - Timber Lined	8	Enclosed	R0.0	Tiles
hall	FR5 - Timber Lined	5.8	Enclosed	R0.0	Tiles
Living up	FR5 - Timber Lined	35.8	Enclosed	R0.0	Tiles

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	FR5- - TIM-300	R0.0	No
Garage	FR5 - Timber	R0.0	No
MEDIA	FR5 - Timber Lined	R0.0	No
Bedroom 3	FR5 - Timber Lined	R0.0	No
BATH	FR5 - Timber Lined	R0.0	No
LDRY	FR5 - Timber Lined	R0.0	No
PANTRY	FR5 - Timber Lined	R0.0	No
PANTRY	Plasterboard	R4.0	Yes
Bedroom 2	FR5 - Timber Lined	R0.0	No
Bedroom 2	FR5 - Timber Lined	R0.0	No
Bedroom 2	Plasterboard	R4.0	Yes
Day 8	FR5 - Timber Lined	R0.0	No
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Kitchen/Living	Plasterboard	R4.0	Yes
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Kitchen/Living	Plasterboard	R4.0	Yes
Bedroom 4	Plasterboard	R4.0	Yes
Bedroom 4	Plasterboard	R4.0	Yes
Bedroom 5	Plasterboard	R4.0	Yes
Bedroom 6	Plasterboard	R4.0	Yes
ens	Plasterboard	R4.0	Yes
wir	Plasterboard	R4.0	Yes
wir	Plasterboard	R4.0	Yes
Bedroom Master	Plasterboard	R4.0	Yes

* Refer to glossary.

bath	Plasterboard	R4.0	Yes
hall	Plasterboard	R4.0	Yes
Living up	Plasterboard	R4.0	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
MEDIA	6	Downlights	50	Sealed
Bedroom 3	2	Downlights	50	Sealed
BATH	1	Exhaust Fans	200	Sealed
BATH	1	Downlights	50	Sealed
LDRY	1	Exhaust Fans	200	Sealed
LDRY	1	Downlights	50	Sealed
PANTRY	1	Exhaust Fans	200	Sealed
PANTRY	1	Downlights	50	Sealed
Bedroom 2	2	Downlights	50	Sealed
Day 8	1	Downlights	50	Sealed
Kitchen/Living	1	Exhaust Fans	200	Sealed
Kitchen/Living	13	Downlights	50	Sealed
Bedroom 4	4	Downlights	50	Sealed
Bedroom 5	4	Downlights	50	Sealed
Bedroom 6	4	Downlights	50	Sealed
ens	1	Exhaust Fans	200	Sealed
ens	1	Downlights	50	Sealed
wir	1	Downlights	50	Sealed
wir	1	Downlights	50	Sealed
Bedroom Master	4	Downlights	50	Sealed
bath	1	Exhaust Fans	200	Sealed
bath	1	Downlights	50	Sealed
hall	2	Downlights	50	Sealed
Living up	8	Downlights	50	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Cont:Attic-Continuous	1.3	0.7	Dark

* 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).