Nationwide House Energy Rating Scheme
NatHERS Certificate No. #HR-BYOUZA-02

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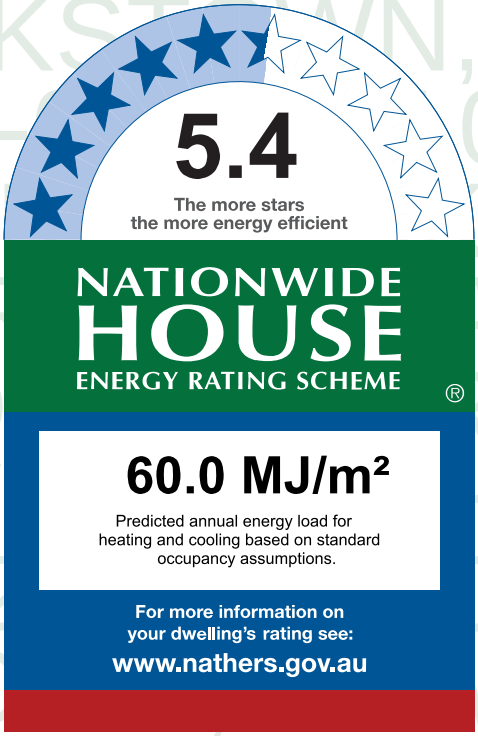

Property

Address	Unit 02, 7 OGMORE COURT, BANKSTOWN, NSW, 2200
Lot/DP	
NCC Class*	1a
Type	New

Plans

Main Plan	07/09/2023
Prepared by	HARRY DESIGN STUDIO PTY LTD

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	175.5	Suburban	
Unconditioned*	12.4	**NatHERS climate zone**	
Total	204.4	56 - Mascot AMO	
Garage	16.5		

Thermal Performance

Heating	Cooling
34.6	**25.4**
MJ/m²	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.	101484
Assessor Accrediting Organisation	ABSA
Declaration of interest	No Conflict of Interest

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com.au/pdf/HR-BYOUZA-02. When using either link, ensure you are visiting http://www.hero-software.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?

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*
BATH	ALM-001-01 A	W2.7	2700	350	Awning	40	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*
BATH	ALM-002-01 A	W2.10	800	1500	Sliding	45	SSW	None
BED 1	ALM-002-01 A	W2.3	800	1800	Sliding	45	SSW	None
BED 2	ALM-001-01 A	W2.8	2100	2600	Awning	30	WNW	None
BED 3	ALM-002-01 A	W2.9	800	1800	Sliding	45	SSW	None
BED 3	ALM-002-01 A	SD2.3	2400	2400	Sliding	45	WNW	None
BED 4	ALM-002-01 A	W2.11	800	1800	Sliding	45	SSW	None
BED 5 MASTER	ALM-002-01 A	SD2.2	2400	3000	Sliding	45	ESE	None
DINING/KITCHEN	ALM-002-01 A	W2.4	650	2000	Fixed	0	SSW	None
DINING/KITCHEN	ALM-002-01 A	W2.1	2400	1200	Fixed	0	WNW	None
DINING/KITCHEN	ALM-002-01 A	SD2.1	2400	3300	Sliding	60	ESE	None
DINING/KITCHEN	ALM-001-01 A	W2.6	2100	800	Awning	60	SSW	None
DINING/KITCHEN	ALM-001-01 A	W2.5	2100	800	Awning	60	SSW	None
ENS	ALM-001-01 A	W2.12	800	900	Awning	90	ESE	None
GARAGE	ALM-002-01 A	W2.2	800	1500	Sliding	45	SSW	None
RUMPUS	ALM-002-01 A	W2.13	2700	350	Fixed	0	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

* Refer to glossary.

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 (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
DINING/KITCHEN	2400	1400	90	WNW
GARAGE	2400	900	90	SSW
GARAGE	2400	2550	90	WNW

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	0.50	Medium	2.00	Yes

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	BV-REFL-CAV	2700	599	WNW		Yes
BATH	BV-REFL-CAV	2700	2791	SSW	583	No
BED 1	BV-REFL-CAV	2700	2994	SSW		Yes
BED 2	BV-REFL-CAV	2700	3603	NNE		Yes
BED 2	BV-REFL-CAV	2700	3000	WNW	590	Yes
BED 2	BV-REFL-CAV	2700	1006	SSW		Yes
BED 3	BV-REFL-CAV	2700	3780	SSW	583	No
BED 3	BV-REFL-CAV	2700	2997	WNW	1596	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 4	BV-REFL-CAV	2700	3900	SSW	583	No
BED 5 MASTER	BV-REFL-CAV	2700	3599	ESE	1527	Yes
DINING/KITCHEN	BV-REFL-CAV	2700	800	ESE		Yes
DINING/KITCHEN	BV-REFL-CAV	2700	4194	SSW		Yes
DINING/KITCHEN	BV-REFL-CAV	2700	3000	WNW	633	Yes
DINING/KITCHEN	BV-REFL-CAV	2700	3505	NNE		Yes
DINING/KITCHEN	BV-REFL-CAV	2700	5898	ESE	3541	Yes
DINING/KITCHEN	BV-REFL-CAV	2700	4501	SSW		Yes
DINING/KITCHEN	BV-REFL-CAV	2700	1006	SSW		Yes
ENS	BV-REFL-CAV	2700	2197	ESE	571	Yes
ENS	BV-REFL-CAV	2700	2712	SSW	590	Yes
GARAGE	BV-REFL-CAV	2700	5500	SSW		Yes
GARAGE	BV-REFL-CAV	2700	2997	WNW	1639	Yes
L'DRY	BV-REFL-CAV	2700	1571	NNE		Yes
RUMPUS	BV-REFL-CAV	2700	1597	NNE		Yes
RUMPUS	BV-REFL-CAV	2700	542	WNW		Yes
WIR	BV-REFL-CAV	2700	800	ESE	600	Yes
WIR	BV-REFL-CAV	2700	2096	SSW	583	No
WIR	BV-REFL-CAV	2700	1695	SSW	590	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	207.3	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	CSOG-100: Concrete Slab on Ground (100mm)	4.0	N/A	0.00	Tile
BATH	TIMB-001: Suspended Timber Floor	8.3	N/A	0.00	Tile
BED 1	CSOG-100: Concrete Slab on Ground (100mm)	9.8	N/A	0.00	Carpet
BED 2	TIMB-001: Suspended Timber Floor	10.8	N/A	0.00	Carpet
BED 3	TIMB-001: Suspended Timber Floor	11.3	N/A	0.00	Carpet
BED 4	TIMB-001: Suspended Timber Floor	11.7	N/A	0.00	Carpet
BED 5 MASTER	TIMB-001: Suspended Timber Floor	16.8	N/A	0.00	Carpet
DINING/KITCHEN	CSOG-100: Concrete Slab on Ground (100mm)	65.5	N/A	0.00	Carpet
DINING/KITCHEN	CSOG-100: Concrete Slab on Ground (100mm)	12.3	N/A	0.00	Tile
ENS	TIMB-001: Suspended Timber Floor	5.2	N/A	0.00	Carpet
GARAGE	CSOG-100: Concrete Slab on Ground (100mm)	16.5	N/A	0.00	Exposed
L'DRY	CSOG-100: Concrete Slab on Ground (100mm)	2.6	N/A	0.00	Tile
RUMPUS	TIMB-001: Suspended Timber Floor	35.2	N/A	0.00	Carpet
WIR	TIMB-001: Suspended Timber Floor	9.8	N/A	0.00	Carpet

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
BED 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
BED 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
BED 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
BED 5 MASTER	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
ENS	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
RUMPUS	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes
WIR	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	Yes

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	6	Downlight	200	Sealed
BATH	2	Exhaust Fan	200	Sealed
BED 1	4	Downlight	200	Sealed
BED 2	4	Downlight	200	Sealed
BED 3	4	Downlight	200	Sealed
BED 4	4	Downlight	200	Sealed
BED 5 MASTER	9	Downlight	200	Sealed
DINING/KITCHEN	24	Downlight	200	Sealed
DINING/KITCHEN	1	Exhaust Fan	350	Sealed
ENS	2	Downlight	200	Sealed
ENS	1	Exhaust Fan	200	Sealed
L'DRY	1	Exhaust Fan	200	Sealed
L'DRY	1	Downlight	200	Sealed
RUMPUS	9	Downlight	200	Sealed
WIR	4	Downlight	200	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
BED 1	1	1500
BED 2	1	1500
BED 3	1	1500
BED 4	1	1500
BED 5 MASTER	1	1500
DINING/KITCHEN	1	1800

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour

* Refer to glossary.

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	1.30	0.85	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 NatHERS Administrator. 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).

* Refer to glossary.