

Nationwide House Energy Rating Scheme — Multiple Class1-dwelling summary NatHERS Certificate No. 0005426520

Generated on 25 Nov 2020 using BERS Pro v4.4.0.2 (3.21)

Property

Address 54 YARRABIN ST , BELROSE ,
NSW , 2085

Lot/DP 3/224801

NatHERS climate zone 56

Accredited assessor 

Luis Contigiani

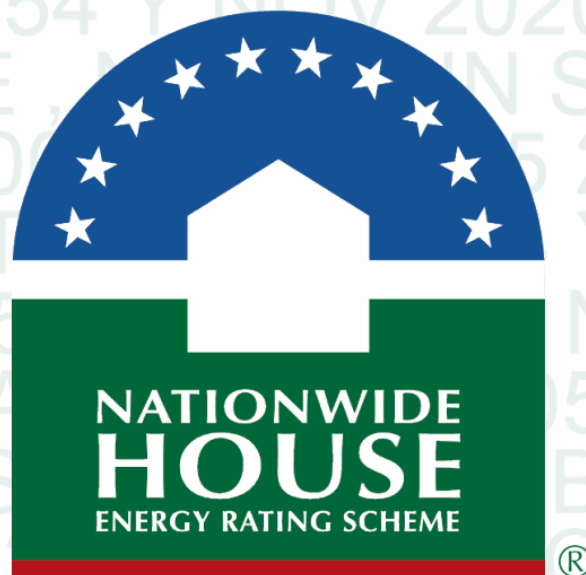
THE LC TRUST

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Accreditation No. DMN/13/1543

Assessor Accrediting Organisation Design Matters
National



Verification



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Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m ² /p.a.)	Cooling load (MJ/m ² /p.a.)	Total load (MJ/m ² /p.a.)	Star rating
0005410626	GRANNY FLAT	28.6	20.9	49.5	6.2
0005410618-01	MAIN DWELLING	35.9	20.3	56.2	5.7

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.

Explanatory Notes

About this report

This is a summary of NCC Class 1 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 dwelling's NatHERS Certificate (accessible via link).

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). 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.

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, input and creation of the NatHERS Certificate is by the assessor. 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.

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0005410618-01

Generated on 25 Nov 2020 using BERS Pro v4.4.0.2 (3.21)

Property

Address Unit MAIN DWELLING, 54 YARRABIN ST
, BELROSE , NSW , 2085

Lot/DP 3/224801

NCC Class* 1A

Type New Dwelling

Plans

Main Plan RL5493

Prepared by RESIDENTIAL LOGISTICS P/L

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 280.0	Suburban
Unconditioned* 56.0	NatHERS climate zone
Total 336.0	56
Garage 35.0	



Accredited assessor

Name Luis Contigiani

Business name THE LC TRUST

Email contempoad@bigpond.com

Phone 0481218250

Accreditation No. DMN/13/1543

Assessor Accrediting Organisation
Design Matters National

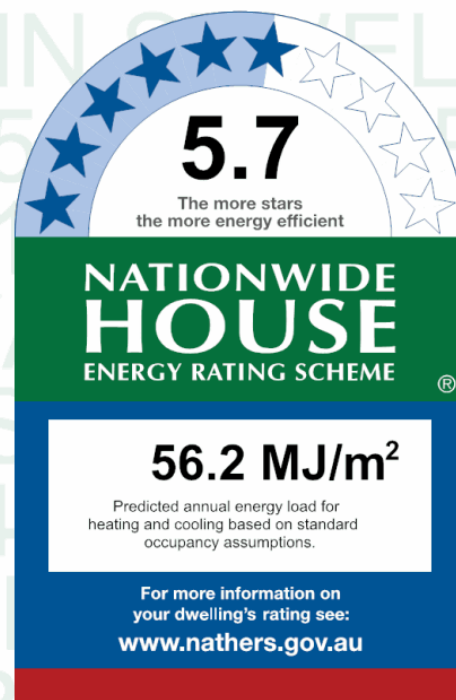
Declaration of interest Declaration completed: no conflicts

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.



Thermal performance

Heating	Cooling
35.9	20.3
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.

Verification

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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?

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

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
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
DOW-006-01 A	DOW-006-01 A Al Sliding Door SG 5Clr	6.2	0.71	0.67	0.75
DOW-001-01 A	DOW-001-01 A Al Sliding Window SG 3Clr	6.4	0.75	0.71	0.79
DOW-014-01 A	DOW-014-01 A Aluminium Fixed Light Window SG 4Clr	6.2	0.75	0.71	0.79
DOW-002-01 A	DOW-002-01 A Elite Al Awning Window SG 3Clr	6.4	0.65	0.62	0.68
DOW-016-01 A	DOW-016-01 A Aluminium French Door SG 4Clr	6.1	0.62	0.59	0.65

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
DINING-KIT-WIP	DOW-006-01 A	n/a	2400	3588	n/a	60	N	No
DINING-KIT-WIP	DOW-001-01 A	n/a	1200	2650	n/a	45	W	No
DINING-KIT-WIP	DOW-014-01 A	n/a	1029	1810	n/a	00	W	No
LIVING	DOW-006-01 A	n/a	2400	3588	n/a	60	N	No
LIVING	DOW-002-01 A	n/a	1800	850	n/a	45	E	No
LIVING	DOW-002-01 A	n/a	1800	850	n/a	45	E	No
LAUNDRY	DOW-002-01 A	n/a	900	610	n/a	45	E	No
GUEST BED	DOW-002-01 A	n/a	2400	610	n/a	45	N	No
GUEST BED	DOW-002-01 A	n/a	2400	610	n/a	45	N	No
ENTRY - HALL -	DOW-014-01 A	n/a	600	1210	n/a	00	E	No
STUDY	DOW-001-01 A	n/a	1800	1810	n/a	45	E	No
HOME THEATRE -	DOW-002-01 A	n/a	600	2650	n/a	45	S	Yes
HOME THEATRE -	DOW-002-01 A	n/a	600	2650	n/a	45	S	Yes
BED 3 - WIR	DOW-002-01 A	n/a	1457	850	n/a	45	S	No
BED 3 - WIR	DOW-002-01 A	n/a	1457	850	n/a	45	S	No
BED 3 - WIR	DOW-002-01 A	n/a	1457	850	n/a	45	S	No
STAIRS - LOUNGE	DOW-014-01 A	n/a	2700	1210	n/a	00	E	No
STAIRS - LOUNGE	DOW-001-01 A	n/a	600	3010	n/a	45	E	No
STAIRS - LOUNGE	DOW-016-01 A	n/a	2100	1450	n/a	90	S	No
STAIRS - LOUNGE	DOW-002-01 A	n/a	2057	610	n/a	45	S	No
STAIRS - LOUNGE	DOW-002-01 A	n/a	2057	610	n/a	45	S	No
BATH	DOW-001-01 A	n/a	500	1810	n/a	45	W	No
Bedroom 2	DOW-001-01 A	n/a	857	1810	n/a	45	W	No
FST - STUDY	DOW-001-01 A	n/a	600	1810	n/a	45	E	No
MASTER BED	DOW-001-01 A	n/a	1029	2050	n/a	45	N	No
MASTER BED	DOW-001-01 A	n/a	600	2650	n/a	45	E	No
MASTER BED ENS	DOW-001-01 A	n/a	600	1810	n/a	45	W	No
MASTER BED ENS	DOW-001-01 A	n/a	600	1810	n/a	45	N	No

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
No Data Available					

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
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 (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
LAUNDRY	2400	881	90	E
GUEST BED	2400	850	90	N
ENTRY - HALL -	2400	1200	90	S
Garage 1	2400	4800	90	S

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Bulk Insulation R2.5	No
EW-2	Single Skin Brick	0.50	Medium	No insulation	No
EW-3	Weatherboard Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap 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)
DINING-KIT-WIP	EW-1	2700	4000	N	3700	NO
DINING-KIT-WIP	EW-1	2700	1000	E	6000	YES
DINING-KIT-WIP	EW-1	2700	295	N	4700	YES

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
DINING-KIT-WIP	EW-1	2700	6400	W	700	YES
LIVING	EW-1	2700	4995	N	4700	NO
LIVING	EW-1	2700	5300	E	700	NO
LIVING	EW-1	2700	600	S	700	YES
LAUNDRY	EW-1	2700	2795	E	0	YES
LAUNDRY	EW-1	2700	400	S	0	YES
GUEST BED	EW-1	2700	3095	N	1300	YES
ENTRY - HALL -	EW-1	2700	2290	E	0	YES
ENTRY - HALL -	EW-1	2700	1890	S	0	YES
STUDY	EW-1	2700	400	N	10400	YES
STUDY	EW-1	2700	3395	E	0	NO
HOME THEATRE -	EW-1	2700	1895	E	0	NO
HOME THEATRE -	EW-1	2700	3800	S	0	NO
HOME THEATRE -	EW-1	2700	1500	W	0	YES
Garage 1	EW-2	2700	6095	S	0	NO
Garage 1	EW-1	2700	900	W	0	NO
BED 3 - WIR	EW-3	2700	5395	S	800	NO
BED 3 - WIR	EW-3	2700	3895	W	700	NO
STAIRS - LOUNGE	EW-1	2700	2295	E	1050	YES
STAIRS - LOUNGE	EW-1	2700	400	N	11100	YES
STAIRS - LOUNGE	EW-1	2700	5500	E	625	NO
STAIRS - LOUNGE	EW-3	2700	600	E	625	NO
STAIRS - LOUNGE	EW-3	2700	4595	S	3400	NO
BATH	EW-3	2700	3090	W	700	NO
Bedroom 2	EW-3	2700	4095	W	700	NO
Bedroom 2	EW-3	2700	1300	N	6100	YES
FST - STUDY	EW-1	2700	3000	E	675	NO
FST - STUDY	EW-1	2700	400	S	11800	YES
MASTER BED	EW-3	2700	5295	N	700	NO
MASTER BED	EW-1	2700	5095	E	675	NO
MASTER BED ENS	EW-1	2700	2795	W	700	NO
MASTER BED ENS	EW-3	2700	3395	N	700	NO
MASTER BED - WI	EW-1	2700	2590	W	700	YES
HOME THEATRE UN	EW-1	2700	2690	E	0	NO

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1	Cavity wall, direct fix plasterboard, single gap	309.00	No insulation

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-2 - Shaft liner party wall with plaster		29.00	Bulk Insulation both sides of shaft liner R2

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
DINING-KIT-WIP	Waffle pod slab 300 mm 100mm	33.30	None	Waffle Pod 300mm	Ceramic Tiles 8mm
LIVING	Waffle pod slab 300 mm 100mm	26.10	None	Waffle Pod 300mm	Ceramic Tiles 8mm
LAUNDRY	Waffle pod slab 300 mm 100mm	8.30	None	Waffle Pod 300mm	Ceramic Tiles 8mm
PWR	Waffle pod slab 300 mm 100mm	3.20	None	Waffle Pod 300mm	Ceramic Tiles 8mm
GUEST BED	Waffle pod slab 300 mm 100mm	21.30	None	Waffle Pod 300mm	Carpet 10mm
GEUSTS ENS	Waffle pod slab 300 mm 100mm	4.60	None	Waffle Pod 300mm	Ceramic Tiles 8mm
ENTRY - HALL -	Waffle pod slab 300 mm 100mm	27.20	None	Waffle Pod 300mm	Ceramic Tiles 8mm
STUDY	Waffle pod slab 300 mm 100mm	12.40	None	Waffle Pod 300mm	Ceramic Tiles 8mm
HOME THEATRE -	Waffle pod slab 300 mm 100mm	7.00	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Garage 1	Waffle pod slab 300 mm 100mm	35.50	None	Waffle Pod 300mm	Ceramic Tiles 8mm
BED 3 - WIR/ENTRY - HALL -	Timber Above Plasterboard 19mm	4.20		No Insulation	Carpet 10mm
BED 3 - WIR/Garage 1	Timber Above Plasterboard 19mm	16.40		No Insulation	Carpet 10mm
STAIRS - LOUNGE/ENTRY - HALL -	Timber Above Plasterboard 19mm	16.50		No Insulation	Carpet 10mm
STAIRS - LOUNGE/STUDY	Timber Above Plasterboard 19mm	12.70		No Insulation	Carpet 10mm
STAIRS - LOUNGE/HOME THEATRE UN	Timber Above Plasterboard 19mm	10.10		No Insulation	Carpet 10mm
BATH/GUEST BED	Timber Above Plasterboard 19mm	2.70		No Insulation	Ceramic Tiles 8mm
BATH/GEUSTS ENS	Timber Above Plasterboard 19mm	2.70		No Insulation	Ceramic Tiles 8mm
BATH/Garage 1	Timber Above Plasterboard 19mm	6.40		No Insulation	Ceramic Tiles 8mm
BATH - CORRIDOR/GEUSTS ENS	Timber Above Plasterboard 19mm	0.70		No Insulation	Carpet 10mm
BATH - CORRIDOR/ENTRY - HALL -	Timber Above Plasterboard 19mm	3.10		No Insulation	Carpet 10mm
Bedroom 2/DINING-KIT-WIP	Timber Above Plasterboard 19mm	6.50		No Insulation	Carpet 10mm
Bedroom 2/PWR	Timber Above Plasterboard 19mm	3.10		No Insulation	Carpet 10mm
Bedroom 2/GUEST BED	Timber Above Plasterboard 19mm	8.70		No Insulation	Carpet 10mm
Bedroom 2/GEUSTS ENS	Timber Above Plasterboard 19mm	1.40		No Insulation	Carpet 10mm
Bedroom 2/ENTRY - HALL -	Timber Above Plasterboard 19mm	1.80		No Insulation	Carpet 10mm
FST - STUDY/LIVING	Timber Above Plasterboard 19mm	0.60		No Insulation	Carpet 10mm
FST - STUDY/LAUNDRY	Timber Above Plasterboard 19mm	8.30		No Insulation	Carpet 10mm
MASTER BED/DINING-KIT-WIP	Timber Above Plasterboard 19mm	5.70		No Insulation	Carpet 10mm
MASTER BED/LIVING	Timber Above Plasterboard 19mm	22.20		No Insulation	Carpet 10mm
MASTER BED/ENTRY - HALL -	Timber Above Plasterboard 19mm	1.20		No Insulation	Carpet 10mm
MASTER BED ENS/DINING-KIT-WIP	Timber Above Plasterboard 19mm	9.10		No Insulation	Ceramic Tiles 8mm
MASTER BED - W/DINING-KIT-WIP	Timber Above Plasterboard 19mm	7.70		No Insulation	Carpet 10mm
HOME THEATRE UN	Waffle pod slab 300 mm 100mm	9.80	None	Waffle Pod 300mm	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
DINING-KIT-WIP	Plasterboard	Bulk Insulation R4.1	No
DINING-KIT-WIP	Timber Above Plasterboard	No Insulation	No
LIVING	Plasterboard	Bulk Insulation R4.1	No
LIVING	Timber Above Plasterboard	No Insulation	No
LAUNDRY	Timber Above Plasterboard	No Insulation	No
PWR	Timber Above Plasterboard	No Insulation	No
GUEST BED	Plasterboard	Bulk Insulation R4.1	No
GUEST BED	Timber Above Plasterboard	No Insulation	No
GEUSTS ENS	Timber Above Plasterboard	No Insulation	No
ENTRY - HALL -	Plasterboard	Bulk Insulation R4.1	No
ENTRY - HALL -	Timber Above Plasterboard	No Insulation	No
STUDY	Timber Above Plasterboard	No Insulation	No
HOME THEATRE -	Plasterboard	Bulk Insulation R4.1	No
Garage 1	Plasterboard	Bulk Insulation R4.1	No
Garage 1	Timber Above Plasterboard	No Insulation	No
BED 3 - WIR	Plasterboard	Bulk Insulation R4.1	No
STAIRS - LOUNGE	Plasterboard	Bulk Insulation R4.1	No
BATH	Plasterboard	Bulk Insulation R4.1	No
BATH - CORRIDOR	Plasterboard	Bulk Insulation R4.1	No
Bedroom 2	Plasterboard	Bulk Insulation R4.1	No
FST - STUDY	Plasterboard	Bulk Insulation R4.1	No
MASTER BED	Plasterboard	Bulk Insulation R4.1	No
MASTER BED ENS	Plasterboard	Bulk Insulation R4.1	No
MASTER BED - WI	Plasterboard	Bulk Insulation R4.1	No
HOME THEATRE UN	Timber Above Plasterboard	No Insulation	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
LAUNDRY	1	Exhaust Fans	300	Sealed
PWR	1	Exhaust Fans	300	Sealed
GEUSTS ENS	1	Exhaust Fans	300	Sealed
BATH	1	Exhaust Fans	300	Sealed
MASTER BED ENS	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Roof Tiles	Foil, No Gap, Reflective Side Down, Anti-glare Up	0.85	Dark
Waterproofing Membrane	No Insulation, Only an Air Gap	0.85	Dark
Roof Tiles	Foil, No Gap, Reflective Side Down, Anti-glare Up	0.85	Dark

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

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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 10m 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).

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0005410626

Generated on 20 Nov 2020 using BERS Pro v4.4.0.2 (3.21)

Property

Address Unit GRANNY FLAT, 54 YARRABIN ST,
BELROSE, NSW, 2085

Lot/DP 3/224801

NCC Class* 1A

Type New Dwelling

Plans

Main Plan RL5493

Prepared by RESIDENTIAL LOGISTICS P/L

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 53.0	Suburban
Unconditioned* 4.0	NatHERS climate zone
Total 57.0	56
Garage 0.0	



Accredited assessor

Name Luis Contigiani

Business name THE LC TRUST

Email contempoat@bigpond.com

Phone 0481218250

Accreditation No. DMN/13/1543

Assessor Accrediting Organisation
Design Matters National

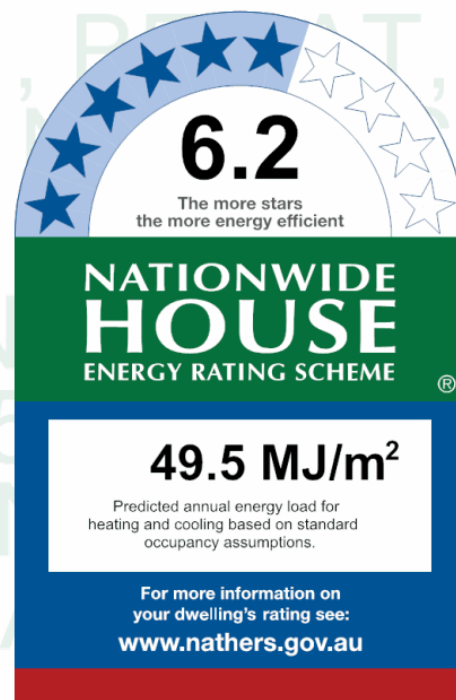
Declaration of interest Declaration completed: no conflicts

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.



Thermal performance

Heating	Cooling
28.6	20.9
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.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=YzmKBHdeH. When using either link, ensure you are visiting hstar.com.au



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?

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

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
No Data Available					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
DOW-006-01 A	DOW-006-01 A AI Sliding Door SG 5Clr	6.2	0.71	0.67	0.75
DOW-002-01 A	DOW-002-01 A Elite AI Awning Window SG 3Clr	6.4	0.65	0.62	0.68
DOW-014-01 A	DOW-014-01 A Aluminium Fixed Light Window SG 4Clr	6.2	0.75	0.71	0.79
DOW-001-01 A	DOW-001-01 A AI Sliding Window SG 3Clr	6.4	0.75	0.71	0.79

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
LIVING - KIT	DOW-006-01 A	n/a	2400	2725	n/a	45	N	No
LIVING - KIT	DOW-002-01 A	n/a	2400	610	n/a	45	E	No
LIVING - KIT	DOW-014-01 A	n/a	500	1810	n/a	00	W	No
LIVING - KIT	DOW-002-01 A	n/a	600	2650	n/a	45	W	No
Bedroom 2	DOW-001-01 A	n/a	1200	1210	n/a	45	W	No
BATH	DOW-001-01 A	n/a	600	1210	n/a	45	W	No
Bedroom 1	DOW-006-01 A	n/a	2400	2410	n/a	45	S	No
Bedroom 1	DOW-001-01 A	n/a	600	2050	n/a	45	W	No

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
No Data Available					

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
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
GEN-04-006a	Single-glazed clear, Timber and Aluminium Frame

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
LIVING - KIT	GEN-04-006a	n/a	50	0.30	N	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	Bulk Insulation 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)
LIVING - KIT	EW-1	2700	3700	N	3400	NO
LIVING - KIT	EW-1	2700	5400	E	800	NO
LIVING - KIT	EW-1	2700	6795	W	700	NO
Bedroom 2	EW-1	2700	3390	W	700	NO
BATH	EW-1	2700	2390	W	700	NO
Bedroom 1	EW-1	2700	3700	S	2100	NO
Bedroom 1	EW-1	2700	3395	W	700	NO

Internal wall *type*

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-1 - Shaft liner party wall with plaster		29.00	Bulk Insulation both sides of shaft liner R2
IW-2 - Cavity wall, direct fix plasterboard, single gap		51.00	No insulation

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
LIVING - KIT	Waffle pod slab 300 mm 100mm	25.00	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Bedroom 2	Waffle pod slab 300 mm 100mm	9.10	None	Waffle Pod 300mm	Carpet 10mm
BATH	Waffle pod slab 300 mm 100mm	4.30	None	Waffle Pod 300mm	Ceramic Tiles 8mm
LDY	Waffle pod slab 300 mm 100mm	1.10	None	Waffle Pod 300mm	Ceramic Tiles 8mm
Bedroom 1	Waffle pod slab 300 mm 100mm	11.30	None	Waffle Pod 300mm	Carpet 10mm
LIVING - KIT	Waffle pod slab 300 mm 100mm	6.70	None	Waffle Pod 300mm	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
LIVING - KIT	Plasterboard	Bulk Insulation R4.1	No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 2	Plasterboard	Bulk Insulation R4.1	No
BATH	Plasterboard	Bulk Insulation R4.1	No
LDY	Plasterboard	Bulk Insulation R4.1	No
Bedroom 1	Plasterboard	Bulk Insulation R4.1	No
LIVING - KIT	Plasterboard	Bulk Insulation R4.1	No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
BATH	1	Exhaust Fans	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Roof Tiles	Foil, No Gap, Reflective Side Down, Anti-glare Up	0.85	Dark

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 10m 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.
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