

Nationwide House Energy Rating Scheme* Certificate



Certificate number: **0004455838-01**

Certificate Date: **13 Dec 2019**

★ Star rating: **5.4**

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: **VIC/BDAV/12/1469**
Name: **Craig Crowther**
Organisation: **Insight Energy**
Email: **info@insightenergy.com.au**
Phone: **02 8188 6777**
Declaration of interest: **The Assessor has provided design advice to the Applicant**
Software: **BERS Pro v4.3.0.2f (3.13)**

AAO: **BDAV**

Overview

Dwelling details

Street: **Unit 27A, 27 Alan Avenue**
Suburb: **SEAFORTH**
State: **NSW** Postcode: **2092**
Type: **New Dwelling** NCC Class: **1A**
NatHERS climate zone: **56**
Lot/DP number: **81/-** Exposure: **Suburban**

Key construction and insulation materials

(see following pages for details)

Construction: **Reverse Brick Veneer**
Corrugated Iron
Concrete Slab on Ground
Insulation: **R2.5 wall insulation**
R4.0 ceiling insulation
No floor insulation
Glazing: **ATB-004-03 B Al Thermally Broken B**
DG Air Fill High Solar Gain low-E -Clear

Net floor area (m²)

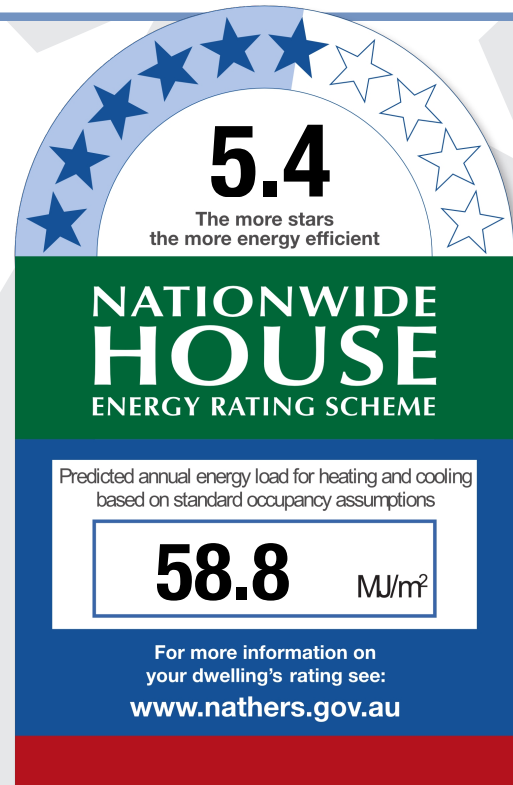
Conditioned: **280.0**
Unconditioned: **106.0**
Garage: **75.0**
TOTAL: **386.0**

Annual thermal performance loads (MJ/m²)

Heating: **33.0**
Cooling: **25.8**
TOTAL: **58.8**

Plan documents

Plan ref/date: **Ref Alan DA, Issue A dated 2.09.19 Consultants**
Prepared by: **Nick Bell Architects**



Ceiling penetrations

(see following pages for details)

Sealed: **67**
Unsealed: **0**
TOTAL:** **67**

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
ATB-004-03 B	ATB-004-03 B Al Thermally Broken B DG Air Fill High Solar Gain low-E -Clear	3.1	0.49
ALM-004-03 A	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E -Clear	4.3	0.53
ALM-002-03 A	ALM-002-03 A Aluminium B SG High Solar Gain Low-E	5.4	0.58

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Family Room	ATB-004-03 B	n/a	2900	1050	SW	No Shading
Family Room	ATB-004-03 B	n/a	2900	3900	NW	No Shading
Laundry	ALM-004-03 A	n/a	2900	920	NE	No Shading
Laundry	ATB-004-03 B	n/a	2900	580	NE	No Shading
Bath 1	ATB-004-03 B	n/a	2900	800	SW	Vertical Louvres, Horizontal Blades
Bed 5	ATB-004-03 B	n/a	2900	1050	SE	No Shading
Bed 5	ATB-004-03 B	n/a	2900	800	SW	Vertical Louvres, Horizontal Blades
Pantry	ALM-004-03 A	n/a	2900	1200	SW	Vertical Vegetation
Pantry	ATB-004-03 B	n/a	2900	500	SW	No Shading
Entry Hall	ATB-004-03 B	n/a	2900	1850	SE	Vertical Louvres, Horizontal Blades
Entry Hall	ATB-004-03 B	n/a	2900	3500	NE	Awning
Entry Hall	ATB-004-03 B	n/a	2900	1600	NW	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2900	1050	NE	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2900	1100	NE	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2900	5700	SE	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2850	850	SE	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2480	1200	SW	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2900	1100	NW	No Shading
Kitchen/Living	ATB-004-03 B	n/a	2900	1850	NW	Vertical Louvres, Horizontal Blades
Bed 3	ATB-004-03 B	n/a	2650	2525	SE	Vertical Louvres, Horizontal Blades
Bed 3	ATB-004-03 B	n/a	2650	950	NE	Vertical Louvres, Horizontal Blades
Bed 4	ATB-004-03 B	n/a	2650	2300	SE	Vertical Louvres, Horizontal Blades
Bed 4	ATB-004-03 B	n/a	2950	1200	SW	Vertical Louvres, Horizontal Blades
Bath 2	ATB-004-03 B	n/a	2950	1200	SW	Vertical Louvres, Horizontal Blades
Bath 2	ATB-004-03 B	n/a	2950	1050	NW	Vertical Louvres, Horizontal Blades
Void 2	ATB-004-03 B	n/a	2950	1850	NW	Vertical Louvres, Horizontal Blades
Void 2	ALM-002-03 A	n/a	500	1900	NW	No Shading
Void 2	ALM-002-03 A	n/a	750	4350	NE	No Shading
Bed 2	ATB-004-03 B	n/a	2950	1050	SE	No Shading
Bed 2	ATB-004-03 B	n/a	2950	800	SW	Vertical Louvres, Horizontal Blades
Ensuite	ATB-004-03 B	n/a	2950	800	SW	

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

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						Vertical Louvres, Horizontal Blades
Bed 1	ATB-004-03 B	n/a	2050	1050	SW	No Shading
Bed 1	ATB-004-03 B	n/a	2850	5700	NW	No Shading
Bed 1	ATB-004-03 B	n/a	2050	1050	NE	No Shading
Dressing Rm	ATB-004-03 B	n/a	2100	1200	NE	Vertical Louvres, Horizontal Blades
Void 1	ATB-004-03 B	n/a	2950	1300	NW	Vertical Louvres, Horizontal Blades
Stair Void FF	ATB-004-03 B	n/a	2950	1200	NE	Vertical Louvres, Horizontal Blades
Hallway FF	ATB-004-03 B	n/a	2950	3500	NE	Vertical Louvres, Horizontal Blades
Hallway FF	ATB-004-03 B	n/a	2100	1200	SW	Vertical Louvres, Horizontal Blades

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 (m ²)	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Concrete Block	No insulation	No
EW-2	Reverse Brick Veneer	Foil reflective both sides of the Bulk Insulation R2.5	Yes
EW-3	Weatherboard Cavity Panel Direct Fix	Foil, Reflective both sides + Bulk Insulation R2.5	Yes
EW-4	EPS Cavity Panel Direct Fix	Foil reflective both sides of the Bulk Insulation R2.5	Yes
EW-5	Stone, lined	Foil reflective both sides of the Bulk Insulation R2.5	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Tanks/Plant	EW-1	5945	2550	SE	No	100
Tanks/Plant	EW-1	4545	2550	SW	No	100
Garage	EW-1	4245	2550	SW	No	100
Garage	EW-1	1900	2550	SW	No	100
Garage	EW-1	7100	2550	NW	No	3100
Garage	EW-1	6145	2550	NE	No	100
Garage Stairs	EW-1	4545	2550	NE	No	100
Garage Stairs	EW-1	1045	2550	SE	No	100
Family Room	EW-2	5295	2980	SW	No	100

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Family Room	EW-2	4200	2980	NW	No	1750
Family Room	EW-2	1200	2980	NE	No	3200
Laundry	EW-2	4090	2980	NE	No	100
Bath 1	EW-2	2490	2980	SW	No	100
Bed 5	EW-2	2000	2980	SE	No	100
Bed 5	EW-2	4695	2980	SW	No	100
Pantry	EW-2	3690	2980	SW	No	100
Entry Hall	EW-2	2495	2980	NE	No	100
Entry Hall	EW-2	995	2980	NE	No	100
Entry Hall	EW-2	1900	2980	SE	No	100
Entry Hall	EW-2	3795	2980	NE	No	100
Entry Hall	EW-2	3095	2980	NW	No	2950
Stairs to Garag	EW-4	3590	2980	NE	No	100
Kitchen/Living	EW-2	5600	2980	NE	No	300
Kitchen/Living	EW-5	3000	2980	NE	No	100
Kitchen/Living	EW-2	1200	2980	NE	No	100
Kitchen/Living	EW-2	7400	2980	SE	No	4000
Kitchen/Living	EW-4	9800	2980	SW	No	100
Kitchen/Living	EW-4	2000	2980	NW	No	100
Kitchen/Living	EW-2	2000	2980	NW	No	100
Bed 3	EW-2	3595	2950	SE	No	100
Bed 3	EW-2	5395	2950	NE	No	100
Bed 4	EW-2	3795	2950	SE	No	100
Bed 4	EW-2	4795	2950	SW	No	100
Bath 2	EW-2	4995	2950	SW	No	100
Bath 2	EW-2	2000	2950	NW	No	100
Void 2	EW-2	2000	2950	NW	No	100
Void 2	EW-2	4395	2950	NE	No	100
Bed 2	EW-4	2000	2950	SE	No	100
Bed 2	EW-4	4195	2950	SW	No	100
Ensuite	EW-4	1890	2950	SW	No	100
Bed 1	EW-4	3995	2950	SW	No	100
Bed 1	EW-2	6000	2950	NW	No	1750
Bed 1	EW-2	1200	2950	NE	No	1400
WIR	EW-4	2390	2950	SW	No	100
Dressing Rm	EW-2	4090	2850	NE	No	100
Void 1	EW-2	1295	2950	NW	No	2950
Void 1	EW-2	2495	2950	NE	No	100
Stair Void FF	EW-2	4595	2950	NE	No	100
Stair Void FF	EW-2	1895	2950	SE	No	100
Hallway FF	EW-2	3795	2950	NE	No	100
Hallway FF	EW-2	3690	2950	SW	No	100

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Single Skin Brick	30.0	No insulation	No

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IW-2 - Cavity wall, direct fix plasterboard, single gap	289.0	No insulation	No
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Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Tanks/Plant	Concrete Slab on Ground 100mm	27.0	None	No Insulation	Bare
Garage	Concrete Slab on Ground 100mm	43.6	None	No Insulation	Bare
Garage Stairs	Concrete Slab on Ground 100mm	4.8	None	No Insulation	Bare
Family Room/Garage	Rendered Concrete 100mm	19.7		No Insulation	Cork Tiles or Parquetry 8mm
Family Room	Concrete Slab on Ground 100mm	2.2	None	No Insulation	Cork Tiles or Parquetry 8mm
Laundry/Tanks/Plant	Rendered Concrete 100mm	1.0		No Insulation	Ceramic Tiles 8mm
Laundry/Garage	Rendered Concrete 100mm	5.1		No Insulation	Ceramic Tiles 8mm
Laundry/Garage Stairs	Rendered Concrete 100mm	1.4		No Insulation	Ceramic Tiles 8mm
Bath 1/Tanks/Plant	Rendered Concrete 100mm	3.5		No Insulation	Ceramic Tiles 8mm
Bath 1/Garage	Rendered Concrete 100mm	3.2		No Insulation	Ceramic Tiles 8mm
Bath 1	Concrete Slab on Ground 100mm	0.5	None	No Insulation	Ceramic Tiles 8mm
Bed 5/Tanks/Plant	Rendered Concrete 100mm	12.9		No Insulation	Cork Tiles or Parquetry 8mm
Bed 5	Concrete Slab on Ground 100mm	6.4	None	No Insulation	Cork Tiles or Parquetry 8mm
Pantry	Concrete Slab on Ground 100mm	6.3	None	No Insulation	Cork Tiles or Parquetry 8mm
Entry Hall/Tanks/Plant	Rendered Concrete 100mm	9.3		No Insulation	Cork Tiles or Parquetry 8mm
Entry Hall/Garage	Rendered Concrete 100mm	12.0		No Insulation	Cork Tiles or Parquetry 8mm
Entry Hall	Concrete Slab on Ground 100mm	9.3	None	No Insulation	Cork Tiles or Parquetry 8mm
Stairs to Garag/Garage Stairs	Rendered Concrete 100mm	3.4		No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	72.4	None	No Insulation	Cork Tiles or Parquetry 8mm
Bed 3/Kitchen/Living	Timber Above Plasterboard 150mm	19.0		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Bed 4/Kitchen/Living	Timber Above Plasterboard 150mm	17.1		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Bath 2/Kitchen/Living	Timber Above Plasterboard 150mm	12.6		Bulk Insulation R3	Ceramic Tiles 8mm
Void 2/Kitchen/Living	Timber Above Plasterboard 150mm	15.4		Bulk Insulation R3	Bare

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Bed 2/Bed 5	Timber Above Plasterboard 150mm	17.2		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Ensuite/Bath 1	Timber Above Plasterboard 150mm	4.0		Bulk Insulation R3	Ceramic Tiles 8mm
Ensuite/Bed 5	Timber Above Plasterboard 150mm	2.0		Bulk Insulation R3	Ceramic Tiles 8mm
Ensuite/Entry Hall	Timber Above Plasterboard 150mm	1.6		Bulk Insulation R3	Ceramic Tiles 8mm
Bed 1/Family Room	Timber Above Plasterboard 19mm	16.4		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Bed 1/Laundry	Timber Above Plasterboard 19mm	2.4		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Bed 1/Entry Hall	Timber Above Plasterboard 19mm	9.2		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Bed 1	Suspended Timber Floor 19mm	2.1	Totally Open	No Insulation	Cork Tiles or Parquetry 8mm
WIR/Family Room	Timber Above Plasterboard 150mm	5.2		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
WIR/Bath 1	Timber Above Plasterboard 150mm	3.1		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
WIR/Entry Hall	Timber Above Plasterboard 150mm	1.3		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Dressing Rm/Laundry	Timber Above Plasterboard 150mm	5.0		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Void 1/Entry Hall	Timber Above Plasterboard 150mm	3.1		Bulk Insulation R3	Bare
Stair Void FF/Entry Hall	Timber Above Plasterboard 150mm	4.6		Bulk Insulation R3	Bare
Stair Void FF/Stairs to Garag	Timber Above Plasterboard 150mm	3.8		Bulk Insulation R3	Bare
Hallway FF/Pantry	Timber Above Plasterboard 150mm	6.3		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Hallway FF/Entry Hall	Timber Above Plasterboard 150mm	11.0		Bulk Insulation R3	Cork Tiles or Parquetry 8mm
Hallway FF/Kitchen/Living	Timber Above Plasterboard 150mm	6.4		Bulk Insulation R3	Cork Tiles or Parquetry 8mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Tanks/Plant	Concrete, Plasterboard	Bulk Insulation R2.5	No
Tanks/Plant	Rendered Concrete	No Insulation	No
Garage	Concrete	No insulation	No
Garage	Rendered Concrete	No Insulation	No
Garage Stairs	Concrete, Plasterboard	Bulk Insulation R2.5	No
Garage Stairs	Rendered Concrete	No Insulation	No
Family Room	Timber Above Plasterboard	Bulk Insulation R3	No
Laundry	Timber Above Plasterboard	Bulk Insulation R3	No
Bath 1	Timber Above Plasterboard		No

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		Bulk Insulation R3	
Bed 5	Timber Above Plasterboard	Bulk Insulation R3	No
Pantry	Timber Above Plasterboard	Bulk Insulation R3	No
Entry Hall	Timber Above Plasterboard	Bulk Insulation R3	No
Stairs to Garag	Timber Above Plasterboard	Bulk Insulation R3	No
Kitchen/Living	Timber Above Plasterboard	Bulk Insulation R3	No
Bed 3	Plasterboard	Bulk Insulation R4	Yes
Bed 4	Plasterboard	Bulk Insulation R4	Yes
Bath 2	Plasterboard	Bulk Insulation R4	Yes
Void 2	Plasterboard	Bulk Insulation R4	Yes
Bed 2	Plasterboard	Bulk Insulation R4	Yes
Ensuite	Plasterboard	Bulk Insulation R4	Yes
Bed 1	Plasterboard	Bulk Insulation R4	Yes
WIR	Plasterboard	Bulk Insulation R4	Yes
Dressing Rm	Plasterboard	Bulk Insulation R4	Yes
Void 1	Plasterboard	Bulk Insulation R4	Yes
Stair Void FF	Plasterboard	Bulk Insulation R4	Yes
Hallway FF	Plasterboard	Bulk Insulation R4	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Garage	5	Downlights - LED	150	Sealed
Family Room	4	Downlights - LED	150	Sealed
Laundry	3	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bath 1	2	Downlights - LED	150	Sealed
Bed 5	4	Downlights - LED	150	Sealed
Pantry	2	Downlights - LED	150	Sealed
Entry Hall	5	Downlights - LED	150	Sealed
Stairs to Garag	1	Downlights - LED	150	Sealed
Kitchen/Living	9	Downlights - LED	150	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Bed 3	4	Downlights - LED	150	Sealed
Bed 4	4	Downlights - LED	150	Sealed

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Bath 2	3	Downlights - LED	150	Sealed
Bath 2	1	Exhaust Fans	300	Sealed
Bed 2	4	Downlights - LED	150	Sealed
Ensuite	3	Downlights - LED	150	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Dressing Rm	2	Downlights - LED	150	Sealed
Stair Void FF	2	Downlights - LED	150	Sealed
Hallway FF	6	Downlights - LED	150	Sealed

Ceiling fans

Location	Number	Diameter (mm)
None Present		

Roof type

Construction	Added insulation	Roof colour
Concrete	No Added Insulation, No air Gap	Light
Corrugated Iron	Bulk, Reflective Side Down, Anti-glare Up R1.3	Light

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Additional information

Infinite R Phase Change Material - No R value available. Have used R2.5 insulation in external walls with reverse brick veneer to represent a proxy solution to the nearest estimated thermal mass performance. Applicable to lightweight cladded external walls of project.

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