

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0004760237

Certificate Date: 14 Apr 2020

★ Star rating: 5.1



## Assessor details

Accreditation number: **20399**  
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Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP4**  
AAO: **ABSA**

## Overview

### Dwelling details

Street: **19 Morgan Road**  
Suburb: **Belrose**  
State: **NSW** Postcode: **2085**  
Type: **New** NCC Class: **1a**  
NatHERS climate zone: **56**  
Lot/DP number: **Lot 2414 DP 752038** Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Concrete wall/Plasterboard**  
**Slate**  
**Slab**  
Insulation: **R2.0 wall insulation**  
**R4.5 ceiling insulation**  
**Floor (uninsulated)**  
Glazing: **Aluminium B SG High Solar Gain**  
**Low-E**

### Net floor area (m<sup>2</sup>)

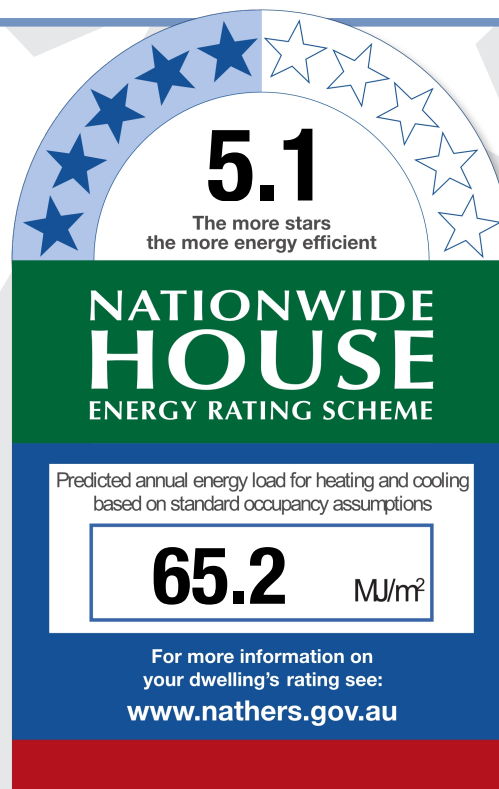
Conditioned: **270.4**  
Unconditioned: **63.2**  
Garage: **52.4**  
TOTAL: **333.6**

### Annual thermal performance loads (MJ/m<sup>2</sup>)

Heating: **39.2**  
Cooling: **26.0**  
TOTAL: **65.2**

### Plan documents

Plan ref/date: **1904**  
Prepared by: **Muri Architects**



### Ceiling penetrations (see following pages for details)

Sealed: **57**  
Unsealed: **0**  
TOTAL:\*\* **57**

\*\*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: **Light-emitting diode (LED)**

### Window selection - default windows only

Note on allowable window values:  
With a 10% tolerance to the nominated SHGC window values shown on page 2, the following ratings are achieved:

-10% SHGC **5.0**  
+10% SHGC **5.1**

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 the rating listed above falls below 6.0 stars or the required rating, then the window with this tolerance can NOT be selected.**

Scan to access this  
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## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.7	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.7	0.70
ALM-002-03 A	DEFAULTS: Aluminium B SG High Solar Gain Low-E	5.4	0.58
ALM-001-03 A	DEFAULTS: Aluminium A SG High Solar Gain Low-E	5.4	0.49

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
GARAGE	ALM-002-01 A	WG07	1600	800	NW	None
GARAGE	ALM-002-01 A	WG08	1600	800	NW	None
GARAGE	ALM-002-01 A	WG05	1600	800	SE	None
GARAGE	ALM-002-01 A	WG06	1600	800	SE	None
ENTRY	ALM-002-01 A	WG02	2400	400	SE	None
ENTRY	ALM-002-01 A	WG03	2400	400	SE	None
K/L/D	ALM-002-01 A	WG11	1400	1750	NW	None
K/L/D	ALM-002-03 A	WG12	2400	3600	NW	None
K/L/D	ALM-002-03 A	WG13	2400	3600	NW	None
K/L/D	ALM-002-01 A	WG14	1900	600	SW	None
K/L/D	ALM-002-01 A	WG15	1900	600	SW	None
SITTING	ALM-002-03 A	WG01	2400	600	SE	None
SITTING	ALM-001-03 A	WG01	2400	1600	SE	None
SITTING	ALM-002-03 A	WG01	2400	600	SE	None
GUEST BEDROOM	ALM-002-03 A	WG04	2400	600	SE	None
GUEST BEDROOM	ALM-001-03 A	WG04	2400	1600	SE	None
GUEST BEDROOM	ALM-002-03 A	WG04	2400	600	SE	None
LDY	ALM-002-01 A	WG09	1400	550	NW	None
PWD	ALM-002-01 A	WG10	1400	600	NW	None
MBED	ALM-002-01 A	WF09	1300	900	NW	None
MBED	ALM-002-01 A	WF10	1300	2900	NW	None
ENS	ALM-002-01 A	WF08	1300	900	NW	None
BED 2	ALM-001-03 A	WF04	2100	1200	SE	None
BED 2	ALM-001-03 A	WF05	2100	1200	SE	None
BED 3	ALM-002-01 A	WF07	1300	2400	NW	None
ENS 2 & 3	ALM-002-01 A	WF06	1300	1200	NW	None
BED 4	ALM-001-01 A	WF01	2100	1200	SE	None
ENS 4	ALM-002-01 A	WF11	700	1000	SW	None
SITTING UPPER	ALM-002-03 A	WF03	2200	600	SE	None
SITTING UPPER	ALM-002-03 A	WF03	2200	600	SE	None
SITTING UPPER	ALM-001-03 A	WF03	2200	1600	SE	None
SITTING UPPER	ALM-001-03 A	WF02	2100	1200	SE	None

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### 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-001	Concrete wall/Plasterboard	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
GARAGE	EW-001	6000	2600	NW	Yes	700
GARAGE	EW-001	8200	2600	NE	Yes	700
GARAGE	EW-001	6000	2600	SE	Yes	700
ENTRY	EW-001	5400	2900	SE	Yes	
K/L/D	EW-001	11950	2900	NW	Yes	5300
K/L/D	EW-001	5500	2900	SW	No	
SITTING	EW-001	4000	2900	SW	No	
SITTING	EW-001	5000	2900	SE	Yes	
GUEST BEDROOM	EW-001	5000	2900	SE	Yes	
GUEST BEDROOM	EW-001	400	2900	NE	Yes	7000
LDY	EW-001	500	2900	NE	Yes	7000
LDY	EW-001	1800	2900	NW	No	
PWD	EW-001	1600	2900	NW	No	
MBED	EW-001	7600	2700	NW	Yes	700
MBED	EW-001	3700	2700	SW	Yes	700
ENS	EW-001	1600	2700	NW	Yes	700
BED 2	EW-001	5300	2700	NE	Yes	700
BED 2	EW-001	5000	2700	SE	Yes	700
BED 3	EW-001	4200	2700	NW	Yes	700
ENS 2 & 3	EW-001	2000	2700	NW	Yes	700
ENS 2 & 3	EW-001	4200	2700	NE	Yes	700
BED 4	EW-001	2900	2700	SE	Yes	700
BED 4	EW-001	4000	2700	SW	Yes	700
ENS 4	EW-001	1600	2700	SW	Yes	700
SITTING UPPER	EW-001	7500	2700	SE	Yes	700

### Internal wall type

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ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-002	Plasterboard	267.2	Glass fibre batt: R2.0	No

## Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
GARAGE/Ground	as_FLOR-B002 #1006 © 150mm Concrete Floor slab (no insul)	52.4			
ENTRY/Ground	as_FLOR-B002 #1001 © 150mm Concrete Floor slab with carpet-underfelt(no insul)	21.4			Carpet 10 + rubber underlay 8
K/L/D/Ground	as_FLOR-B002 #1005 © 150mm Concrete Floor slab with ceramic tiles (no insul)	14.0			Ceramic tile
K/L/D/Ground	as_FLOR-B002 #1001 © 150mm Concrete Floor slab with carpet-underfelt(no insul)	58.3			Carpet 10 + rubber underlay 8
SITTING/Ground	as_FLOR-B002 #1001 © 150mm Concrete Floor slab with carpet-underfelt(no insul)	19.9			Carpet 10 + rubber underlay 8
GUEST BEDROOM/Ground	as_FLOR-B002 #1001 © 150mm Concrete Floor slab with carpet-underfelt(no insul)	19.7			Carpet 10 + rubber underlay 8
LDY/Ground	as_FLOR-B002 #1005 © 150mm Concrete Floor slab with ceramic tiles (no insul)	7.3			Ceramic tile
PWD/Ground	as_FLOR-B002 #1005 © 150mm Concrete Floor slab with ceramic tiles (no insul)	3.5			Ceramic tile
MBED/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	33.8			Carpet underlay (felt)
ENS/K/L/D	as_FLOR-B010 #1006 © Framed flr with ceramic tiles on comp FC - PB ceiling under	7.1			Ceramic tile
BED 2/GUEST BEDROOM	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	19.7			Carpet underlay (felt)
BED 2/GARAGE	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	2.4			Carpet underlay (felt)
BED 2/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	4.0			Carpet underlay (felt)
BED 3/PWD	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	3.5			Carpet underlay (felt)
BED 3/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	13.9			Carpet underlay (felt)
ENS 2 & 3/LDY	as_FLOR-B010 #1006 © Framed flr with ceramic tiles on comp FC - PB ceiling under	7.3			Ceramic tile
BED 4/SITTING	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	11.4			Carpet underlay (felt)
ENS 4/K/L/D		4.7			Ceramic tile

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

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	as_FLOR-B010 #1006 © Framed flr with ceramic tiles on comp FC - PB ceiling under		
SITTING UPPER/SITTING	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	8.5	Carpet underlay (felt)
SITTING UPPER/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	8.8	Carpet underlay (felt)
SITTING UPPER/ENTRY	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	9.7	Carpet underlay (felt)
VOID/ENTRY	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	11.7	Carpet underlay (felt)
ROOF/MBED	as_CEIL-A001.flr - 2016 © 10mm 33.8 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/ENS	as_CEIL-A001.flr - 2016 © 10mm 7.1 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/BED 2	as_CEIL-A001.flr - 2016 © 10mm 26.1 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/BED 3	as_CEIL-A001.flr - 2016 © 10mm 17.4 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/ENS 2 & 3	as_CEIL-A001.flr - 2016 © 10mm 7.3 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/BED 4	as_CEIL-A001.flr - 2016 © 10mm 11.4 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/ENS 4	as_CEIL-A001.flr - 2016 © 10mm 4.7 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/SITTING UPPER	as_CEIL-A001.flr - 2016 © 10mm 27.0 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF/VOID	as_CEIL-A001.flr - 2016 © 10mm 11.7 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5
ROOF LOWER/GARAGE	as_CEIL-A001.flr - 2016 © 10mm 50.0 Plasterboard ceiling fixed to ceiling joists above + R4.5 bulk insulation		R4.5

## Ceiling type

Location	Construction	Added	Roof space
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	insulation	above
BED 2/GARAGE	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
ROOF LOWER/GARAGE	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
SITTING UPPER/ENTRY	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
VOID/ENTRY	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
MBED/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
ENS/K/L/D	as_FLOR-B010 #1006 © Framed flr with ceramic tiles on comp FC - PB ceiling under	No
BED 2/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
BED 3/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
ENS 4/K/L/D	as_FLOR-B010 #1006 © Framed flr with ceramic tiles on comp FC - PB ceiling under	No
SITTING UPPER/K/L/D	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
BED 4/SITTING	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
SITTING UPPER/SITTING	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
BED 2/GUEST BEDROOM	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
ENS 2 & 3/LDY	as_FLOR-B010 #1006 © Framed flr with ceramic tiles on comp FC - PB ceiling under	No
BED 3/PWD	as_FLOR-B010 #1001 © Framed flr with carpet-underfelt - PB ceiling under	No
ROOF/MBED	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/ENS	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/BED 2	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/BED 3	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/ENS 2 & 3	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/BED 4	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/ENS 4	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/SITTING UPPER	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes
ROOF/VOID	as_CEIL-A001.flr - 2016 © 10mm Plasterboard ceiling fixed to R4.5 ceiling joists above + R4.5 bulk insulation	Yes

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
ENTRY	4	Downlight		Sealed



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## Building features continued

K/L/D	28	Downlight	Sealed
K/L/D	1	Ceiling exhaust fan	300 Sealed
SITTING	6	Downlight	Sealed
GUEST BEDROOM	6	Downlight	Sealed
LDY	2	Downlight	Sealed
LDY	1	Ceiling exhaust fan	300 Sealed
PWD	1	Downlight	Sealed
PWD	1	Ceiling exhaust fan	300 Sealed
MBED	13	Downlight	Sealed
ENS	2	Downlight	Sealed
ENS	1	Ceiling exhaust fan	300 Sealed
BED 2	10	Downlight	Sealed
BED 3	6	Downlight	Sealed
ENS 2 & 3	2	Downlight	Sealed
ENS 2 & 3	1	Ceiling exhaust fan	300 Sealed
BED 4	5	Downlight	Sealed
ENS 4	1	Downlight	Sealed
ENS 4	1	Ceiling exhaust fan	300 Sealed
SITTING UPPER	10	Downlight	Sealed
VOID	5	Downlight	Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
as_ROOF-A033 #3011 © 22.5 deg concrete tile roof + RFL with no ceiling under		Dark

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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](http://www.nathers.gov.au)

For more information on energy efficient design and insulation visit [www.yourhome.gov.au](http://www.yourhome.gov.au)