Nationwide House Energy Rating Scheme — Class 2 summary
NatHERS Certificate No. 0008729800

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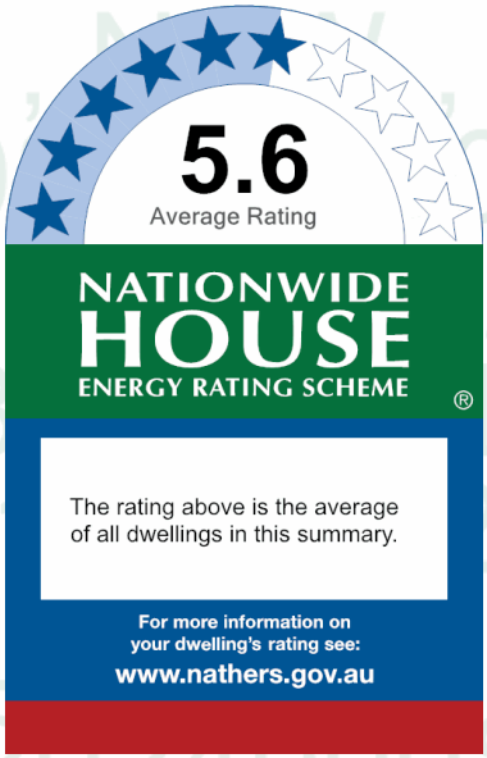

Property

Address 37-43 Hay Street,
Collaroy , NSW , 2097

Lot/DP 10648

NatHERS climate zone 56

Accredited assessor

Ian Fry

Frys Energywise

comply@frysenergywise.com.au

02 9899 2825

Accreditation No. DMN/12/1441

Assessor Accrediting Organisation Design Matters National

Verification

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

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
0009623620	1	42.8	28.2	71	4.7
0009623661	2	31.9	18	49.9	6.1
0009623679-03	3	14.4	27.9	42.3	6.7
0009623711-01	4	18.5	26.5	45	6.5
0009623745-01	5	31.5	25.4	56.9	5.6

National Construction Code (NCC) requirements

Continued Over

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.

Summary of all dwellings (continued)

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
0009623752-01	6	31.2	19.9	51.1	5.9
0009623786-01	7	43.4	24	67.3	4.9
0009623729-01	8	37	28.9	65.9	5
0009623760-01	9	35.8	29	64.8	5.1
0009623778-02	10	37.6	27.7	65.2	5
Average		32.41	25.55	57.94	5.55

Explanatory notes

About this ratings

This summary rating is the average rating of all NCC Class 2 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. 0009623620

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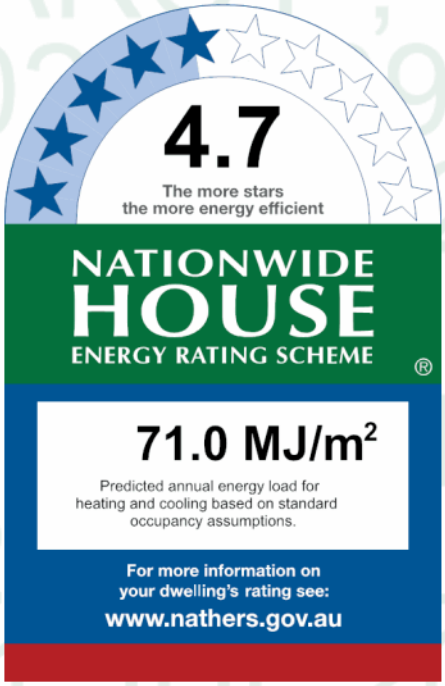

Property

Address	Unit 1, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	203.0
Unconditioned*	0.0
Total	203.0
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
56

Thermal performance

Heating	Cooling
42.8 MJ/m^2	28.2 MJ/m^2

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	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=wKyOTdLCI.
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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.

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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-112-24 A	BRD-112-24 A ESS Awning 52 SG 638ComPlsClr	5.1	0.53	0.50	0.56

* Refer to glossary.
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Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-033-10 A	BRD-033-10 A ESS Sliding Door (80mm) SG 6.38CPClr	4.3	0.60	0.57	0.63
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78
BRD-112-01 A	BRD-112-01 A ESS Awning 52 SG 4mmClr	6.5	0.67	0.64	0.70
BRD-063-13 A	BRD-063-13 A SIG Fixed Lite (67mm) SG 638CPClr	4.0	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*
Kit/Din/Liv	BRD-112-24 A	n/a	1000	4962	n/a	90	N	No
Kit/Din/Liv	BRD-033-10 A	n/a	2700	3350	n/a	60	E	No
Kit/Din/Liv	BRD-033-10 A	n/a	2700	3215	n/a	60	E	No
Flexi	BRD-033-10 A	n/a	2700	1952	n/a	45	N	No
Flexi	BRD-112-24 A	n/a	2700	900	n/a	60	E	No
Bedroom 1	BRD-033-01 A	n/a	2700	4962	n/a	60	N	No
Bedroom 1	BRD-033-01 A	n/a	2700	3350	n/a	45	E	No
Bedroom 3	BRD-033-01 A	n/a	2700	1960	n/a	45	N	No
Bedroom 3	BRD-112-01 A	n/a	2700	900	n/a	10	E	No
Bedroom 2	BRD-033-01 A	n/a	2700	3215	n/a	45	E	No
Ensuite	BRD-112-01 A	n/a	2700	1233	n/a	10	N	Yes
Corridor	BRD-063-13 A	n/a	2800	1100	n/a	00	N	Yes
Corridor	BRD-112-24 A	n/a	2700	960	n/a	10	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					

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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
Ensuite	GEN-04-006a	n/a	1070	0.40	W	None	No	0.50
FF Bathroom	GEN-04-006a	n/a	890	0.40	S	None	No	0.50
Corridor	GEN-04-006a	n/a	506	0.40	W	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	920	90	N

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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

* Refer to glossary.
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External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kit/Din/Liv	EW-1	2700	4995	N	1100	NO
Kit/Din/Liv	EW-1	2700	8195	E	3900	YES
Kit/Din/Liv	EW-1	2700	2090	W	100	NO
Bathroom	EW-1	2700	2690	S	100	NO
Flexi	EW-1	2700	2300	N	4200	YES
Flexi	EW-1	2700	3600	E	100	NO
Flexi	EW-1	2700	4495	S	100	NO
Bedroom 1	EW-2	2700	4995	N	1200	NO
Bedroom 1	EW-2	2700	3995	E	900	NO
Bedroom 3	EW-2	2700	2300	N	1500	YES
Bedroom 3	EW-2	2700	3600	E	900	NO
Bedroom 3	EW-2	2700	4595	S	100	NO
Bedroom 2	EW-2	2700	4190	E	900	YES
Ensuite	EW-2	2700	1195	N	1800	YES
Ensuite	EW-2	2700	600	W	2500	YES
Ensuite	EW-2	2700	1295	N	1200	NO
FF Bathroom	EW-2	2700	2990	S	100	NO
Corridor	EW-2	2800	1195	N	1800	NO
Corridor	EW-2	2700	8895	W	100	NO
Entry	EW-1	2700	6895	W	100	NO
Entry	EW-1	2700	2400	N	1700	YES
Entry	EW-1	2700	600	W	2500	YES
Entry	EW-1	2700	1295	N	100	NO
Linen	EW-2	2700	1295	S	100	NO
Linen	EW-2	2700	300	W	2200	YES
Linen	EW-2	2700	795	S	400	YES
FF Lift	EW-2	2700	1995	W	100	NO
FF Lift	EW-2	2700	1295	S	400	NO
GF Lift	EW-1	2700	1895	W	100	NO

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		205.00	No insulation
IW-2 - Cavity brick, plasterboard		11.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kit/Din/Liv	Suspended Concrete Slab 200mm	64.70	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Laundry	Suspended Concrete Slab 200mm	5.00	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Bathroom	Suspended Concrete Slab 200mm	5.60	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Flexi	Suspended Concrete Slab 200mm	15.90	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Bedroom 1/Kit/Din/Liv	Timber Above Plasterboard 200mm	25.80		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 3/Flexi	Timber Above Plasterboard 150mm	15.30		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2/Kit/Din/Liv	Timber Above Plasterboard 19mm	14.20		No Insulation	Cork Tiles or Parquetry 8mm
Ensuite/Kit/Din/Liv	Timber Above Plasterboard 19mm	4.50		No Insulation	Ceramic Tiles 8mm
Ensuite/Entry	Timber Above Plasterboard 19mm	4.80		No Insulation	Ceramic Tiles 8mm
WIR/Kit/Din/Liv	Timber Above Plasterboard 19mm	8.20		No Insulation	Cork Tiles or Parquetry 8mm
FF Bathroom/Laundry	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
FF Bathroom/Bathroom	Timber Above Plasterboard 19mm	5.40		No Insulation	Ceramic Tiles 8mm
Corridor/Kit/Din/Liv	Timber Above Plasterboard 19mm	9.70		No Insulation	Cork Tiles or Parquetry 8mm
Corridor/Flexi	Timber Above Plasterboard 19mm	0.60		No Insulation	Cork Tiles or Parquetry 8mm
Corridor/Entry	Timber Above Plasterboard 19mm	7.90		No Insulation	Cork Tiles or Parquetry 8mm
Entry	Suspended Concrete Slab 200mm	12.80	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Linen/Laundry	Timber Above Plasterboard 200mm	4.10		No Insulation	Cork Tiles or Parquetry 8mm

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
FF Lift/GF Lift	Timber Above Plasterboard 19mm	2.30		No Insulation	Cork Tiles or Parquetry 8mm
GF Lift	Suspended Concrete Slab 200mm	2.30	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kit/Din/Liv	Plasterboard	Bulk Insulation R4	No
Kit/Din/Liv	Timber Above Plasterboard	No Insulation	No
Laundry	Plasterboard	Bulk Insulation R4	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Bathroom	Timber Above Plasterboard	No Insulation	No
Flexi	Plasterboard	Bulk Insulation R4	No
Flexi	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
WIR	Plasterboard	Bulk Insulation R4	No
FF Bathroom	Plasterboard	Bulk Insulation R4	No
Corridor	Plasterboard	Bulk Insulation R4	No
Entry	Plasterboard	Bulk Insulation R4	No
Entry	Timber Above Plasterboard	No Insulation	No
Linen	Plasterboard	Bulk Insulation R4	No
FF Lift	Plasterboard	Bulk Insulation R4	No
GF Lift	Plasterboard	Bulk Insulation R4	No
GF Lift	Timber Above Plasterboard	No Insulation	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
FF Bathroom	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
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	Medium

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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 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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009623661

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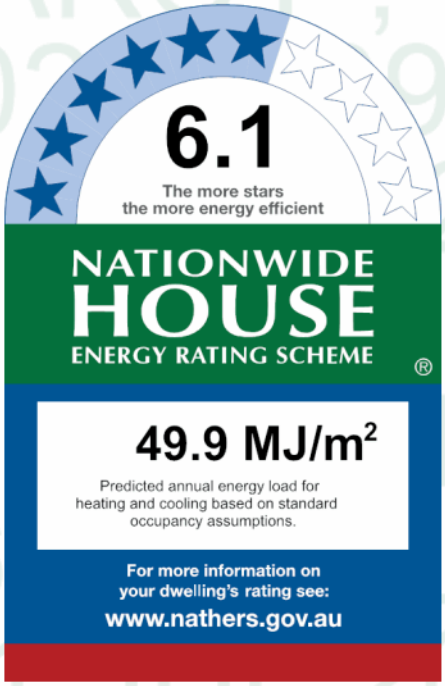


Property

Address	Unit 2, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	131.0
Unconditioned*	0.0
Total	131.0
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
56

Thermal performance

Heating	Cooling
31.9	**18.0**
MJ/m^2	MJ/m^2

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	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

Verification

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

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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kit/Din/Liv	BRD-033-01 A	n/a	2700	2990	n/a	45	W	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	5750	n/a	75	N	No
Bedroom 1	BRD-033-01 A	n/a	2700	3700	n/a	60	W	No
Flexi	BRD-033-01 A	n/a	2700	2185	n/a	45	N	No
Bedroom 2	BRD-033-01 A	n/a	2700	2315	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	

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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
Entry	2340	880	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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kit/Din/Liv	EW-1	2700	4695	W	3100	YES
Kit/Din/Liv	EW-1	2700	7495	N	1200	NO
Bedroom 1	EW-1	2700	5000	S	100	NO
Bedroom 1	EW-1	2700	3795	W	500	NO
Entry	EW-1	2700	6195	E	100	NO
Entry	EW-1	2700	1595	S	100	NO
Flexi	EW-1	2700	4095	N	1200	NO
Flexi	EW-1	2700	3295	E	100	NO
Bedroom 2	EW-1	2700	3395	W	100	NO
Bedroom 2	EW-1	2700	2600	N	5200	YES
Bathroom	EW-2	2700	495	S	100	NO

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		109.00	No insulation
IW-2 - Cavity brick, plasterboard		26.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kit/Din/Liv	Suspended Concrete Slab 200mm	48.40	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Concrete Slab 200mm	21.40	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Ensuite	Suspended Concrete Slab 200mm	9.00	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Ldry/Prep	Suspended Concrete Slab 200mm	4.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	14.30	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Flexi	Suspended Concrete Slab 200mm	13.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Bedroom 2	Suspended Concrete Slab 200mm	14.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bathroom	Suspended Concrete Slab 200mm	6.40	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kit/Din/Liv	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 1	Concrete, Plasterboard	Bulk Insulation R2	No
Ensuite	Concrete, Plasterboard	Bulk Insulation R2	No
Ldry/Prep	Concrete, Plasterboard	Bulk Insulation R2	No
Entry	Concrete, Plasterboard	Bulk Insulation R2	No
Flexi	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R2	No
Bathroom	Concrete, Plasterboard	Bulk Insulation R2	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Ldry/Prep	1	Exhaust Fans	300	Sealed
Flexi	1	Chimneys	300	Sealed
Bathroom	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
None Present			

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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.

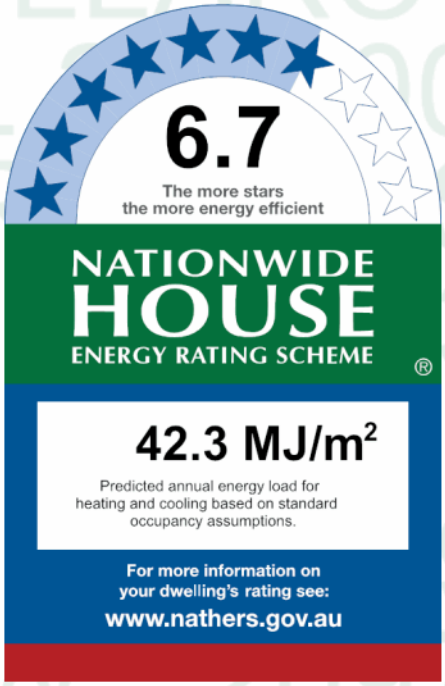
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009623679-03

Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21)



Property

Address	Unit 3, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	154.0
Unconditioned*	0.0
Total	154.0
Garage	0.0

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
14.4	**27.9**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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.

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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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-033-10 A	BRD-033-10 A ESS Sliding Door (80mm) SG 6.38CPClr	4.3	0.60	0.57	0.63

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bed 3/Flexi	BRD-033-01 A	n/a	2700	3105	n/a	45	E	No
Bedroom 1	BRD-033-01 A	n/a	2700	1650	n/a	45	E	No
Bedroom 2	BRD-033-01 A	n/a	2700	3100	n/a	45	E	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	4290	n/a	60	N	No
Kit/Din/Liv	BRD-033-10 A	n/a	2700	4000	n/a	60	E	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	

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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
Entry	2340	880	90	W

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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bed 3/Flexi	EW-1	2700	3290	E	2800	NO
Bedroom 1	EW-1	2700	2200	E	5800	YES
Bedroom 1	EW-1	2700	700	N	13800	YES
Bedroom 1	EW-1	2700	1000	E	100	NO
Bedroom 2	EW-1	2700	3195	E	1800	NO
Bedroom 2	EW-1	2700	3995	S	2000	YES
Entry	EW-1	2700	1590	W	3100	YES
Kit/Din/Liv	EW-1	2700	700	S	10600	YES
Kit/Din/Liv	EW-1	2700	4200	W	7200	NO
Kit/Din/Liv	EW-1	2700	6200	N	100	NO
Kit/Din/Liv	EW-1	2700	4995	E	1800	NO
Kit/Din/Liv	EW-1	2700	795	W	3100	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Laundry	EW-1	2700	700	N	6700	YES
Laundry	EW-2	2700	600	S	6200	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		134.00	No insulation
IW-2 - Cavity brick, plasterboard		62.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed 3/Flexi	Suspended Concrete Slab 200mm	14.60	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Bedroom 1	Suspended Concrete Slab 200mm	19.50	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Concrete Slab 200mm	14.10	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
WIR	Suspended Concrete Slab 200mm	9.90	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Ensuite	Suspended Concrete Slab 200mm	11.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Bathroom	Suspended Concrete Slab 200mm	5.70	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	15.50	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Kit/Din/Liv	Suspended Concrete Slab 200mm	57.90	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Laundry	Suspended Concrete Slab 200mm	5.10	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bed 3/Flexi	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 1	Concrete, Plasterboard	Bulk Insulation R2	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R2	No
WIR	Concrete, Plasterboard	Bulk Insulation R2	No
Ensuite	Concrete, Plasterboard	Bulk Insulation R2	No
Bathroom	Concrete, Plasterboard	Bulk Insulation R2	No
Entry	Concrete, Plasterboard	Bulk Insulation R2	No
Kit/Din/Liv	Concrete, Plasterboard	Bulk Insulation R2	No
Laundry	Concrete, Plasterboard	Bulk Insulation R2	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Laundry	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
None Present			

Explanatory notes

About this report

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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.

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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.

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009623711-01

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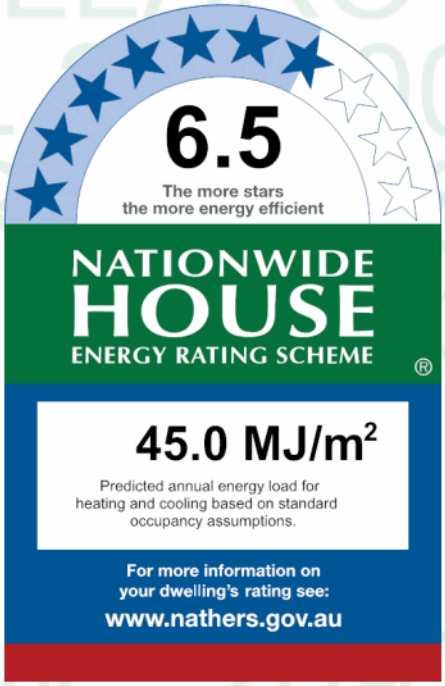

Property

Address	Unit 4, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	176.0
Unconditioned*	0.0
Total	176.0
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
56

Thermal performance

Heating	Cooling
18.5	**26.5**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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=FjvqWlucs.
When using either link, ensure you are visiting hstar.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.

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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	BRD-033-01 A	n/a	2700	3820	n/a	45	W	No
Bedroom 2	BRD-033-01 A	n/a	2700	3100	n/a	45	W	No
Kit/Din/Liv	BRD-033-01 A	n/a	3750	5155	n/a	60	E	No
Flexi	BRD-033-01 A	n/a	2700	3700	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
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								

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	880	90	N

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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2700	4200	W	100	NO
Bedroom 1	EW-1	2700	5295	N	100	NO
Bedroom 1	EW-1	2700	6100	S	100	YES
Bedroom 2	EW-1	2700	3290	W	100	YES
Entry	EW-1	2700	1495	N	9300	NO
Ensuite	EW-1	2700	3700	N	4300	NO
Ensuite	EW-1	2700	1995	E	2975	YES
Ensuite	EW-1	2700	295	N	100	YES
Ensuite	EW-1	2700	3200	W	100	YES
Kit/Din/Liv	EW-1	3750	5700	E	6800	YES
Flexi	EW-1	2700	3795	W	900	NO
Laundry	EW-2	2700	600	N	6300	YES
Laundry	EW-2	2700	600	E	2375	YES
Laundry	EW-2	2700	795	N	9300	YES

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		115.00	No insulation
IW-2 - Cavity brick, plasterboard		119.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Suspended Concrete Slab 200mm	24.80	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Concrete Slab 200mm	14.60	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Entry	Suspended Concrete Slab 200mm	17.00	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
WIR	Suspended Concrete Slab 200mm	4.60	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Ensuite	Suspended Concrete Slab 200mm	12.60	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Bathroom	Suspended Concrete Slab 200mm	5.10	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Kit/Din/Liv	Suspended Concrete Slab 200mm	76.10	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Flexi	Suspended Concrete Slab 200mm	17.10	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Laundry	Suspended Concrete Slab 150mm	4.50	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R2	No
Entry	Concrete, Plasterboard	Bulk Insulation R2	No
WIR	Concrete, Plasterboard	Bulk Insulation R2	No
Ensuite	Concrete, Plasterboard	Bulk Insulation R2	No
Bathroom	Concrete, Plasterboard	Bulk Insulation R2	No
Kit/Din/Liv	Concrete, Plasterboard	Bulk Insulation R2	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Flexi	Concrete, Plasterboard	Bulk Insulation R2	No
Laundry	Concrete, Plasterboard	Bulk Insulation R2	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Flexi	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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.

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009623745-01

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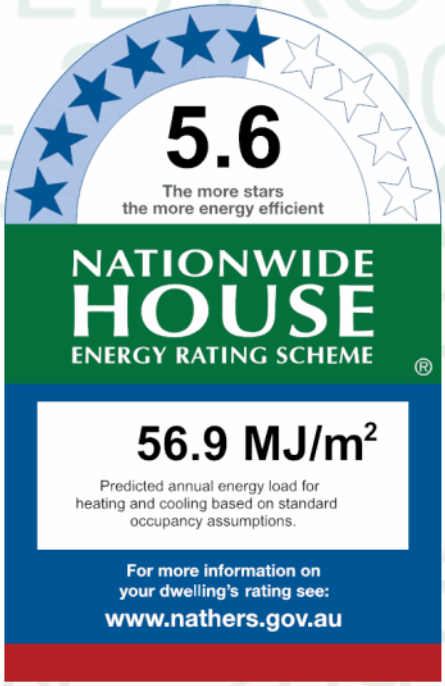

Property

Address	Unit 5, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	163.0
Unconditioned*	0.0
Total	163.0
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
56

Thermal performance

Heating	Cooling
31.5	**25.4**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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.

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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.

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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.

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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".

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

Additional notes

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I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	BRD-033-01 A	n/a	2700	3695	n/a	45	W	No
Bedroom 2	BRD-033-01 A	n/a	2700	3390	n/a	45	W	No
Bed 3/Flexi	BRD-033-01 A	n/a	2700	1895	n/a	45	E	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	4000	n/a	45	E	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	3390	n/a	60	E	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	

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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
Entry	2340	880	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	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2700	295	W	2500	YES
Bedroom 1	EW-1	2700	3700	W	2500	NO
Bedroom 1	EW-1	2700	4600	N	100	NO
Bedroom 2	EW-1	2700	700	N	4100	YES
Bedroom 2	EW-1	2700	4595	S	100	NO
Bedroom 2	EW-1	2700	3400	W	1800	NO
Bed 3/Flexi	EW-1	2700	3695	E	3500	NO
Laundry	EW-1	2700	2390	S	6500	NO
Bathroom	EW-1	2700	3190	S	6500	NO
Prep	EW-1	2700	195	W	7000	YES
Entry	EW-1	2700	2490	S	6500	YES
Kit/Din/Liv	EW-1	2700	3500	N	100	NO
Kit/Din/Liv	EW-1	2700	7695	E	600	NO
Kit/Din/Liv	EW-1	2700	3900	S	100	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kit/Din/Liv	EW-1	2700	4095	W	7000	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity brick, plasterboard		70.00	No Insulation
IW-2 - Cavity wall, direct fix plasterboard, single gap		117.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Suspended Concrete Slab 200mm	25.10	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Concrete Slab 200mm	14.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bed 3/Flexi	Suspended Concrete Slab 200mm	18.00	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Ensuite	Suspended Concrete Slab 200mm	9.30	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Laundry	Suspended Concrete Slab 200mm	4.70	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Bathroom	Suspended Concrete Slab 200mm	5.90	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Prep	Suspended Concrete Slab 200mm	5.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	16.50	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Kit/Din/Liv	Suspended Concrete Slab 200mm	63.80	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R2	No
Bed 3/Flexi	Concrete, Plasterboard	Bulk Insulation R2	No

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Ensuite	Concrete, Plasterboard	Bulk Insulation R2	No
Laundry	Concrete, Plasterboard	Bulk Insulation R2	No
Bathroom	Concrete, Plasterboard	Bulk Insulation R2	No
Prep	Concrete, Plasterboard	Bulk Insulation R2	No
Entry	Concrete, Plasterboard	Bulk Insulation R2	No
Kit/Din/Liv	Concrete, Plasterboard	Bulk Insulation R2	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			

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Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

Explanatory notes

About this report

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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.

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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.

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009623752-01

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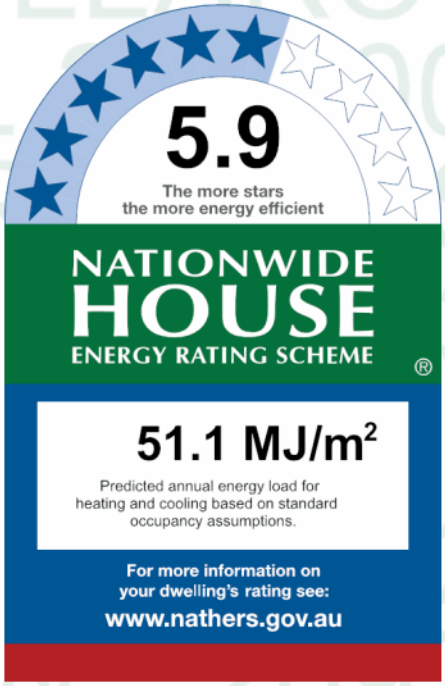

Property

Address	Unit 6, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	160.0
Unconditioned*	9.0
Total	169.0
Garage	0.0

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
31.2	**19.9**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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=gygBueSCy.
When using either link, ensure you are visiting hstar.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.

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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-112-01 A	BRD-112-01 A ESS Awning 52 SG 4mmClr	6.5	0.67	0.64	0.70
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-001-01 A	BRD-001-01 A ESS Sliding Window (52mm) SG 3Clr	6.4	0.76	0.72	0.80

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	BRD-112-01 A	n/a	1800	900	n/a	60	S	No
Bedroom 1	BRD-033-01 A	n/a	2700	3635	n/a	45	W	No
Bedroom 2	BRD-033-01 A	n/a	2700	3500	n/a	45	W	No
Bedroom 3	BRD-033-01 A	n/a	2700	2570	n/a	45	S	No
Ensuite	BRD-001-01 A	n/a	2700	1045	n/a	30	W	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	5095	n/a	75	E	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	5530	n/a	75	S	No
Bathroom	BRD-112-01 A	n/a	900	1781	n/a	90	S	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								

* Refer to glossary.
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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
Entry	2340	880	90	W

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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2700	6595	S	100	YES
Bedroom 1	EW-1	2700	3895	W	1600	YES
Bedroom 2	EW-1	2700	3600	W	900	NO
Bedroom 2	EW-1	2700	4495	N	100	NO
Bedroom 2	EW-1	2700	700	S	4000	YES
Bedroom 3	EW-1	2700	3490	S	100	NO
Ensuite	EW-1	2700	1300	W	100	YES
Ensuite	EW-1	2700	2395	S	100	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Ldry	EW-1	2700	2895	N	100	NO
Entry	EW-2	2700	2300	N	6600	YES
Entry	EW-1	2700	2300	W	15800	YES
Kit/Din/Liv	EW-1	2700	2000	N	100	NO
Kit/Din/Liv	EW-1	2700	5100	E	2200	NO
Kit/Din/Liv	EW-1	2700	10995	S	100	NO
Bathroom	EW-1	2700	1990	S	100	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		133.00	No insulation
IW-2 - Cavity brick, plasterboard		55.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Suspended Concrete Slab 200mm	25.30	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Concrete Slab 200mm	14.70	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Bedroom 3	Suspended Concrete Slab 200mm	15.50	Enclosed	Bulk Insulation in Contact with Floor R1.7	Carpet+Rubber Underlay 18mm
Ensuite	Suspended Concrete Slab 200mm	12.00	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Ldry	Suspended Concrete Slab 200mm	5.80	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
Entry	Suspended Concrete Slab 200mm	28.20	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Kit/Din/Liv	Suspended Concrete Slab 200mm	55.40	Enclosed	Bulk Insulation in Contact with Floor R1.7	Cork Tiles or Parquetry 8mm
Bathroom	Suspended Concrete Slab 200mm	8.70	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm
WC	Suspended Concrete Slab 200mm	3.60	Enclosed	Bulk Insulation in Contact with Floor R1.7	Ceramic Tiles 8mm

* Refer to glossary.

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 2	Concrete, Plasterboard	Bulk Insulation R2	No
Bedroom 3	Concrete, Plasterboard	Bulk Insulation R2	No
Ensuite	Concrete, Plasterboard	Bulk Insulation R2	No
Ldry	Concrete, Plasterboard	Bulk Insulation R2	No
Entry	Concrete, Plasterboard	Bulk Insulation R2	No
Kit/Din/Liv	Concrete, Plasterboard	Bulk Insulation R2	No
Bathroom	Concrete, Plasterboard	Bulk Insulation R2	No
WC	Concrete, Plasterboard	Bulk Insulation R2	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Ldry	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
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Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
None Present			

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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. 0009623786-01

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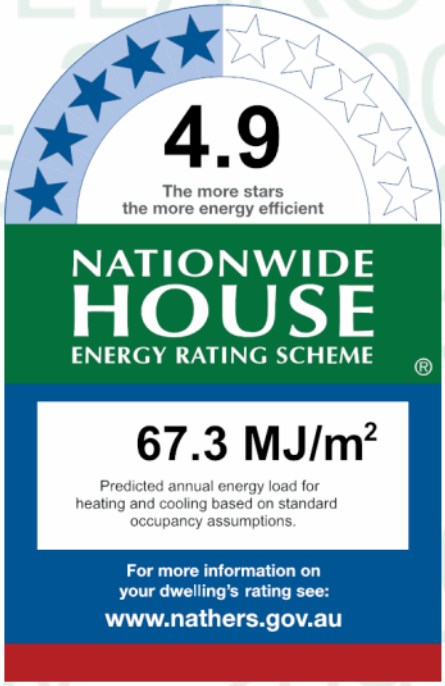

Property

Address	Unit 7, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	131.0
Unconditioned*	0.0
Total	131.0
Garage	0.0

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
43.4	**24.0**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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=vqFOdIarw.
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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.

Certificate check

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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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-112-01 A	BRD-112-01 A ESS Awning 52 SG 4mmClr	6.5	0.67	0.64	0.70
BRD-001-01 A	BRD-001-01 A ESS Sliding Window (52mm) SG 3Clr	6.4	0.76	0.72	0.80

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kit/Din/Liv	BRD-033-01 A	n/a	2700	2990	n/a	45	W	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	5750	n/a	75	N	No
Bedroom 1	BRD-033-01 A	n/a	2550	2460	n/a	45	W	No
Entry	BRD-112-01 A	n/a	1800	900	n/a	10	E	No
Flexi	BRD-033-01 A	n/a	2700	2185	n/a	45	N	No
Flexi	BRD-001-01 A	n/a	1400	2100	n/a	10	E	No
Bedroom 2	BRD-112-01 A	n/a	2550	589	n/a	10	W	No
Bedroom 2	BRD-033-01 A	n/a	2700	2315	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								

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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
Ensuite	GEN-04-006a	n/a	840	0.40	S	None	No	0.50
Ldry/Prep	GEN-04-006a	n/a	780	0.40	E	None	No	0.50
Bathroom	GEN-04-006a	n/a	640	0.40	E	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	880	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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kit/Din/Liv	EW-1	2700	4695	W	3200	YES
Kit/Din/Liv	EW-1	2700	7495	N	1600	NO
Bedroom 1	EW-1	2700	5000	S	100	NO
Bedroom 1	EW-1	2700	3795	W	600	NO
Entry	EW-1	2700	6195	E	100	NO
Entry	EW-1	2700	1595	S	100	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Flexi	EW-1	2700	4095	N	1600	NO
Flexi	EW-1	2700	3295	E	100	NO
Bedroom 2	EW-1	2700	3395	W	600	NO
Bedroom 2	EW-1	2700	2600	N	6300	YES
Bathroom	EW-2	2700	495	S	100	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		109.00	No insulation
IW-2 - Cavity brick, plasterboard		26.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kit/Din/Liv	Concrete Slab, Unit Below 200mm	48.40	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Bedroom 1	Concrete Slab, Unit Below 200mm	21.40	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Ensuite	Concrete Slab, Unit Below 200mm	9.00	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Ldry/Prep	Concrete Slab, Unit Below 200mm	4.20	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	14.30	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Flexi	Concrete Slab, Unit Below 200mm	13.20	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Bedroom 2	Concrete Slab, Unit Below 200mm	14.20	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Bathroom	Concrete Slab, Unit Below 200mm	6.40	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kit/Din/Liv	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Ldry/Prep	Plasterboard	Bulk Insulation R4	No
Entry	Plasterboard	Bulk Insulation R4	No
Flexi	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Ldry/Prep	1	Exhaust Fans	300	Sealed
Flexi	1	Chimneys	300	Sealed
Bathroom	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
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	Medium

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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.
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Nationwide House Energy Rating Scheme
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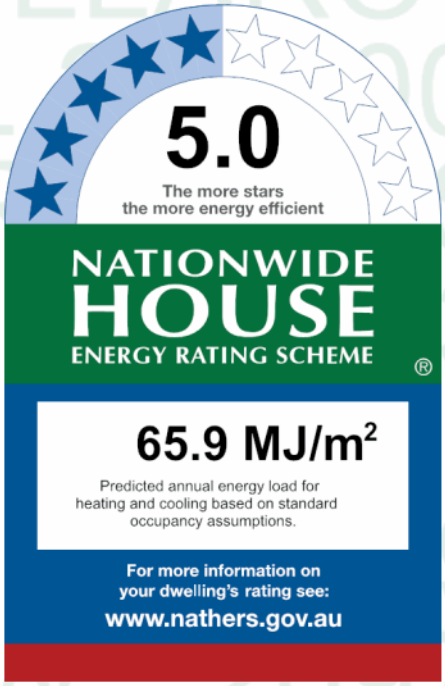

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Prepared by	PopovBass Architects

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Total	185.0
Garage	0.0

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Suburban

NatHERS climate zone

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Thermal performance

Heating	Cooling
37.0	**28.9**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

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Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-001-01 A	BRD-001-01 A ESS Sliding Window (52mm) SG 3Clr	6.4	0.76	0.72	0.80
BRD-112-01 A	BRD-112-01 A ESS Awning 52 SG 4mmClr	6.5	0.67	0.64	0.70

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	BRD-033-01 A	n/a	2550	3700	n/a	45	W	No
Bedroom 2	BRD-033-01 A	n/a	2700	2863	n/a	45	W	No
Bedroom 3	BRD-001-01 A	n/a	2700	1095	n/a	10	W	No
Ensuite	BRD-112-01 A	n/a	900	1900	n/a	90	S	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	2923	n/a	45	N	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	4778	n/a	75	E	No
Kit/Din/Liv	BRD-112-01 A	n/a	1600	1100	n/a	10	S	No
WC	BRD-112-01 A	n/a	600	550	n/a	90	N	No
Family	BRD-033-01 A	n/a	2700	2200	n/a	45	N	No
Family	BRD-033-01 A	n/a	2700	2875	n/a	45	E	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					

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

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
Ensuite	GEN-04-006a	n/a	410	0.40	S	None	No	0.50
Bathroom	GEN-04-006a	n/a	250	0.40	N	None	No	0.50
Kit/Din/Liv	GEN-04-006a	n/a	600	1.00	S	None	No	0.50
Kit/Din/Liv	GEN-04-006a	n/a	600	1.00	S	None	No	0.50
Laundry	GEN-04-006a	n/a	250	0.40	N	None	No	0.50
WC	GEN-04-006a	n/a	450	0.40	N	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	880	90	N

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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2700	6495	S	100	NO
Bedroom 1	EW-1	2700	3795	W	2200	NO
Bedroom 2	EW-1	2700	3495	W	2200	NO
Bedroom 2	EW-1	2700	4995	N	100	NO
Bedroom 3	EW-1	2700	3795	S	100	NO
Bedroom 3	EW-1	2700	1500	W	100	YES
Ensuite	EW-1	2700	2490	S	100	YES
Bathroom	EW-1	2700	3090	N	6700	NO
Entry	EW-1	2700	1595	N	6700	NO
Entry	EW-1	2700	695	N	100	NO
Kit/Din/Liv	EW-2	2700	3200	N	4100	YES
Kit/Din/Liv	EW-1	2700	4800	E	1400	NO
Kit/Din/Liv	EW-1	2700	11795	S	100	NO
Laundry	EW-1	2700	2490	N	6700	NO
WC	EW-2	2700	2090	N	100	NO
Family	EW-1	2700	6395	N	100	NO
Family	EW-1	2700	3995	E	4600	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		157.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Concrete Slab, Unit Below 200mm	24.20	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 200mm	15.90	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 3	Concrete Slab, Unit Below 200mm	18.50	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Ensuite	Concrete Slab, Unit Below 200mm	9.00	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bathroom	Concrete Slab, Unit Below 200mm	5.80	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	22.20	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Kit/Din/Liv	Concrete Slab, Unit Below 200mm	57.20	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Laundry	Concrete Slab, Unit Below 200mm	4.90	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
WC	Concrete Slab, Unit Below 200mm	3.50	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Family	Concrete Slab, Unit Below 200mm	23.60	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Entry	Plasterboard	Bulk Insulation R4	No
Kit/Din/Liv	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
WC	Plasterboard	Bulk Insulation R4	No
Family	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Bedroom 1	1	1200
Bedroom 2	1	1200
Bedroom 3	1	1200
Family	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	Medium

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

Explanatory notes

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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.

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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.
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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.
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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009623760-01

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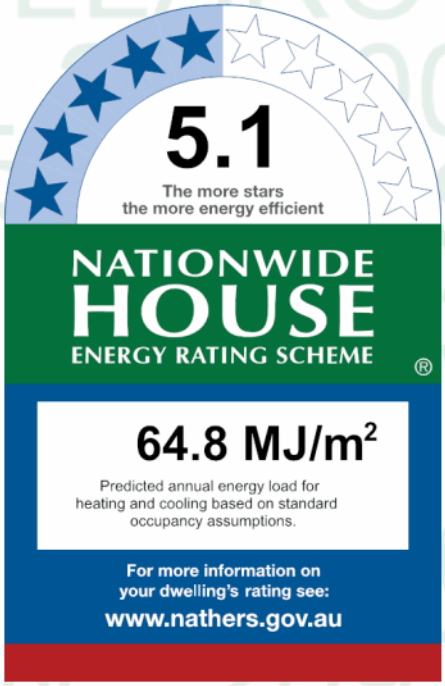

Property

Address	Unit 9, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*	
Conditioned*	178.0
Unconditioned*	10.0
Total	187.0
Garage	0.0

Exposure type
Suburban

NatHERS climate zone
56

Thermal performance

Heating	Cooling
35.8	**29.0**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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=mMkmhyNIx.
When using either link, ensure you are visiting hstar.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.

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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78
BRD-112-01 A	BRD-112-01 A ESS Awning 52 SG 4mmClr	6.5	0.67	0.64	0.70

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	BRD-033-01 A	n/a	2550	3820	n/a	45	W	No
Bedroom 2	BRD-033-01 A	n/a	2550	3145	n/a	45	W	No
Bedroom 3	BRD-033-01 A	n/a	2700	2620	n/a	45	N	No
Ensuite	BRD-112-01 A	n/a	900	1830	n/a	90	N	No
Bathroom	BRD-112-01 A	n/a	600	1000	n/a	90	S	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	5000	n/a	75	N	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	4778	n/a	60	E	No
Kit/Din/Liv	BRD-033-01 A	n/a	2700	3045	n/a	45	S	No
WC	BRD-112-01 A	n/a	900	550	n/a	90	S	No
Family	BRD-033-01 A	n/a	2700	3695	n/a	60	E	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

* Refer to glossary.
Generated on 11 Jul 2024 using BERS Pro v4.4.1.5 (3.21) for Collaroy , NSW , 2097

Skylight ID	Skylight description

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Ensuite	GEN-04-006a	n/a	410	0.40	S	None	No	0.50
Bathroom	GEN-04-006a	n/a	250	0.40	S	None	No	0.50
Kit/Din/Liv	GEN-04-006a	n/a	600	1.00	N	None	No	0.50
Kit/Din/Liv	GEN-04-006a	n/a	600	1.00	N	None	No	0.50
Laundry	GEN-04-006a	n/a	250	0.40	S	None	No	0.50
WC	GEN-04-006a	n/a	450	0.40	S	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	880	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	No
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2700	3900	W	2600	NO
Bedroom 1	EW-1	2700	7195	N	100	YES
Bedroom 1	EW-1	2700	800	S	3600	YES
Bedroom 2	EW-1	2700	4495	S	100	NO
Bedroom 2	EW-1	2700	3495	W	3400	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 3	EW-1	2700	3990	N	100	NO
Ensuite	EW-1	2700	2395	N	100	NO
Ensuite	EW-1	2700	1400	W	100	YES
Bathroom	EW-1	2700	1995	S	6700	NO
Bathroom	EW-1	2700	1095	S	100	NO
Entry	EW-1	2700	2490	S	6700	NO
Kit/Din/Liv	EW-1	2700	11195	N	100	NO
Kit/Din/Liv	EW-1	2700	5000	E	1400	NO
Kit/Din/Liv	EW-2	2700	3400	S	3900	YES
Laundry	EW-1	2700	2490	S	6700	NO
WC	EW-2	2700	2290	S	100	NO
Family	EW-1	2700	3795	E	4800	YES
Family	EW-1	2700	5695	S	100	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		156.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Concrete Slab, Unit Below 200mm	27.60	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 200mm	14.30	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Bedroom 3	Concrete Slab, Unit Below 200mm	18.90	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Ensuite	Concrete Slab, Unit Below 200mm	12.20	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Bathroom	Concrete Slab, Unit Below 200mm	5.80	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	23.10	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm

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Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kit/Din/Liv	Concrete Slab, Unit Below 200mm	55.50	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Laundry	Concrete Slab, Unit Below 200mm	4.90	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
WC	Concrete Slab, Unit Below 200mm	3.90	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Family	Concrete Slab, Unit Below 200mm	21.10	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
Entry	Plasterboard	Bulk Insulation R4	No
Kit/Din/Liv	Plasterboard	Bulk Insulation R4	No
Laundry	Plasterboard	Bulk Insulation R4	No
WC	Plasterboard	Bulk Insulation R4	No
Family	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Laundry	1	Exhaust Fans	300	Sealed

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Ceiling *fans*

Location	Quantity	Diameter (mm)
Kit/Din/Liv	1	1200
Family	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	Medium

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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).
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Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
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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.
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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. 0009623778-02

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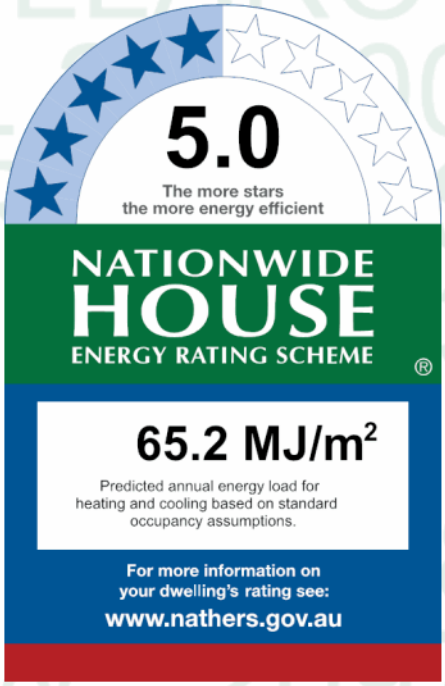

Property

Address	Unit 10, 37-43 Hay Street, Collaroy , NSW , 2097
Lot/DP	10648
NCC Class*	2
Type	New Dwelling

Plans

Main plan	M 29/02/24
Prepared by	PopovBass Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	168.0
Unconditioned*	17.0
Total	185.0
Garage	0.0

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
37.6 MJ/m^2	27.7 MJ/m^2

Accredited assessor

Name	Ian Fry
Business name	Frys Energywise
Email	comply@frysenergywise.com.au
Phone	02 9899 2825
Accreditation No.	DMN/12/1441
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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=TavDGNgmR.
When using either link, ensure you are visiting hstar.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.

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

Where not noted on plans, default selections to floor coverings and external colours have been used in this assessment, as noted in the NatHERS Technical Notes. Alternative selections past this point can be made to floor coverings and external colours, without requiring an amended certificate.

I have modeled the shading in accordance with NatHERS principles

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
BRD-112-01 A	BRD-112-01 A ESS Awning 52 SG 4mmClr	6.5	0.67	0.64	0.70
BRD-033-01 A	BRD-033-01 A ESS Sliding Door (80mm) SG 4Clr	6.2	0.74	0.70	0.78

* Refer to glossary.

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
BRD-001-01 A	BRD-001-01 A ESS Sliding Window (52mm) SG 3Clr	6.4	0.76	0.72	0.80
BRD-033-10 A	BRD-033-10 A ESS Sliding Door (80mm) SG 6.38CPClr	4.3	0.60	0.57	0.63
BRD-001-16 A	BRD-001-16 A ESS Sliding Window (52mm) SG 638CPClr	4.6	0.61	0.58	0.64

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	BRD-112-01 A	n/a	1800	900	n/a	10	S	No
Bedroom 1	BRD-033-01 A	n/a	2550	3395	n/a	45	W	No
Bedroom 2	BRD-033-01 A	n/a	2550	3380	n/a	45	W	No
Bedroom 2	BRD-112-01 A	n/a	1800	800	n/a	10	N	No
Bedroom 3	BRD-001-01 A	n/a	1650	2570	n/a	45	S	No
Ensuite	BRD-001-01 A	n/a	2700	1045	n/a	10	W	No
Ldry	BRD-112-01 A	n/a	1800	800	n/a	60	N	No
Kit/Din/Liv	BRD-033-10 A	n/a	2700	3045	n/a	45	N	No
Kit/Din/Liv	BRD-033-10 A	n/a	2700	4778	n/a	75	E	No
Kit/Din/Liv	BRD-001-16 A	n/a	1650	5530	n/a	45	S	Yes
Bathroom	BRD-112-01 A	n/a	900	1781	n/a	90	S	No
WC	BRD-112-01 A	n/a	600	1141	n/a	90	N	No
Family	BRD-033-10 A	n/a	2700	3500	n/a	45	N	No
Family	BRD-033-10 A	n/a	2700	3695	n/a	45	E	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					

* Refer to glossary.

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
Ensuite	GEN-04-006a	n/a	410	0.40	S	None	No	0.50
Ldry	GEN-04-006a	n/a	250	0.40	N	None	No	0.50
Kit/Din/Liv	GEN-04-006a	n/a	600	1.00	S	None	No	0.50
Kit/Din/Liv	GEN-04-006a	n/a	600	1.00	S	None	No	0.50
WC	GEN-04-006a	n/a	450	0.40	N	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	880	90	W

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	No

* Refer to glossary.

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-2	Brick Veneer	0.50	Medium	Bulk Insulation R2	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-1	2700	7095	S	100	YES
Bedroom 1	EW-1	2700	3895	W	2200	NO
Bedroom 2	EW-1	2700	3495	W	2200	NO
Bedroom 2	EW-1	2700	4495	N	100	NO
Bedroom 3	EW-1	2700	695	S	100	NO
Bedroom 3	EW-1	2700	2795	S	100	NO
Ensuite	EW-1	2700	1300	W	100	YES
Ensuite	EW-1	2700	2495	S	100	NO
Ldry	EW-1	2700	2695	N	100	NO
Ldry	EW-1	2700	2195	E	0	YES
Entry	EW-1	2700	2400	N	6500	YES
Entry	EW-2	2700	2700	N	6500	NO
Entry	EW-1	2700	2200	W	17000	YES
Entry	EW-1	2700	1595	N	100	NO
Kit/Din/Liv	EW-2	2700	3300	N	3800	YES
Kit/Din/Liv	EW-1	2700	5000	E	1500	NO
Kit/Din/Liv	EW-1	2700	11095	S	100	NO
Bathroom	EW-1	2700	1990	S	100	NO
WC	EW-2	2700	1390	N	100	NO
Family	EW-1	2700	5095	N	100	NO
Family	EW-1	2700	3695	E	4800	YES

* Refer to glossary.
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Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		153.00	No insulation
IW-2 - Cavity brick, plasterboard		7.00	No Insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 1	Concrete Slab, Unit Below 200mm	27.20	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Bedroom 2	Concrete Slab, Unit Below 200mm	14.10	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Bedroom 3	Concrete Slab, Unit Below 200mm	15.50	None	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Ensuite	Concrete Slab, Unit Below 200mm	12.50	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Ldry	Concrete Slab, Unit Below 200mm	5.30	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Entry	Concrete Slab, Unit Below 200mm	25.20	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Kit/Din/Liv	Concrete Slab, Unit Below 200mm	54.90	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Bathroom	Concrete Slab, Unit Below 200mm	8.70	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
WC	Concrete Slab, Unit Below 200mm	2.80	None	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Family	Concrete Slab, Unit Below 200mm	18.50	None	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Ldry	Plasterboard	Bulk Insulation R4	No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Entry	Plasterboard	Bulk Insulation R4	No
Kit/Din/Liv	Plasterboard	Bulk Insulation R4	No
Bathroom	Plasterboard	Bulk Insulation R4	No
WC	Plasterboard	Bulk Insulation R4	No
Family	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Ensuite	1	Exhaust Fans	300	Sealed
Ldry	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Exhaust Fans	300	Sealed
Kit/Din/Liv	1	Chimneys	300	Sealed
Bathroom	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Bedroom 1	1	1200
Bedroom 2	1	1200
Bedroom 3	1	1200
Kit/Din/Liv	1	1200
Family	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	0.50	Medium

* Refer to glossary.
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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).
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