

## Nationwide House Energy Rating Scheme\* — Multiple-dwelling summary



Certificate number: **0003521960**

Certificate Date: **21 Dec 2018**

★ Average Star rating: **5.4**

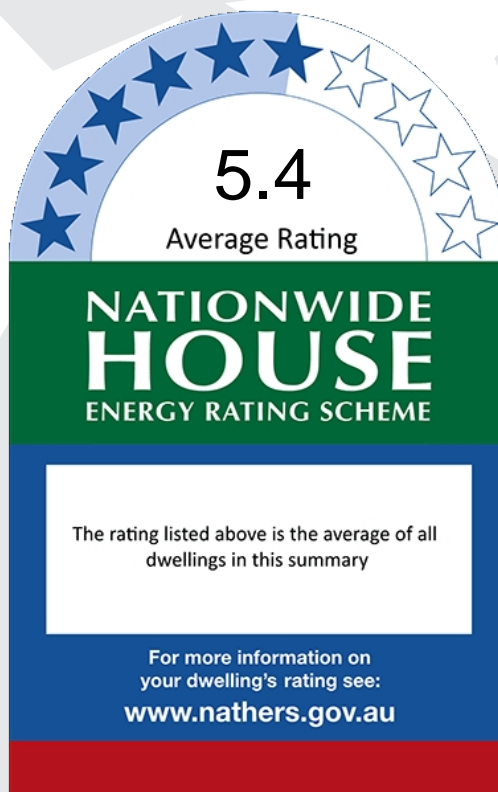
### Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

### Dwelling details

Street: **44 Rose Avenue**  
Suburb: **Wheeler Heights**  
State: **NSW**  
Postcode: **2097**

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## Summary of all dwellings

### Certificate Details

Certificate number	Dwelling/Unit number	Heating load	Cooling load	Total load	Star Rating
0003521879	1	37.0	25.0	61.0	5.3
0003521887	2	36.0	21.0	57.0	5.6
0003521895	3	37.0	24.0	62.0	5.3
0003521911	4	37.0	25.0	62.0	5.2
0003521929	5	38.0	18.0	57.0	5.6
0003521952	6	34.0	23.0	57.0	5.6

**NatHERS Thermal Performance Specifications (BASIX Thermal Comfort)**  
**44 Rose Avenue, Wheeler Heights**

*These are the Specifications upon which the NatHERS assessment is based. If details included in these Specifications vary from other drawings or written specifications, these Specifications shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the project.*

Windows	Glass	Frame	U value	SHGC	Detail
Default	Single glazed, low E low solar gain	Aluminium	5.60	0.41	To unit: 6 – all glazing
Default	Double glazed, low e low solar gain	Aluminium thermally broken	3.1	0.27	To units: 2, 3, 5 – all glazing (except WC / laundry) 4 – all east facing glazing (except WC / laundry)
Default	Double glazed, low e high solar gain	Aluminium thermally broken	3.1	0.49	To units: 1 – all glazing (except WC / laundry) 4 – all west facing glazing

Skylights	Glass	Frame	U value	SHGC	Detail
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External walls	Construction	Added Insulation	Detail
Cavity brick		R 1.0	

Internal walls	Construction	Added Insulation	Detail
Stud Framed		None	Internal walls
Brick		None	Party walls

Floors	Construction	Added Insulation	Covering	Detail
Concrete		R1.0	Timber generally; carpet bedrooms tiles wet areas	Floors over basement carpark
Concrete		R1.5	Timber generally; carpet bedrooms tiles wet areas	To unit: 3 (Floors over basement carpark)
Framed		None	Timber generally; carpet bedrooms tiles wet areas	To units: 1, 2, 4, 5 – first level floors

Ceilings	Construction	Added Insulation	Detail
Plasterboard		None	Generally
Plasterboard		R 3.5	To ceilings below roof / roof space

Roof	Construction	Added Insulation	Detail
Metal sheeting		(refer to ceiling detail)	

**Other Requirements**

All exhaust fans and downlights (if installed) to be **sealed** to prevent air-infiltration



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 Assessor Name: Robert Mallindine  
 Accreditation no.: VIC/BDAV/12/1475  
 Certificate date: 21 December 2018

Dwelling Address:  
 44 Rose Avenue  
 Wheeler Heights, NSW  
 2097

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



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521879

Certificate Date: 21 Dec 2018

★ Star rating: 5.3



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 1, 44 Rose Avenue**  
Suburb: **Wheeler Heights**  
State: **NSW** Postcode: **2097**  
Type: **New** NCC Class: **1a**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Metal roof/Plasterboard**  
**Timber/Slab**  
Insulation: **R1.0 wall insulation**  
**Ceiling (uninsulated)**  
**R1.5 floor insulation**  
Glazing: **Al Thermally Broken B DG Air Fill High Solar Gain**

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

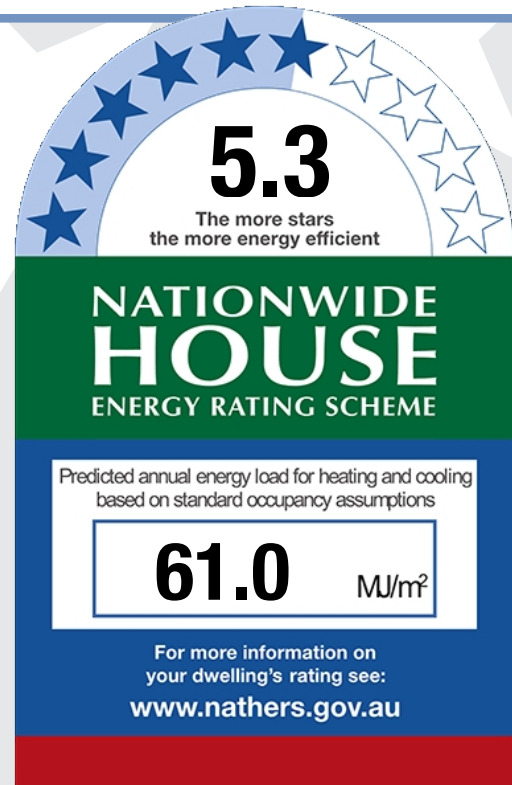
Conditioned: **127.0**  
Unconditioned: **5.0**  
Garage: -  
TOTAL: **132.0**

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

Heating: **37.0**  
Cooling: **25.0**  
TOTAL: **61.0**

### Plan documents

Plan ref/date: **1704; 11/12/18**  
Prepared by: **Barry Rush & Associates P/L**



### Ceiling penetrations

(see following pages for details)

Sealed: **32**  
Unsealed: **0**  
TOTAL:\*\* **32**

\*\*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

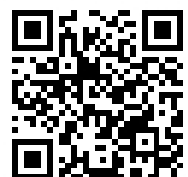
Note on allowable window values: With a 10% tolerance to the nominated SHGC window values shown on page 2, the following ratings are achieved:

-10% SHGC **5.2**  
+10% SHGC **5.3**

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.**

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**21 Dec 2018**

★ Star rating:

**5.3**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.7	0.70
ATB-004-03 B	DEFAULTS: Al Thermally Broken B DG Air Fill High Solar Gain low-E -Clear	3.1	0.49

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ATB-004-03 B	01	2400	600	E	None
Living / Dining / Kitchen	ATB-004-03 B	02	2700	4100	W	None
Living / Dining / Kitchen	ATB-004-03 B	03	2700	600	N	None
Living / Dining / Kitchen	ATB-004-03 B	04	2700	4000	W	None
Bedroom 1	ATB-004-03 B	05	2400	2400	E	None
Bedroom 1 Ens	ATB-004-03 B	06	600	2100	S	None
WC / Laundry	ALM-002-01 A	07	600	1700	E	None
Bedroom 2	ATB-004-03 B	08	1500	2400	E	Miniature louvres
Bedroom 3	ATB-004-03 B	09	1500	2400	E	Miniature louvres
Hall / Void over LDK	ATB-004-03 B	10	600	2400	S	None
Hall / Void over LDK	ATB-004-03 B	11	1600	4100	W	Miniature louvres
Hall / Void over LDK	ATB-004-03 B	13	1600	600	N	None
Hall / Void over LDK	ATB-004-03 B	14	1600	3800	W	Miniature louvres

### 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-014	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-014	1500	2700	E	Yes	900
Living / Dining /	EW-014	4100	2700	S	Yes	1400

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## Building features continued

Kitchen						
Living / Dining / Kitchen	EW-014	4100	2700	W	Yes	1500
Living / Dining / Kitchen	EW-014	600	2700	N	Yes	4000
Living / Dining / Kitchen	EW-014	4000	2700	W	Yes	2300
Bedroom 1	EW-014	4100	2700	E	No	
Bedroom 1	EW-014	3800	2700	S	No	
Bedroom 1 Ens	EW-014	2300	2700	S	Yes	1400
WC / Laundry	EW-014	900	2700	N	No	
WC / Laundry	EW-014	2300	2700	E	No	
Bedroom 2	EW-014	900	2700	N	No	
Bedroom 2	EW-014	4000	2700	E	No	
Bedroom 3	EW-014	4200	2700	E	No	
Bedroom 3	EW-014	6200	2500	S	No	
Hall / Void over LDK	EW-014	4100	2000	S	No	
Hall / Void over LDK	EW-014	4100	1700	W	Yes	1000
Hall / Void over LDK	EW-014	600	1700	N	Yes	3800
Hall / Void over LDK	EW-014	3800	1700	W	Yes	1200

## Internal wall type

ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-001	Plasterboard	95.5		No
IW-005	Plasterboard	41.9		No

## Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - timber - concrete 200mm	47.6		R1.5	
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	5.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	14.6		R1.5	Carpet underlay (felt)
Bedroom 1 Ens/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	8.3		R1.5	Ceramic tile
WC / Laundry/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.8		R1.5	Ceramic tile
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under	11.5			Carpet underlay (felt)
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under	4.8			Carpet underlay (felt)

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**5.3**



## Building features continued

Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under er	14.6	Carpet underlay (felt)
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under er	8.0	Carpet underlay (felt)
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under	4.8	Ceramic tile
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under	0.3	Ceramic tile
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under	36.1	

## Ceiling type

Location	Construction	Added insulation	Roof space above
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under		No
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under		No
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under		No
Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under		No
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under		No
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under		No
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under		No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	9	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	6	Downlight		Sealed
Bedroom 1 Ens	2	Downlight		Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
WC / Laundry	2	Downlight		Sealed
WC / Laundry	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	6	Downlight		Sealed
Bedroom 3	9	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Void over LDK	14	Downlight		Sealed

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Certificate number: **0003521879**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.3**



### Building features continued

#### Ceiling fans

Location	Number	Diameter (mm)
None Present		

#### Roof type

Construction	Added insulation	Roof colour
R3.5 - Steel roof with R3.0 bulk insul + Plasterb'd ceiling under	R3.5	Medium



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521879

Certificate Date: 21 Dec 2018

★ Star rating: 5.3



## 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)



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521887

Certificate Date: 21 Dec 2018

★ Star rating: 5.6



## Assessor details

Accreditation

number: VIC/BDAV/12/1475

Name: Robert Mallindine

Organisation: AGA Consultants

Email: ag@agac.cc

Phone: 02 9977 2794

Declaration of interest: No potential conflicts of interest to declare

Software: AccuRate Sustainability V2.3.3.13 SP3

AAO: BDAV

## Overview

### Dwelling details

Street: Unit 2, 44 Rose Avenue

Suburb: Wheeler Heights

State: NSW

Postcode: 2097

Type: New

NCC Class: 1a

NatHERS

climate zone: 56

Lot/DP

number: -

Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: Double Brick

Metal roof/Plasterboard

Timber/Slab

Insulation: R1.0 wall insulation

Ceiling (uninsulated)

R1.5 floor insulation

Glazing: AI Thermally Broken B DG Air Fill Low

Solar Gain

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

Conditioned: 132.0

Unconditioned: 5.0

Garage:

TOTAL: 137.0

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

Heating: 36.0

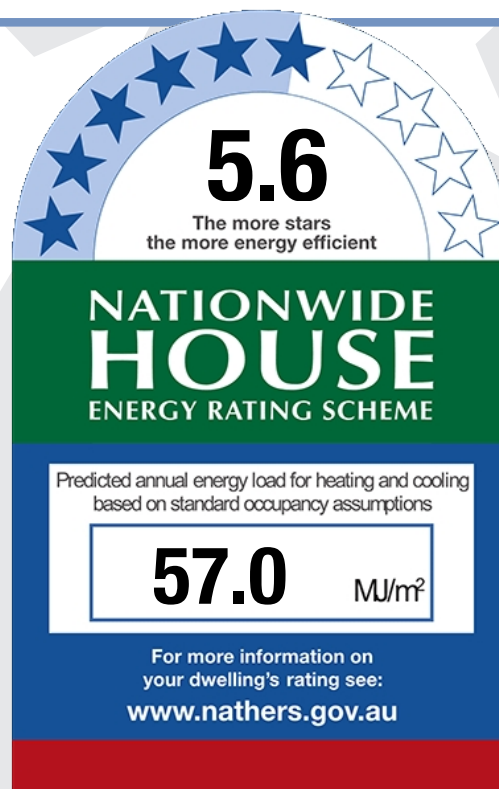
Cooling: 21.0

TOTAL: 57.0

### Plan documents

Plan ref/date: 1704; 11/12/18

Prepared by: Barry Rush & Associates P/L



### Ceiling penetrations

(see following pages for details)

Sealed: 32

Unsealed: 0

TOTAL:\*\* 32

\*\*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 5.5

+10% SHGC 5.6

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.**

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521887**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.6**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.7	0.70
ATB-004-04 B	DEFAULTS: Al Thermally Broken B DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ATB-004-04 B	01	2400	600	E	None
Living / Dining / Kitchen	ATB-004-04 B	02	2700	8200	W	None
Bedroom 1	ATB-004-04 B	05	2400	2400	E	None
WC / Laundry	ALM-002-01 A	07	600	1700	E	None
Bedroom 2	ATB-004-04 B	08	1500	2400	E	Miniature louvres
Bedroom 3	ATB-004-04 B	09	1500	2400	E	Miniature louvres
Hall / Void over LDK	ATB-004-04 B	11	1600	8200	W	Miniature louvres

### 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-014	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-014	1500	2700	E	Yes	900
Living / Dining / Kitchen	EW-014	2100	2700	S	Yes	4000
Living / Dining / Kitchen	EW-014	8200	2700	W	Yes	2500
Bedroom 1	EW-014	4100	2700	E	No	
WC / Laundry	EW-014	2300	2700	E	No	
Bedroom 2	EW-014	4900	2500	N	No	
Bedroom 2	EW-014	4000	2700	E	No	
Bedroom 3	EW-014	4200	2700	E	No	
Hall / Void over LDK	EW-014	1900	1900	S	Yes	3800
	EW-014	8200	1700	W	Yes	1000

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**5.6**



## Building features continued

Hall / Void over LDK

Hall / Void over LDK	EW-014	5600	2000	N	No
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## Internal wall type

ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-001	Plasterboard	95.5		No
IW-005	Plasterboard	71.3		No

## Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - timber - concrete 200mm	52.9		R1.5	
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	5.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	14.6		R1.5	Carpet underlay (felt)
Bedroom 1 Ens/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	8.3		R1.5	Ceramic tile
WC / Laundry/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.8		R1.5	Ceramic tile
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under	11.5			Carpet underlay (felt)
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under	4.8			Carpet underlay (felt)
Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under	14.6			Carpet underlay (felt)
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under	8.0			Carpet underlay (felt)
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under	4.8			Ceramic tile
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under	0.3			Ceramic tile
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under	41.6			

## Ceiling type

Location	Construction	Added insulation	Roof space above
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under		No
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under		No
	timber - framed - PB ceiling under		No

# Nationwide House Energy Rating Scheme\* Certificate

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## Building features continued

Hall / Void over  
LDK/Living / Dining  
/ KitchenBedroom  
3/Bedroom 1 carpet - framed - PB ceiling under

No

Bedroom  
3/Bedroom 1 Ens carpet - framed - PB ceiling under

No

Bathroom/Bedroom tiles - framed - PB ceiling under  
1 Ens

No

Bedroom 2/WC /  
Laundry carpet - framed - PB ceiling under

No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	9	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	6	Downlight		Sealed
Bedroom 1 Ens	2	Downlight		Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
WC / Laundry	2	Downlight		Sealed
WC / Laundry	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	6	Downlight		Sealed
Bedroom 3	9	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Void over LDK	14	Downlight		Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
R3.5 - Steel roof with R3.0 bulk insul + Plasterb'd ceiling under	R3.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

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Certificate Date: 21 Dec 2018

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## Additional information

## Explanatory notes

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### Contact

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521895

Certificate Date: 21 Dec 2018

★ Star rating: 5.3



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 3, 44 Rose Avenue**  
Suburb: **Wheeler Heights**  
State: **NSW** Postcode: **2097**  
Type: **New** NCC Class: **1a**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Metal roof/Plasterboard**  
**Timber/Slab**  
Insulation: **R1.0 wall insulation**  
**R2.0 floor insulation**  
Glazing: **AI Thermally Broken B DG Air Fill Low Solar Gain**

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

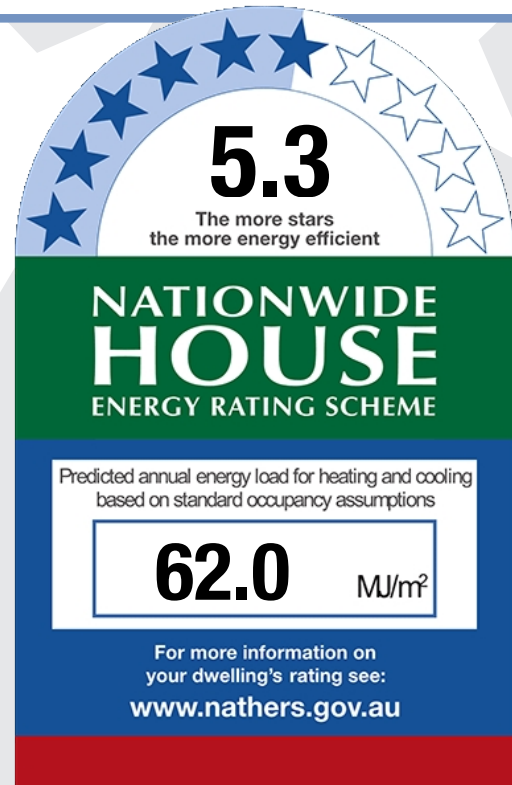
Conditioned: **110.0**  
Unconditioned: **4.0**  
Garage: **114.0**  
TOTAL: **114.0**

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

Heating: **37.0**  
Cooling: **24.0**  
TOTAL: **62.0**

### Plan documents

Plan ref/date: **1704; 11/12/18**  
Prepared by: **Barry Rush & Associates P/L**



### Ceiling penetrations

(see following pages for details)

Sealed: **47**  
Unsealed: **0**  
TOTAL:\*\* **47**

\*\*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 **5.3**  
+10% SHGC **5.2**

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521895**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.3**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ATB-004-04 B	DEFAULTS: AI Thermally Broken B DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ATB-004-04 B	01	2400	4850	N	None
Living / Dining / Kitchen	ATB-004-04 B	02	2400	4500	W	None
Living / Dining / Kitchen	ATB-004-04 B	07	1400	1000	W	None
Bedroom 1	ATB-004-04 B	03	2400	2400	W	None
Bedroom 2	ATB-004-04 B	04	2400	2400	E	None
Bedroom 3	ATB-004-04 B	05	700	2400	E	None
Hall / Entry	ATB-004-04 B	06	2400	500	E	None

### 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-014	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-014	4900	2700	N	Yes	2500
Living / Dining / Kitchen	EW-014	4800	2800	W	No	
Living / Dining / Kitchen	EW-014	1500	2700	W	Yes	5000
Living / Dining / Kitchen	EW-014	1000	2700	N	No	
Living / Dining / Kitchen	EW-014	2500	2700	N	Yes	2500
Living / Dining / Kitchen	EW-014	1900	2700	E	Yes	4000
Bedroom 1	EW-014	1500	3000	S	No	
Bedroom 1	EW-014	3800	2900	W	No	
Bedroom 2	EW-014	3400	2900	E	No	



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521895**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.3**



## Building features continued

Bedroom 2	EW-014	900	2700	S	No	
Bedroom 3	EW-014	3500	2700	N	Yes	4500
Bedroom 3	EW-014	3000	2800	E	No	
Hall / Entry	EW-014	1500	2800	E	Yes	900
Bathroom	EW-014	1000	2700	N	Yes	4500

## Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	107.4		No
IW-005	Plasterboard	31.5		No

## Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.5 - CP - timber - concrete 200mm	41.1		R2.0	
Living / Dining / Kitchen/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 5.0			R2.0	Ceramic tile
Bedroom 1/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	19.1		R2.0	Carpet underlay (felt)
Bedroom 1 Ens/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 8.3			R2.0	Ceramic tile
Bedroom 2/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	10.5		R2.0	Carpet underlay (felt)
Bedroom 3/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	10.5		R2.0	Carpet underlay (felt)
Laundry/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 4.2			R2.0	Ceramic tile
Hall / Entry/Outdoor Air	R1.5 - CP - timber - concrete 200mm	11.2		R2.0	
Bathroom/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 4.7			R2.0	Ceramic tile

## Ceiling type

Location	Construction	Added insulation	Roof space above
None Present			

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	17	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed

## Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521895**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.3**



### Building features continued

Bedroom 1	6	Downlight		Sealed
Bedroom 1 Ens	2	Downlight		Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	5	Downlight		Sealed
Bedroom 3	5	Downlight		Sealed
Laundry	2	Downlight		Sealed
Laundry	1	Ceiling exhaust fan	160	Sealed
Hall / Entry	4	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R3.5 - Steel roof with R3.0 bulk insul + Plasterb'd ceiling under	R3.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521895

Certificate Date: 21 Dec 2018

★ Star rating: 5.3



## Additional information

## Explanatory notes

### About this report

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### 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

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521911

Certificate Date: 21 Dec 2018

★ Star rating: 5.2



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 4, 44 Rose Avenue**  
Suburb: **Wheeler Heights**  
State: **NSW** Postcode: **2097**  
Type: **New** NCC Class: **1a**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Metal roof/Plasterboard**  
**Timber/Slab**  
Insulation: **R1.0 wall insulation**  
**Ceiling (uninsulated)**  
**R1.5 floor insulation**  
Glazing: **Al Thermally Broken B DG Air Fill High Solar Gain**

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

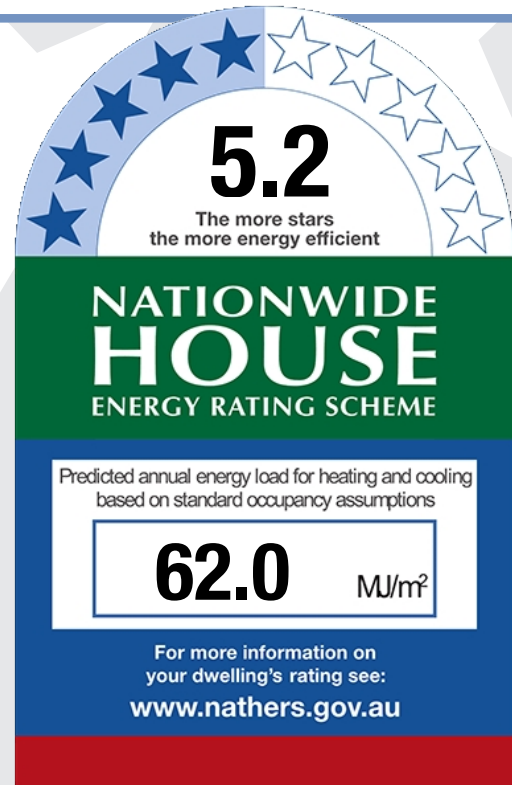
Conditioned: **132.0**  
Unconditioned: **5.0**  
Garage: **137.0**  
TOTAL: **137.0**

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

Heating: **37.0**  
Cooling: **25.0**  
TOTAL: **62.0**

### Plan documents

Plan ref/date: **1704; 11/12/18**  
Prepared by: **Barry Rush & Associates P/L**



### Ceiling penetrations

(see following pages for details)

Sealed: **32**  
Unsealed: **0**  
TOTAL:\*\* **32**

\*\*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

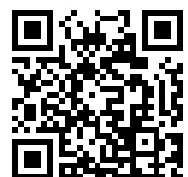
Note on allowable window values: With a 10% tolerance to the nominated SHGC window values shown on page 2, the following ratings are achieved:

-10% SHGC **5.2**  
+10% SHGC **5.2**

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521911**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.2**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.7	0.70
ATB-004-03 B	DEFAULTS: Al Thermally Broken B DG Air Fill High Solar Gain low-E -Clear	3.1	0.49
ATB-004-04 B	DEFAULTS: Al Thermally Broken B DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ATB-004-04 B	01	2400	600	E	None
Living / Dining / Kitchen	ATB-004-03 B	02	2700	8200	W	None
Bedroom 1	ATB-004-04 B	05	1200	2400	E	None
WC / Laundry	ALM-002-01 A	07	600	1700	E	None
Bedroom 2	ATB-004-04 B	08	1500	2400	E	Miniature louvres
Bedroom 3	ATB-004-04 B	09	1500	2400	E	Miniature louvres
Hall / Void over LDK	ATB-004-03 B	11	1600	8200	W	Miniature louvres

### 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 <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-014	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-014	1500	2700	E	Yes	900
Living / Dining / Kitchen	EW-014	4400	2700	S	Yes	2500
Living / Dining / Kitchen	EW-014	8200	2700	W	Yes	2500
Living / Dining / Kitchen	EW-014	1100	2700	N	Yes	5500
Bedroom 1	EW-014	4100	2700	E	No	
Bedroom 1	EW-014	3800	2700	S	Yes	2500
Bedroom 1 Ens	EW-014	2300	2700	S	Yes	2500
WC / Laundry	EW-014	2300	2700	E	No	

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521911**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.2**



## Building features continued

Bedroom 2	EW-014	4000	2700	E	No	
Bedroom 3	EW-014	4200	2700	E	No	
Bedroom 3	EW-014	6200	2700	S	No	
Hall / Void over LDK	EW-014	4300	1900	S	No	
Hall / Void over LDK	EW-014	8200	1700	W	Yes	1000
Hall / Void over LDK	EW-014	1000	1800	N	Yes	8300

## Internal wall type

ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-001	Plasterboard	95.5		No
IW-005	Plasterboard	47.3		No

## Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - timber - concrete 200mm	52.9		R1.5	
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	5.0		R2.0	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	14.6		R1.5	Carpet underlay (felt)
Bedroom 1 Ens/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	8.3		R2.0	Ceramic tile
WC / Laundry/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.8		R2.0	Ceramic tile
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under	11.5			Carpet underlay (felt)
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under	4.8			Carpet underlay (felt)
Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under	14.6			Carpet underlay (felt)
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under	8.0			Carpet underlay (felt)
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under	4.8			Ceramic tile
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under	0.3			Ceramic tile
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under	41.6			

## Ceiling type

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521911**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.2**



## Building features continued

Location	Construction	Added insulation	Roof space above
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under		No
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under		No
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under		No
Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under		No
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under		No
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under		No
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under		No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	9	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	6	Downlight		Sealed
Bedroom 1 Ens	2	Downlight		Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
WC / Laundry	2	Downlight		Sealed
WC / Laundry	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	6	Downlight		Sealed
Bedroom 3	9	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Void over LDK	14	Downlight		Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
R3.5 - Steel roof with R3.0 bulk insul + Plasterb'd ceiling under	R3.5	Medium



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521911

Certificate Date: 21 Dec 2018

★ Star rating: 5.2



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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521929

Certificate Date: 21 Dec 2018

★ Star rating: 5.6



## Assessor details

Accreditation

number: VIC/BDAV/12/1475

Name: Robert Mallindine

Organisation: AGA Consultants

Email: ag@agac.cc

Phone: 02 9977 2794

Declaration of interest: No potential conflicts of interest to declare

Software: AccuRate Sustainability V2.3.3.13 SP3

AAO: BDAV

## Overview

### Dwelling details

Street: Unit 5, 44 Rose Avenue

Suburb: Wheeler Heights

State: NSW

Postcode: 2097

Type: New

NCC Class: 1a

NatHERS

climate zone: 56

Lot/DP

number: -

Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: Double Brick

Metal roof/Plasterboard

Timber/Slab

Insulation: R1.0 wall insulation

Ceiling (uninsulated)

R1.5 floor insulation

Glazing: AI Thermally Broken B DG Air Fill Low

Solar Gain

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

Conditioned: 132.0

Unconditioned: 5.0

Garage:

TOTAL: 137.0

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

Heating: 38.0

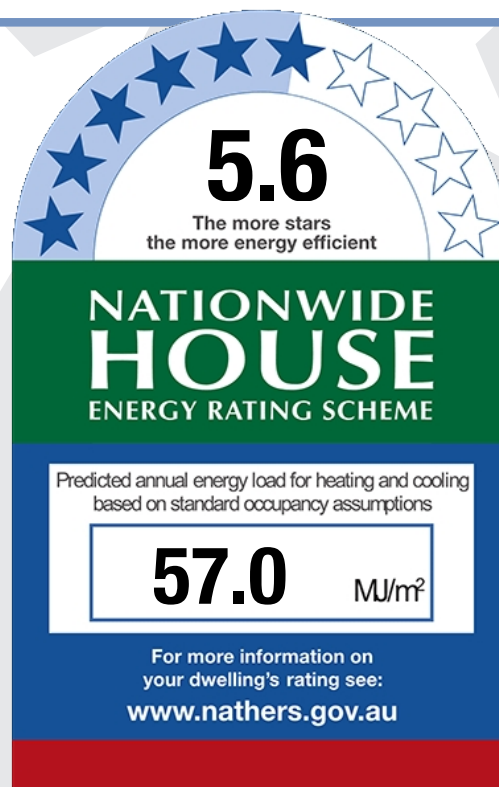
Cooling: 18.0

TOTAL: 57.0

### Plan documents

Plan ref/date: 1704; 11/12/18

Prepared by: Barry Rush & Associates P/L



### Ceiling penetrations

(see following pages for details)

Sealed: 32

Unsealed: 0

TOTAL:\*\* 32

\*\*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 5.6

+10% SHGC 5.7

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

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



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0003521929**

Certificate Date:

**21 Dec 2018**

★ Star rating:

**5.6**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.7	0.70
ATB-004-04 B	DEFAULTS: Al Thermally Broken B DG Air Fill Low Solar Gain low-E -Clear	3.1	0.27

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ATB-004-04 B	01	2400	600	E	None
Living / Dining / Kitchen	ATB-004-04 B	02	2700	8200	W	None
Bedroom 1	ATB-004-04 B	05	1200	2400	E	None
WC / Laundry	ALM-002-01 A	07	600	1700	E	None
Bedroom 2	ATB-004-04 B	08	1500	2400	E	Miniature louvres
Bedroom 3	ATB-004-04 B	09	1500	2400	E	Miniature louvres
Hall / Void over LDK	ATB-004-04 B	11	1600	8200	W	Miniature louvres

### 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 <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-014	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-014	1500	2700	E	Yes	900
Living / Dining / Kitchen	EW-014	8200	2700	W	Yes	2500
Bedroom 1	EW-014	4100	2700	E	No	
Bedroom 1	EW-014	1000	2700	S	No	
WC / Laundry	EW-014	2300	2700	E	No	
Bedroom 2	EW-014	4900	2500	N	No	
Bedroom 2	EW-014	4000	2700	E	No	
Bedroom 3	EW-014	4200	2700	E	No	
Bedroom 3	EW-014	900	2700	S	No	
Hall / Void over LDK	EW-014	8200	1700	W	Yes	1000

# Nationwide House Energy Rating Scheme\* Certificate

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**21 Dec 2018**

★ Star rating:

**5.6**



## Building features continued

Hall / Void over LDK	EW-014	5600	2000	N	No
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## Internal wall type

ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-001	Plasterboard	95.5		No
IW-005	Plasterboard	76.8		No

## Floors

Location	Construction	Area (m²)	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - timber - concrete 200mm	52.9		R1.5	
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	5.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	14.6		R1.5	Carpet underlay (felt)
Bedroom 1 Ens/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	8.3		R1.5	Ceramic tile
WC / Laundry/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.8		R1.5	Ceramic tile
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under	11.5			Carpet underlay (felt)
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under	4.8			Carpet underlay (felt)
Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under	14.6			Carpet underlay (felt)
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under	8.0			Carpet underlay (felt)
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under	4.8			Ceramic tile
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under	0.3			Ceramic tile
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under	41.6			

## Ceiling type

Location	Construction	Added insulation	Roof space above
Bedroom 2/Living / Dining / Kitchen	carpet - framed - PB ceiling under		No
Bathroom/Living / Dining / Kitchen	tiles - framed - PB ceiling under		No
Hall / Void over LDK/Living / Dining / Kitchen	timber - framed - PB ceiling under		No

## Nationwide House Energy Rating Scheme\* Certificate

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### Building features continued

Bedroom 3/Bedroom 1	carpet - framed - PB ceiling under	No
Bedroom 3/Bedroom 1 Ens	carpet - framed - PB ceiling under	No
Bathroom/Bedroom 1 Ens	tiles - framed - PB ceiling under	No
Bedroom 2/WC / Laundry	carpet - framed - PB ceiling under	No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	9	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	6	Downlight		Sealed
Bedroom 1 Ens	2	Downlight		Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
WC / Laundry	2	Downlight		Sealed
WC / Laundry	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	6	Downlight		Sealed
Bedroom 3	9	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Void over LDK	14	Downlight		Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R3.5 - Steel roof with R3.0 bulk insul + Plasterb'd ceiling under	R3.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521929

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## Additional information

## Explanatory notes

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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.

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### Contact

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0003521952

Certificate Date: 21 Dec 2018

★ Star rating: 5.6



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants**  
Email: **ag@agac.cc**  
Phone: **02 9977 2794**  
Declaration of interest: **No potential conflicts of interest to declare**  
Software: **AccuRate Sustainability V2.3.3.13 SP3**  
AAO: **BDAV**

## Overview

### Dwelling details

Street: **Unit 6, 44 Rose Avenue**  
Suburb: **Wheeler Heights**  
State: **NSW** Postcode: **2097**  
Type: **New** NCC Class: **1a**  
NatHERS climate zone: **56**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Double Brick**  
**Metal roof**  
**Timber/Slab**  
Insulation: **R1.0 wall insulation**  
**R3.5 ceiling insulation**  
**R1.5 floor insulation**  
Glazing: **Aluminium B SG Low Solar Gain Low-E**

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

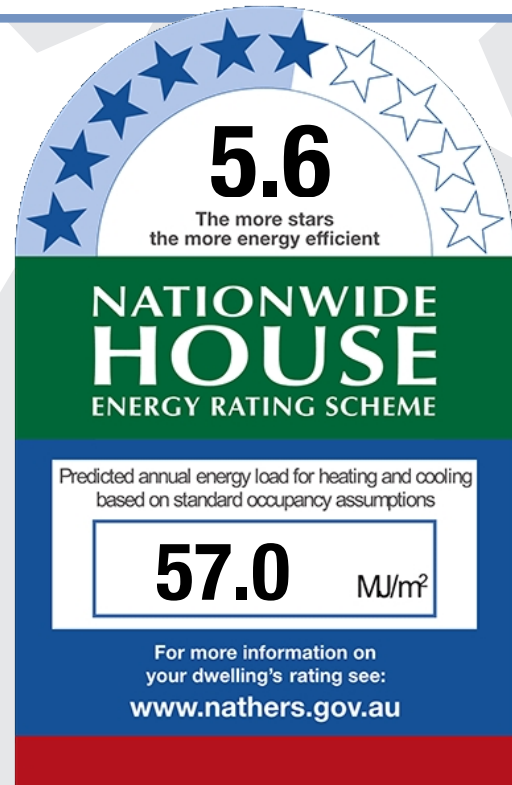
Conditioned: **110.0**  
Unconditioned: **5.0**  
Garage: **115.0**  
TOTAL: **115.0**

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

Heating: **34.0**  
Cooling: **23.0**  
TOTAL: **57.0**

### Plan documents

Plan ref/date: **1704; 11/12/18**  
Prepared by: **Barry Rush & Associates P/L**



### Ceiling penetrations

(see following pages for details)

Sealed: **44**  
Unsealed: **0**  
TOTAL:\*\* **44**

\*\*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 **5.6**  
+10% SHGC **5.5**

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 certificate online and confirm this is valid.





# Nationwide House Energy Rating Scheme\* Certificate

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**5.6**



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-04 A	DEFAULTS: Aluminium B SG Low Solar Gain Low-E	5.6	0.41

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-04 A	01	2400	6100	N	None
Living / Dining / Kitchen	ALM-002-04 A	02	1100	2400	W	None
Bedroom 1	ALM-002-04 A	03	1100	2400	W	None
Bedroom 2	ALM-002-04 A	04	1100	2400	E	None
Bedroom 3	ALM-002-04 A	05	1100	2400	E	None
Hall / Entry	ALM-002-04 A	06	2400	500	E	None

### 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-014	Double Brick	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-014	10500	2700	N	Yes	450
Living / Dining / Kitchen	EW-014	4700	2700	W	No	
Bedroom 1	EW-014	2700	2700	S	No	
Bedroom 1	EW-014	3800	2700	W	No	
Bedroom 2	EW-014	3400	2700	E	No	
Bedroom 3	EW-014	3000	2700	N	No	
Bedroom 3	EW-014	3500	2700	E	No	
Hall / Entry	EW-014	1500	2700	E	Yes	900

### Internal wall type

ID	Wall type	Area (m²)	Insulation	Wall wrap or foil
IW-001	Plasterboard	95.9		No
IW-005	Plasterboard	27.8		No

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**5.6**



## Building features continued

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - timber - concrete 200mm	45.8		R1.5	
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	5.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	20.1		R1.5	Carpet underlay (felt)
Bedroom 1 Ens/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	8.3		R1.5	Ceramic tile
Bedroom 2/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	10.5		R1.5	Carpet underlay (felt)
Bedroom 3/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	10.5		R1.5	Carpet underlay (felt)
Bathroom/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.8		R1.5	Ceramic tile
Hall / Entry/Outdoor Air	R1.0 - CP - timber - concrete 200mm	9.4		R1.5	
Roof Space/Living / Dining / Kitchen	Plasterboard 13 mm + R3.5 bulk insulation	50.8		R3.5	
Roof Space/Bedroom 1	Plasterboard 13 mm + R3.5 bulk insulation	20.1		R3.5	
Roof Space/Bedroom 1 Ens	Plasterboard 13 mm + R3.5 bulk insulation	8.3		R3.5	
Roof Space/Bedroom 2	Plasterboard 13 mm + R3.5 bulk insulation	10.5		R3.5	
Roof Space/Bedroom 3	Plasterboard 13 mm + R3.5 bulk insulation	10.5		R3.5	
Roof Space/Bathroom	Plasterboard 13 mm + R3.5 bulk insulation	4.8		R3.5	
Roof Space/Hall / Entry	Plasterboard 13 mm + R3.5 bulk insulation	9.4		R3.5	

### Ceiling type

Location	Construction	Added insulation	Roof space above
Roof Space/Living / Dining / Kitchen	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes
Roof Space/Bedroom 1	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes
Roof Space/Bedroom 1 Ens	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes
Roof Space/Bedroom 2	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes
Roof Space/Bedroom 3	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes
Roof Space/Bathroom	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes
Roof Space/Hall / Entry	Plasterboard 13 mm + R3.5 bulk insulation	R3.5	Yes

## Nationwide House Energy Rating Scheme\* Certificate

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**5.6**



### Building features continued

#### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	17	Downlight		Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	6	Downlight		Sealed
Bedroom 1 Ens	2	Downlight		Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	5	Downlight		Sealed
Bedroom 3	5	Downlight		Sealed
Bathroom	2	Downlight		Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Entry	4	Downlight		Sealed

#### Ceiling fans

Location	Number	Diameter (mm)
None Present		

#### Roof type

Construction	Added insulation	Roof colour
none - 5-10 deg Colourbond steel roof with no ceiling under		Medium

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