

Nationwide House Energy Rating Scheme* Certificate



Certificate number: 0004077327-01

Certificate Date: 05 Aug 2019

★ Star rating: 5.3

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Assessor details

Accreditation

number: 20374

Name: Stephen Collins

Organisation: Concept Designs Australia

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Declaration

of interest:

None

Software: BERS Pro v4.3.0.2d (3.13)

AAO: ABSA

Overview

Dwelling details

Street: 24 Sir Thomas Mitchell Drive

Suburb: DAVIDSON

State: NSW

Postcode: 2085

Type: New Dwelling

NCC Class: 1A

NatHERS

climate zone: 56

Lot/DP

number: 28/242262

Exposure: Suburban

Key construction and insulation materials

(see following pages for details)

Construction: Fibro Cavity Panel Direct Fix
Corrugated Iron

Insulation: Suspended Timber Floor

R2.0 wall insulation

R6.0 ceiling insulation

No floor insulation

Glazing: RYL-322-213 A AA Series Casement

Window DG 4-12Ar-4ET

Net floor area (m²)

Conditioned: 225.0

Unconditioned: 73.0

Garage: 50.0

TOTAL: 298.0

Annual thermal performance loads (MJ/m²)

Heating: 39.1

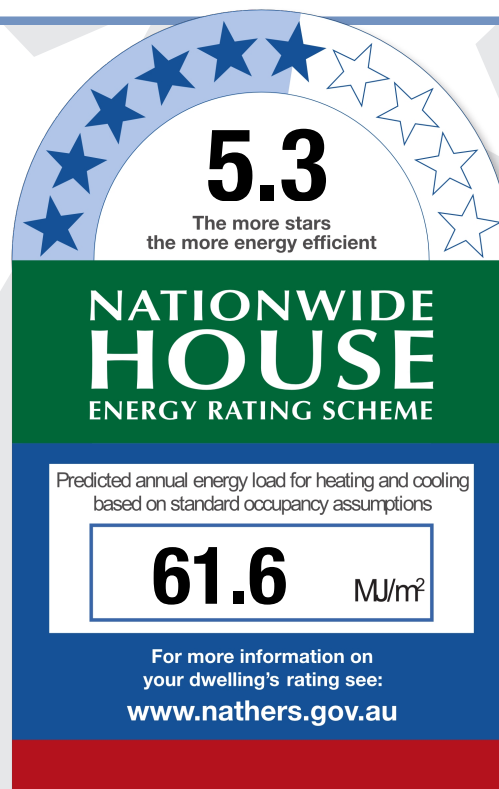
Cooling: 22.5

TOTAL: 61.6

Plan documents

Plan ref/date: W35

Prepared by: Envirotecture



Ceiling penetrations

(see following pages for details)

Sealed: 64

Unsealed: 0

TOTAL:** 64

**NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. If this number is exceeded in construction then this certificate IS NOT VALID and a new certificate is required. Loss of ceiling insulation for the penetrations listed has been taken into account with the rating.

Principle downlight type: LED

Window selection - default windows only

Note on allowable window values:
Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/- 5% SHGC tolerance is allowed with this rating.

NB: This tolerance ONLY applies to SHGC, the U-value can always be lower but not higher than the values stated on page 2.

If any of windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be rerated to confirm compliance.

Scan to access this certificate online and confirm this is valid.



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Building features

Window type and performance value

Window ID	Window type	U-value	SHGC
RYL-322-213 A	RYL-322-213 A AA Series Casement Window DG 4-12Ar-4ET	3.1	0.49
RYL-302-013 A	RYL-302-013 A AA Series Fixed Lite Window DG 4-12Ar-4ET	2.3	0.61
RYL-312-113 A	RYL-312-113 A AA Series Awning Window DG 4-12Ar-4ET	3.1	0.49
RYL-372-713 A	RYL-372-713 A AA Series Hinged Door DG 4-12Ar-4ET	3.3	0.44
RYL-342-413 A	RYL-342-413 A AA Series Sliding Window in-line reveal DG 4-12Ar-4ET	3.1	0.56
RYL-362-613 A	RYL-362-613 A AA Series Sliding Door DG 4-12Ar-4ET	3.2	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Guest Bed	RYL-322-213 A	n/a	600	600	W	No Shading
Guest Bed	RYL-302-013 A	n/a	600	1500	W	No Shading
Guest Bath	RYL-312-113 A	n/a	600	900	W	No Shading
Rumpus	RYL-372-713 A	n/a	2100	900	E	No Shading
Rumpus	RYL-322-213 A	n/a	1500	600	E	No Shading
Rumpus	RYL-312-113 A	n/a	900	900	S	No Shading
Rumpus	RYL-312-113 A	n/a	900	900	S	No Shading
Rumpus	RYL-312-113 A	n/a	600	1800	W	No Shading
Entry/Plant	RYL-302-013 A	n/a	650	650	E	No Shading
Entry/Plant	RYL-372-713 A	n/a	2140	1600	S	No Shading
Entry/Plant	RYL-302-013 A	n/a	650	650	S	No Shading
Bedroom 1	RYL-372-713 A	n/a	2100	1800	N	No Shading
Bedroom 1	RYL-322-213 A	n/a	2100	600	E	No Shading
Bedroom 1	RYL-322-213 A	n/a	2100	600	E	No Shading
Bedroom 1	RYL-322-213 A	n/a	2100	1075	S	No Shading
WIR	RYL-322-213 A	n/a	2100	800	N	No Shading
Ensuite	RYL-322-213 A	n/a	2100	450	N	No Shading
Stair	RYL-302-013 A	n/a	650	650	E	No Shading
Stair	RYL-302-013 A	n/a	650	650	E	No Shading
Stair	RYL-302-013 A	n/a	1900	900	S	No Shading
Stair	RYL-302-013 A	n/a	650	650	S	No Shading
Stair	RYL-302-013 A	n/a	650	650	S	No Shading
Bedroom 2	RYL-342-413 A	n/a	1900	3600	S	No Shading
Study	RYL-372-713 A	n/a	2100	1800	S	No Shading
Study	RYL-322-213 A	n/a	1500	900	W	No Shading
Bedroom 3	RYL-322-213 A	n/a	1500	900	W	No Shading
Bedroom 3	RYL-372-713 A	n/a	2100	1800	N	No Shading
Bath FF	RYL-322-213 A	n/a	1500	1800	N	No Shading
WC FF	RYL-312-113 A	n/a	700	900	N	No Shading
Kitchen/Living	RYL-312-113 A	n/a	1200	1400	N	No Shading
Kitchen/Living	RYL-312-113 A	n/a	1200	1400	N	No Shading
Kitchen/Living	RYL-362-613 A	n/a	2100	3300	N	No Shading
Kitchen/Living	RYL-302-013 A	n/a	650	650	E	No Shading
Kitchen/Living	RYL-302-013 A	n/a	650	650	E	No Shading
Kitchen/Living	RYL-342-413 A	n/a	1500	3000	S	No Shading
Kitchen/Living	RYL-362-613 A	n/a	2100	1800	S	No Shading
Kitchen/Living	RYL-362-613 A	n/a	2100	3400	S	No Shading

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Kitchen/Living	RYL-312-113 A	n/a	600	5000	W	No Shading
Kitchen/Living	RYL-302-013 A	n/a	800	1000	S	No Shading
Ldry	RYL-312-113 A	n/a	600	1800	E	No Shading
WC Ldry	RYL-322-213 A	n/a	2100	900	N	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
None Present			

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Concrete block, lined	Bulk Insulation R2	No
EW-2	Concrete Block	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	Bulk Insulation R2	No
EW-4	Metal Clad Cavity Panel Direct Fix	Bulk Insulation R2	No

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Guest Bed	EW-1	4300	2000	N	No	0
Guest Bed	EW-1	4300	550	N	No	0
Guest Bed	EW-1	1400	2000	E	No	0
Guest Bed	EW-1	1400	550	E	No	10900
Guest Bed	EW-1	3630	1300	W	No	0
Guest Bed	EW-1	3630	1250	W	No	700
Guest Bath	EW-1	1760	1200	W	No	0
Guest Bath	EW-1	1760	1350	W	No	700
Rumpus	EW-1	2600	2550	E	No	9700
Rumpus	EW-1	4300	2550	S	No	400
Rumpus	EW-1	2800	2550	W	No	0
Rumpus	EW-1	2230	1000	W	No	0
Rumpus	EW-1	2230	1551	W	No	700
Garage	EW-2	9605	1800	N	No	0
Garage	EW-2	9605	750	N	No	1200
Garage	EW-2	2705	1300	E	No	0
Garage	EW-2	2705	1250	E	No	1200
Garage	EW-2	6010	2550	S	No	2500
Entry/Plant	EW-1	5305	1000	E	No	0
Entry/Plant	EW-1	5305	1550	E	No	0
Entry/Plant	EW-1	3500	2550	S	No	1000

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Entry/Plant	EW-1	1500	2550	W	No	10500
Bedroom 1	EW-3	3995	2550	N	No	600
Bedroom 1	EW-3	5000	2550	E	No	850
Bedroom 1	EW-3	1300	2550	S	No	600
WIR	EW-3	1990	2550	N	No	600
Ensuite	EW-3	1390	2550	N	No	4900
Stair	EW-3	3995	2550	E	No	0
Stair	EW-3	4095	2550	S	No	0
Bedroom 2	EW-3	5495	2550	S	No	1500
Bedroom 2	EW-3	1300	2550	W	No	3600
Study	EW-3	3595	2550	S	No	2800
Study	EW-3	2100	2550	W	No	0
Study	EW-3	1495	2550	W	No	800
Bedroom 3	EW-3	4095	2550	W	No	800
Bedroom 3	EW-3	3595	2550	N	No	600
Bath FF	EW-3	2190	2550	N	No	4900
WC FF	EW-3	1290	2550	N	No	4900
Kitchen/Living	EW-3	9595	2535	N	No	800
Kitchen/Living	EW-3	1295	3000	E	No	500
Kitchen/Living	EW-3	2700	1700	E	No	400
Kitchen/Living	EW-3	1300	1700	S	No	200
Kitchen/Living	EW-3	7000	2535	S	No	1400
Kitchen/Living	EW-3	2100	2700	W	No	4700
Kitchen/Living	EW-3	4000	2800	S	No	3500
Kitchen/Living	EW-3	5700	3200	W	No	700
Ldry	EW-4	2790	2535	E	No	500
WC Ldry	EW-3	2695	2535	N	No	800
WC Ldry	EW-3	995	2535	E	No	500

Internal wall type

Wall type	Area (m ²)	Insulation	Wall wrap or foil
IW-1 - Concrete Block	36.0	Bulk Insulation, No Air Gap R2	No
IW-2 - Concrete Block	22.0	No insulation	No
IW-3 - Cavity wall, direct fix plasterboard, single gap	145.0	No insulation	No

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Guest Bed	Concrete Slab on Ground 100mm	15.4	None	Bulk Insulation in Contact with Floor R1	Carpet+Rubber Underlay 18mm
Guest Bath	Concrete Slab on Ground 100mm	4.5	None	Bulk Insulation in Contact with Floor R1	Ceramic Tiles 8mm
Rumpus	Concrete Slab on Ground	24.3	None	Bulk Insulation	Cork Tiles or

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	100mm			in Contact with Floor R1	Parquetry 8mm
Garage	Concrete Slab on Ground 100mm	50.0	None	No Insulation	Bare
Entry/Plant	Concrete Slab on Ground 100mm	18.2	None	Bulk Insulation in Contact with Floor R1	Cork Tiles or Parquetry 8mm
Bedroom 1/Garage	Timber Above Plasterboard 19mm	7.4		Bulk Insulation R4	Carpet+Rubber Underlay 18mm
Bedroom 1/Entry/Plant	Timber Above Plasterboard 19mm	2.1		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1	Suspended Timber Floor 19mm	10.1	Very Open	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
WIR/Garage	Timber Above Plasterboard 19mm	4.9		Bulk Insulation R4	Carpet+Rubber Underlay 18mm
WIR	Suspended Timber Floor 19mm	2.6	Very Open	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Ensuite/Garage	Timber Above Plasterboard 19mm	3.4		Bulk Insulation R4	Ceramic Tiles 8mm
Ensuite	Suspended Timber Floor 19mm	1.8	Very Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Stair/Garage	Timber Above Plasterboard 19mm	1.8		Bulk Insulation R4	Cork Tiles or Parquetry 8mm
Stair/Entry/Plant	Timber Above Plasterboard 19mm	13.7		No Insulation	Cork Tiles or Parquetry 8mm
Stair	Suspended Timber Floor 19mm	0.5	Very Open	Bulk Insulation in Contact with Floor R2	Cork Tiles or Parquetry 8mm
Hall/Garage	Timber Above Plasterboard 150mm	13.8		Bulk Insulation R4	Cork Tiles or Parquetry 8mm
Hall/Entry/Plant	Timber Above Plasterboard 150mm	0.6		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	12.8		Bulk Insulation R4	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Timber Floor 19mm	4.8	Very Open	Bulk Insulation in Contact with Floor R2	Carpet+Rubber Underlay 18mm
Study/Guest Bath	Timber Above Plasterboard 150mm	2.6		No Insulation	Carpet+Rubber Underlay 18mm
Study/Rumpus	Timber Above Plasterboard 150mm	9.6		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Guest Bed	Timber Above Plasterboard 150mm	12.7		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Guest Bath	Timber Above Plasterboard 150mm	0.7		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Rumpus	Timber Above Plasterboard 150mm	0.7		No Insulation	Carpet+Rubber Underlay 18mm
Bath FF/Garage	Timber Above Plasterboard 19mm	3.5		Bulk Insulation R4	Ceramic Tiles 8mm
Bath FF	Suspended Timber Floor 19mm	2.9	Very Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
WC FF/Garage	Timber Above Plasterboard 19mm	0.7		Bulk Insulation R4	Ceramic Tiles 8mm

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WC FF	Suspended Timber Floor 19mm	1.7	Very Open	Bulk Insulation in Contact with Floor R2	Ceramic Tiles 8mm
Kitchen/Living/Bed room 1	Timber Above Plasterboard 19mm	3.2		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/WIR	Timber Above Plasterboard 19mm	8.0		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Ens uite	Timber Above Plasterboard 19mm	5.6		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Stair	Timber Above Plasterboard 19mm	11.4		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Hall	Timber Above Plasterboard 19mm	15.3		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bed room 2	Timber Above Plasterboard 19mm	8.8		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Stud y	Timber Above Plasterboard 19mm	4.3		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bed room 3	Timber Above Plasterboard 19mm	11.0		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/Bath FF	Timber Above Plasterboard 19mm	6.8		No Insulation	Cork Tiles or Parquetry 8mm
Kitchen/Living/WC FF	Timber Above Plasterboard 19mm	2.6		No Insulation	Cork Tiles or Parquetry 8mm
Ldry/Bedroom 1	Timber Above Plasterboard 19mm	7.2		No Insulation	Ceramic Tiles 8mm
WC Ldry/Bedroom 1	Timber Above Plasterboard 19mm	2.5		No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Guest Bed	Plasterboard	Foil Anti-glare one side and Reflective other of the Bulk Insulation R6	No
Guest Bed	Timber Above Plasterboard	No Insulation	No
Guest Bath	Plasterboard	Foil Anti-glare one side and Reflective other of the Bulk Insulation R6	No
Guest Bath	Timber Above Plasterboard	No Insulation	No
Rumpus	Plasterboard	Bulk Insulation R4	No
Rumpus	Timber Above Plasterboard	No Insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R4	No
Entry/Plant	Plasterboard	Bulk Insulation R4	No
Entry/Plant	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Foil Anti-glare one side and Reflective other	No

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		of the Bulk Insulation R6	
Bedroom 1	Timber Above Plasterboard	No Insulation	No
WIR	Plasterboard	Bulk Insulation R4	No
WIR	Timber Above Plasterboard	No Insulation	No
Ensuite	Plasterboard	Bulk Insulation R4	No
Ensuite	Timber Above Plasterboard	No Insulation	No
Stair	Plasterboard	Bulk Insulation R4	No
Stair	Timber Above Plasterboard	No Insulation	No
Hall	Plasterboard	Bulk Insulation R4	No
Hall	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Timber Above Plasterboard	No Insulation	No
Study	Plasterboard	Bulk Insulation R4	No
Study	Timber Above Plasterboard	No Insulation	No
Bedroom 3	Plasterboard	Foil Anti-glare one side and Reflective other of the Bulk Insulation R6	No
Bedroom 3	Timber Above Plasterboard	No Insulation	No
Bath FF	Plasterboard	Bulk Insulation R4	No
Bath FF	Timber Above Plasterboard	No Insulation	No
WC FF	Plasterboard	Bulk Insulation R4	No
WC FF	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Foil Anti-glare one side and Reflective other of the Bulk Insulation R6	No
Ldry	Plasterboard	Foil Anti-glare one side and Reflective other of the Bulk Insulation R6	Yes
WC Ldry	Plasterboard	Foil Anti-glare one side and Reflective other of the Bulk Insulation R6	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Guest Bed	4	Downlights - LED	150	Sealed
Guest Bath	2	Downlights - LED	150	Sealed
Guest Bath	1	Exhaust Fans	300	Sealed

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Rumpus	5	Downlights - LED	150	Sealed
Entry/Plant	4	Downlights - LED	150	Sealed
Bedroom 1	4	Downlights - LED	150	Sealed
WIR	2	Downlights - LED	150	Sealed
Ensuite	2	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Stair	2	Downlights - LED	150	Sealed
Hall	4	Downlights - LED	150	Sealed
Bedroom 2	4	Downlights - LED	150	Sealed
Study	4	Downlights - LED	150	Sealed
Bedroom 3	4	Downlights - LED	150	Sealed
Bath FF	2	Downlights - LED	150	Sealed
Bath FF	1	Exhaust Fans	300	Sealed
WC FF	1	Downlights - LED	150	Sealed
Kitchen/Living	13	Downlights - LED	150	Sealed
Ldry	2	Downlights - LED	150	Sealed
Ldry	1	Exhaust Fans	300	Sealed
WC Ldry	1	Downlights - LED	150	Sealed

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Corrugated Iron	No Insulation, Only an Air Gap	Light
Waterproofing Membrane	No Added Insulation, No air Gap	Medium
Corrugated Iron	No Insulation, Only an Air Gap	Medium
Concrete	No Added Insulation, No air Gap	Medium
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.3	Medium

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Additional information

Explanatory notes

About this report

Residential energy ratings address the quality of the building fabric i.e. walls, windows, floors and roof/ceilings. Ratings do not cover the energy or water efficiency of appliances including heating and cooling, hot water, dishwashers, ovens, fridges, TVs etc. or solar panel or water tank requirements. The efficiency or specification of these items is generally covered by other regulations, standards or guidelines.

General Information

A NatHERS House Energy Rating is a comprehensive, dynamic computer modelling evaluation of the floorplans, elevations and specifications to predict an energy load of a home. Not all of us use our homes in the same way, so ratings are generated using standard assumptions. This means homes can be compared across the country.

The actual energy consumption of your home may vary significantly from the predicted energy load figures in the report depending on issues such as the size of your household and your personal preferences, e.g. in terms of heating or cooling.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparative purposes between different house designs and for demonstrating that the design meets the required regulatory compliance.

Homes that are energy efficient use less energy, are warmer in winter, cooler in summer and cost less to run. The higher the star rating the more energy efficient.

This NatHERS House Energy Rating report was carefully prepared by your assessor on the basis of comprehensive modelling using standard procedures to rate your home using the underlying engine developed by the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO).

All information relating to energy loads presented in this report is based on a range of standard assumptions in order to allow for comparisons with reports prepared for other homes and to demonstrate minimum regulatory compliance.

The standard assumptions include figures for occupancy, indoor air temperature and are based on a unique climate file for your region.

Accredited Assessors

To ensure you get a high-quality, professional NatHERS House Energy Rating report, you should always use an accredited assessor, 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. Non-accredited assessors do not have this level of quality assurance or any on-going training requirements.

If you have any questions or concerns about this report, please direct them to your assessor in the first instance.

If your assessor is unable to address your questions or concerns, please contact their AAO listed under 'assessor details'. You can also find a range of information about accredited assessors on the AAO websites.

Disclaimer

The energy values quoted are for comparison purposes only; they are not a prediction of actual energy use. This rating only applies to the floor plan, construction details, orientation and climate as submitted and included in the attached drawing set that bears a stamp with the same number as this certificate. Changes to any of these details could affect the rating.

Contact

For more information on the Nationwide House Energy Rating Scheme (NatHERS), visit www.nathers.gov.au

For more information on energy efficient design and insulation visit www.yourhome.gov.au

* Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au