

Nationwide House Energy Rating Scheme* Certificate



Certificate number: 0004511747-01

Certificate Date: 16 Jan 2020

★ 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: 9-10 Surfside Avenue

Suburb: AVALON BEACH

State: NSW

Postcode: 2107

Type: New Dwelling

NCC Class: 1A

NatHERS

climate zone: 56

Lot/DP

number: 8 9/28920

Exposure: Suburban

Key construction and insulation materials

(see following pages for details)

Construction: Cavity Brick

Concrete

Suspended Concrete Slab

Insulation:

No wall insulation

R2.5 ceiling insulation

No floor insulation

Glazing:

TIM-004-01 W Timber B DG Air Fill

Clear-Clear

Net floor area (m²)

Conditioned: 394.0

Unconditioned: 94.0

Garage: 87.0

TOTAL: 489.0

Annual thermal performance loads (MJ/m²)

Heating: 40.3

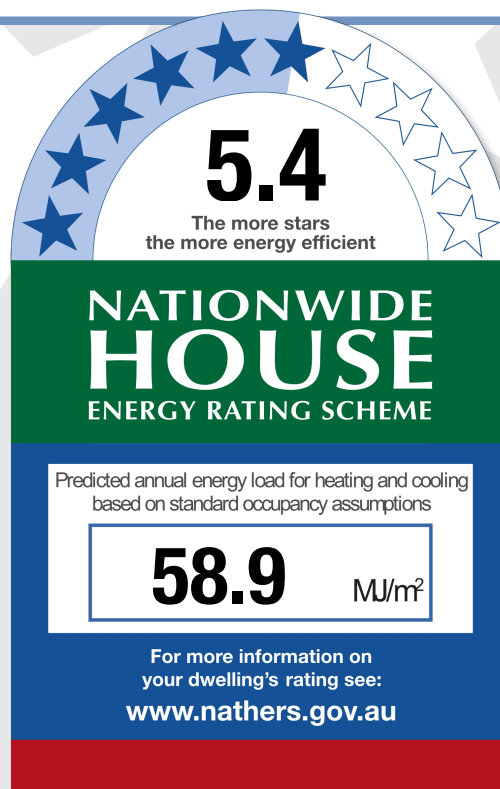
Cooling: 18.6

TOTAL: 58.9

Plan documents

Plan ref/date: Project No 1907, DA Issue dated July 2019

Prepared by: Richard Cole Architecture, Drawn RC



Ceiling penetrations

(see following pages for details)

Sealed: 25

Unsealed: 0

TOTAL:** 25

**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
TIM-004-01 W	TIM-004-01 W Timber B DG Air Fill Clear-Clear	3.0	0.56
TIM-002-01 W	TIM-002-01 W Timber B SG Clear	5.4	0.63

Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Garage Store	TIM-004-01 W	n/a	500	6708	NW	No Shading
Guest Bed	TIM-004-01 W	n/a	2850	2440	N	No Shading
Rumpus	TIM-004-01 W	n/a	2850	6250	N	No Shading
Bedroom 1	TIM-004-01 W	n/a	2850	1600	N	No Shading
Bunkroom	TIM-004-01 W	n/a	2850	1100	N	No Shading
Bedroom 2	TIM-004-01 W	n/a	2850	1600	W	No Shading
Bedroom 2	TIM-004-01 W	n/a	2850	1600	N	No Shading
Bed 2 Bath	TIM-002-01 W	n/a	2850	1010	W	No Shading
Study Hall	TIM-004-01 W	n/a	2400	1200	W	No Shading
Study Hall	TIM-004-01 W	n/a	2400	375	W	No Shading
Study Hall	TIM-004-01 W	n/a	600	1575	W	No Shading
Master Ensuite	TIM-004-01 W	n/a	1200	1948	N	No Shading
Master Ensuite	TIM-004-01 W	n/a	1200	6290	NW	Vertical Louvres, Horizontal Blades
Master Ensuite	TIM-004-01 W	n/a	462	1045	N	No Shading
Master Ensuite	TIM-004-01 W	n/a	462	402	W	No Shading
Master Robe	TIM-004-01 W	n/a	1200	1900	N	No Shading
Master Bed	TIM-004-01 W	n/a	1200	4970	E	Vertical Louvres, Horizontal Blades
Master Bed	TIM-004-01 W	n/a	1200	3835	N	No Shading
Master Bed	TIM-004-01 W	n/a	462	1257	N	No Shading
Master Bed	TIM-004-01 W	n/a	662	4504	E	No Shading
Entry Hall	TIM-004-01 W	n/a	2800	1350	E	No Shading
Entry Hall	TIM-004-01 W	n/a	2800	1575	W	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	2850	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	2850	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	3870	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	3840	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	3200	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	1050	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	1050	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	2850	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	1050	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	6391	SE	Vertical Louvres, Horizontal Blades
Kitchen/Living	TIM-004-01 W	n/a	600	3011	S	No Shading
Kitchen/Living	TIM-004-01 W	n/a	2800	6250	NW	Vertical Louvres, Horizontal Blades
Kitchen/Living	TIM-004-01 W	n/a	600	1196	NW	No Shading
Kitchen/Living	TIM-004-01 W	n/a	600	2358	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	600	1120	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	600	2487	N	No Shading
Kitchen/Living	TIM-004-01 W	n/a	600	1129	N	No Shading

* 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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Kitchen/Living	TIM-004-01 W	n/a	600	1416	E	No Shading
Kitchen/Living	TIM-004-01 W	n/a	600	706	E	No Shading

Roof window and skylight type and performance value

ID	Window type	U-value	SHGC
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame	0.0	0.00

Roof window and skylight schedule

Location	ID	Roof window/skylight no.	Area (m²)	Orientation	Outdoor shade	Indoor shade/diffuser
Entry Hall	GEN-04-008a	1	0.5	S	None	No
Stairs	GEN-04-008a	1	2.0	S	None	No

External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-1	Stone	No insulation	No
EW-2	Tilt up Concrete	No insulation	No
EW-3	Cavity Brick	No insulation	No
EW-4	Cavity Brick	Foil reflective both sides of the Bulk Insulation R2	Yes
EW-5	Fibro Cavity Panel Direct Fix	Foil reflective both sides of the Bulk Insulation R2	Yes

External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Garden Store	EW-1	3000	2200	N	No	0
Garden Store	EW-2	6300	2200	E	No	0
Garden Store	EW-1	5600	2200	S	No	0
Garden Store	EW-2	6815	2200	NW	No	0
Garage Store	EW-2	6815	2950	NW	No	0
Garage Store	EW-1	1930	2950	N	No	0
Garage Store	EW-1	4530	2950	S	No	5000
Garage	EW-1	6230	2950	N	No	0
Garage	EW-2	6300	2950	E	No	1350
Garage	EW-1	6230	2950	S	No	1950
Guest Bed	EW-3	5130	2950	N	No	100
Guest Bed	EW-1	3793	2950	SE	No	56
Guest Ensuite	EW-1	2595	2950	SE	No	56
Rumpus	EW-3	6260	2950	N	No	8100
Bedroom 1	EW-3	3860	2950	N	No	100
Bunkroom	EW-3	3960	2950	N	No	100
Bedroom 2	EW-4	3530	2950	W	No	1150
Bedroom 2	EW-3	3930	2950	N	No	100
Bed 2 Bath	EW-1	2000	2950	S	No	1675

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Bed 2 Bath	EW-3	2630	2950	W	No	2425
Study Hall	EW-4	9762	2950	S	No	50
Study Hall	EW-5	1550	3000	W	No	1700
Study Hall	EW-1	2888	3000	SE	No	112
Study Hall	EW-4	8300	3000	S	No	100
Master Ensuite	EW-5	1930	3200	N	No	1600
Master Ensuite	EW-1	930	3000	S	No	9400
Master Ensuite	EW-1	3400	3000	S	No	3350
Master Ensuite	EW-5	6369	3200	NW	No	1592
Master Robe	EW-5	1825	3200	N	No	1600
Master Robe	EW-1	1760	3000	S	No	9400
Master Bed	EW-5	5900	3200	E	No	3800
Master Bed	EW-1	2700	3000	S	No	1100
Master Bed	EW-1	1195	3000	S	No	2000
Master Bed	EW-5	3895	3200	N	No	1600
Pantry	EW-1	1995	3600	S	No	3000
Entry Hall	EW-5	2650	2950	E	No	2875
Entry Hall	EW-4	1995	3000	S	No	100
Entry Hall	EW-4	9757	3000	S	No	100
Entry Hall	EW-5	1550	3000	W	No	1800
Stairs	EW-4	4290	3000	S	No	100
Kitchen/Living	EW-5	23400	3200	N	No	600
Kitchen/Living	EW-5	6742	3200	SE	No	1393
Kitchen/Living	EW-1	995	3600	S	No	2300
Kitchen/Living	EW-1	4400	3600	S	No	100
Kitchen/Living	EW-5	6742	3800	NW	No	1899

Internal wall type

Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-1 - Tilt Concrete	190.0	No insulation	No
IW-2 - Stone	95.0	No insulation	No
IW-3 - Cavity wall, direct fix plasterboard, single gap	78.0	No insulation	No

Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Garden Store	Concrete Slab on Ground 100mm	27.1	None	No Insulation	Bare
Garage Store/Garden Store	Rendered Concrete 150mm	20.1		No Insulation	Bare
Garage /Garden Store	Rendered Concrete 150mm	6.2		No Insulation	Bare
Garage	Suspended Concrete Slab 150mm	33.0	Open	No Insulation	Bare
Guest Bed	Concrete Slab on Ground	18.0	None	Bulk Insulation	Carpet+Rubber

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	100mm			in Contact with Underlay 18mm Floor R2.5	
Guest Ensuite	Concrete Slab on Ground 100mm	4.8	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Rumpus	Concrete Slab on Ground 100mm	37.5	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	14.3	None	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Bed 1 Bath	Concrete Slab on Ground 100mm	6.6	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bunkroom	Concrete Slab on Ground 100mm	14.7	None	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Laundry	Concrete Slab on Ground 100mm	6.7	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	14.6	None	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Bed 2 Bath	Concrete Slab on Ground 100mm	7.3	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Study Hall	Concrete Slab on Ground 100mm	51.7	None	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Master Ensuite/Garage Store	Concrete Above Timber 150mm	15.4		Bulk Insulation R2.5	Ceramic Tiles 8mm
Master Ensuite/Garage	Concrete Above Timber 150mm	2.9		Bulk Insulation R2.5	Ceramic Tiles 8mm
Master Robe/Garage	Concrete Above Timber 150mm	10.5		Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
Master Bed/Garage	Concrete Above Timber 150mm	22.7		Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
Coat Room/Rumpus	Concrete Above Timber 150mm	4.0		Bulk Insulation R2.5	Ceramic Tiles 8mm
Coat Room/Study Hall	Concrete Above Timber 150mm	0.6		Bulk Insulation R2.5	Ceramic Tiles 8mm
Pantry/Guest Bed	Concrete Above Timber 150mm	1.0		Bulk Insulation R2.5	Ceramic Tiles 8mm
Pantry/Rumpus	Concrete Above Timber 150mm	3.2		Bulk Insulation R2.5	Ceramic Tiles 8mm
Pantry/Study Hall	Concrete Above Timber 150mm	0.5		Bulk Insulation R2.5	Ceramic Tiles 8mm
Entry Hall/Study Hall	Concrete Above Timber 150mm	31.3		Bulk Insulation R2.5	Ceramic Tiles 8mm
Stairs/Study Hall	Concrete Above Timber 150mm	5.3		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Guest Bed	Concrete Above Timber 150mm	16.4		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Guest Ensuite	Concrete Above Timber 150mm	4.4		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Rumpus	Concrete Above Timber 150mm	30.1		Bulk Insulation R2.5	Ceramic Tiles 8mm

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Kitchen/Living /Bedroom 1	Concrete Above Timber 150mm	14.9		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Bed 1 Bath	Concrete Above Timber 150mm	7.3		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Bunkroom	Concrete Above Timber 150mm	15.3		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Laundry	Concrete Above Timber 150mm	7.6		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Bedroom 2	Concrete Above Timber 150mm	15.0		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Bed 2 Bath	Concrete Above Timber 150mm	7.7		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living /Study Hall	Concrete Above Timber 150mm	6.6		Bulk Insulation R2.5	Ceramic Tiles 8mm
Kitchen/Living	Suspended Concrete Slab 150mm	7.2	Totally Open	No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction	Added insulation	Roof space above
Garden Store	Rendered Concrete	No Insulation	No
Garage Store	Concrete, Timber	Bulk Insulation R2.5	No
Garage Store	Concrete Above Timber	Bulk Insulation R2.5	No
Garage	Concrete, Timber	Bulk Insulation R2.5	No
Garage	Concrete Above Timber	Bulk Insulation R2.5	No
Guest Bed	Concrete, Timber	Bulk Insulation R2.5	No
Guest Bed	Concrete Above Timber	Bulk Insulation R2.5	No
Guest Ensuite	Concrete, Timber	Bulk Insulation R2.5	No
Guest Ensuite	Concrete Above Timber	Bulk Insulation R2.5	No
Rumpus	Concrete, Timber	Bulk Insulation R2.5	No
Rumpus	Concrete Above Timber	Bulk Insulation R2.5	No
Bedroom 1	Concrete, Timber	Bulk Insulation R2.5	No
Bedroom 1	Concrete Above Timber	Bulk Insulation R2.5	No
Bed 1 Bath	Concrete, Timber	Bulk Insulation R2.5	No
Bed 1 Bath	Concrete Above Timber	Bulk Insulation R2.5	No
Bunkroom	Concrete, Timber	Bulk Insulation R2.5	No
Bunkroom	Concrete Above Timber	Bulk Insulation R2.5	No

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Laundry	Concrete, Timber	Bulk Insulation R2.5	No
Laundry	Concrete Above Timber	Bulk Insulation R2.5	No
Bedroom 2	Concrete, Timber	Bulk Insulation R2.5	No
Bedroom 2	Concrete Above Timber	Bulk Insulation R2.5	No
Bed 2 Bath	Concrete, Timber	Bulk Insulation R2.5	No
Bed 2 Bath	Concrete Above Timber	Bulk Insulation R2.5	No
Study Hall	Concrete, Timber	Bulk Insulation R2.5	No
Study Hall	Concrete Above Timber	Bulk Insulation R2.5	No
Master Ensuite	Plasterboard	Bulk Insulation R4	Yes
Master Robe	Plasterboard	Bulk Insulation R4	Yes
Master Bed	Plasterboard	Bulk Insulation R4	Yes
Coat Room	Plasterboard	Bulk Insulation R4	Yes
Pantry	Plasterboard	Bulk Insulation R4	Yes
Entry Hall	Plasterboard	Bulk Insulation R4	No
Stairs	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Plasterboard	Bulk Insulation R4	Yes

Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Guest Ensuite	1	Exhaust Fans	300	Sealed
Bed 1 Bath	1	Downlights - LED	150	Sealed
Bed 2 Bath	1	Exhaust Fans	300	Sealed
Study Hall	11	Downlights - LED	0	Sealed
Entry Hall	9	Downlights - LED	0	Sealed
Kitchen/Living	1	Exhaust Fans	300	Sealed
Kitchen/Living	1	Chimneys	250	Sealed

Ceiling fans

Location	Number	Diameter (mm)
None Present		

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Building features continued

Roof type

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