

Residential Energy Rating — Non-Accredited 0004466397

This rating report has been completed by a **rater (non-accredited assessor)***. For more details see the NatHERS House Energy Rating Scheme (NatHERS) website www.nathers.gov.au.

About the rating NatHERS software models expected thermal energy loads using information on 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.

Star rating 6.0

Annual thermal performance

Total 119.0 MJ/m², Heating 106.7 MJ/m², Cooling 12.3 MJ/m²

Property

Address

Unit 1, 37 Graham Road , Highett , VIC , 3190

Lot/DP Lot gf DP 442528, lot Y

NCC Class* 1a

Type New Home

Plans

Main Plan rtr

Prepared by d

Construction and environment

Assessed floor area (m²)*

Conditioned* 250.0

Unconditioned* 0.0

Total 250.0

Garage

Exposure Type

Suburban

NatHERS climate zone

62

Rater*

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Declaration of interest Yes - managed

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated buildings 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.

*Raters (non-accredited assessors) are not required to have any formal qualifications, insurance, ongoing professional development or quality assurance checks on their ratings. This is distinct from NatHERS accredited assessors who are required to have qualifications, ongoing professional development and have quality assurance checks on their ratings.

* Refer to glossary.

Verification

To verify this rating report, scan the QR code or visit hstar.com.au/QR/Generate?p=BrHnboVGP.

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



Rating report check

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

Genuine rating report

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

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 rating report?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this rating report?

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 rating report.

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

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Department of Industry, Innovation and Science. While all due care and attention has been taken to establish the

Window and glazed door *type and performance*

Default* windows					
Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-001-01 A	Aluminium A SG Clear	6.70	0.57	0.54	1.11
ALM-006-01 A	Aluminium B DG Argon Fill Clear-Clear	4.50	0.61	0.58	1.19

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

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Living	ALM-001-01 A	W1	2000	1000	Awning	60	N	Roller Shutters
Bed	ALM-006-01 A	WindowInBed	1000	500	DoubleHung	45	N	None

Roof window *type and performance*

Default* roof windows					
Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
SG-Generic-01 A	Clear AI SG DEFAULT ROOF WINDOW System 01	7.30	0.79	0.75	1.54

Custom* roof windows					
Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Living	SG-Generic-01 A	RWInLiving	40	1000	1000	N	None	Roller Blind
Roofspace	SG-Generic-01 A	RW01	0	1414	1414	W	None	Roller Blind

Skylight *type and performance*

Skylight ID	Skylight description
GEN-04-005a	GENERIC_SKYLIGHTS: Double-glazed opal: norma
GEN-04-003a	GENERIC_SKYLIGHTS: Single-glazed clear: tubula

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Bed	GEN-04-003a	SkylightThree	1000	3.00	N	None	Yes	0.20
Bed	GEN-04-005a	SkylightOne	500	0.44	E	None	Yes	0.90
Bed	GEN-04-003a	SkylightTwo	1000	2.00	S	None	Yes	0.80

* Refer to glossary.

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2	1	100	N

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Brick wall/Plasterboard	50	Medium		No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living	EW-001	2600	10000	N	1000	Yes
Bed	EW-001	2400	5000	N	1000	Yes

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
No Data Available			

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living/Ground	375mm waffle pod with 100mm concrete cover	200.00		R0.9	
Roofspace/Bed	Plasterboard 13 mm + R2.5 bulk insulation	50.00		R2.5	
Roofspace/Living	Floor/Ceiling : 7	5.00		R2.5	
Bed/Living	Timber (hardwood): carpet/air gap/plasterboard	50.00		R1.0	Carpet 10 + felt underlay 10

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bed/Living	Timber (hardwood): carpet/air gap/plasterboard	R1.0	No
Roofspace/Living	Floor/Ceiling : 7	R2.5	Yes
Roofspace/Bed	Plasterboard 13 mm + R2.5 bulk insulation	R2.5	No

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
No Data Available				

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Tiles (concrete)	R3.0	38	Copper (aged)

* Refer to glossary.

Explanatory notes

About this report

This summary rating is the average rating of all NCC Class 2a dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the 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. For more details about an individual dwelling's assessment, refer to the individual rating report (accessible via the link in the table above).

Raters

Raters (non-accredited assessors) may not have completed a recognised software training course, do not have quality assurance checks conducted through NatHERS processes, do not have any ongoing training requirements and **are not supported or recognised under NatHERS**.

Any questions or concerns about this report should be directed to the rater in the first instance. If the rater is unable to address these questions or concerns, the state or territory building code authority should be contacted.

Disclaimer

The format of the energy rating report was developed by the NatHERS Administrator. However the content of each individual rating report is entered and created by the rater. It is the responsibility of the rater who prepared this rating report to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce the rating report.

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.

* Refer to glossary.

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).