

**NatHERS Thermal Performance Specifications (BASIX Thermal Comfort)  
29-31 Castlereagh Street, Penrith**

*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, clear	Aluminium	6.7	0.57	Generally for window types: Awning, bi-fold, casement, tilt 'n' turn
Default	Single glazed, clear	Aluminium	6.7	0.70	Generally for window types: Sliding window/ door, double hung, fixed, louvre
Default	Single glazed, low E low solar gain	Aluminium	5.6	0.41	To units: 5 – living room east facing glazing 18 – all glazing
Default	Single glazed, low E high solar gain	Aluminium	5.4	0.58	To units: 7 – north and west facing glazed doors to balcony

Skylights	Glass	Frame	U value	SHGC	Detail
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External walls	Construction	Added Insulation	Detail
Brick veneer		R2.0	To ground level and level 1
Hebel panel		R2.0	To levels 2, 3, 4 and 5

Internal walls	Construction	Added Insulation	Detail
Plasterboard on studs		None	Within units
Hebel		None	Party/ common walls generally
Hebel / Concrete		R1.0	Internal apartment walls adjoining common lobbies, lift core, stairwells to units: 1, 2, 3, 7, 19

Floors	Construction	Added Insulation	Covering	Detail
Concrete		None	Carpet generally; tiles for wet areas	
Concrete		R1.0	Carpet generally; tiles for wet areas	To units: 1, 4
Concrete		R1.5	Carpet generally; tiles for wet areas	To units: 2, 3

Ceilings	Construction	Added Insulation	Detail
Plasterboard		(see roof detail below)	

Roof	Construction	Added Insulation	Detail
Concrete		R1.0	To units: 1, 2, 3, 6, 7, 13, 14
Concrete		R2.5	To units: 18, 19, 20

**Other Requirements**

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



Certificate no.: 0001949520  
 Assessor Name: Robert Mallindine  
 Accreditation no.: VIC/BDAV/12/1475  
 Certificate date: 21 September 2017

Dwelling Address:  
 29-31 Castlereagh Street  
 Penrith, NSW  
 2750

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



# Nationwide House Energy Rating Scheme\* — Class 2 summary

Certificate number: **0001949520**

Certificate Date: **21 Sep 2017**

★ Average Star rating: **6.6**



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
 Name: **Robert Mallindine**  
 Organisation: **AGA Consultants Pty Ltd**  
 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: **29-31 Castlereagh Street**  
 Suburb: **Penrith**  
 State: **NSW**  
 Postcode: **2750**

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## Summary of all dwellings

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0001498971-01	1	59.0	47.0	106.0	5.2
0001498989-01	2	63.0	28.0	91.0	5.8
0001499011-01	3	59.0	23.0	82.0	6.2
0001499037	4	16.0	27.0	43.0	8
0001499003-01	5	53.0	61.0	114.0	4.9
0001499029	6	54.0	55.0	109.0	5.1
0001498997-01	7	63.0	46.0	110.0	5.1
0001499052	8	9.0	29.0	38.0	8.3
0001499045	9	28.0	27.0	55.0	7.4
0001499078	10	34.0	26.0	61.0	7.2
0001499086	11	7.0	16.0	24.0	8.9
0001499102	12	28.0	27.0	55.0	7.4
0001499110	13	39.0	33.0	71.0	6.8
0001499094	14	5.0	31.0	36.0	8.4
0001499128	15	36.0	34.0	70.0	6.8

\* Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments.

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## Nationwide House Energy Rating Scheme\* - Class 2 summary



Certificate number: **0001949520**

Certificate Date:

**21 Sep 2017**

★ Average Star rating: **6.6**

### Summary of all dwellings continued

#### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0001499144	16	50.0	30.0	80.0	6.3
0001499136	17	17.0	19.0	37.0	8.4
0001499151-01	18	50.0	62.0	112.0	4.9
0001499169-01	19	62.0	60.0	121.0	4.7
0001499177	20	34.0	44.0	78.0	6.4

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001498971-01

Certificate Date: 21 Sep 2017

★ Star rating: 5.2



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
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, 29-31 Castlereagh Street**  
Suburb: **Penrith**  
State: **NSW** Postcode: **2750**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **28**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Brick Veneer**  
**Concrete roof/Plasterboard Slab**  
Insulation: **R2.0 wall insulation**  
**Ceiling (uninsulated)**  
**R1.5 floor insulation**  
Glazing: **Aluminium B SG Clear**

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

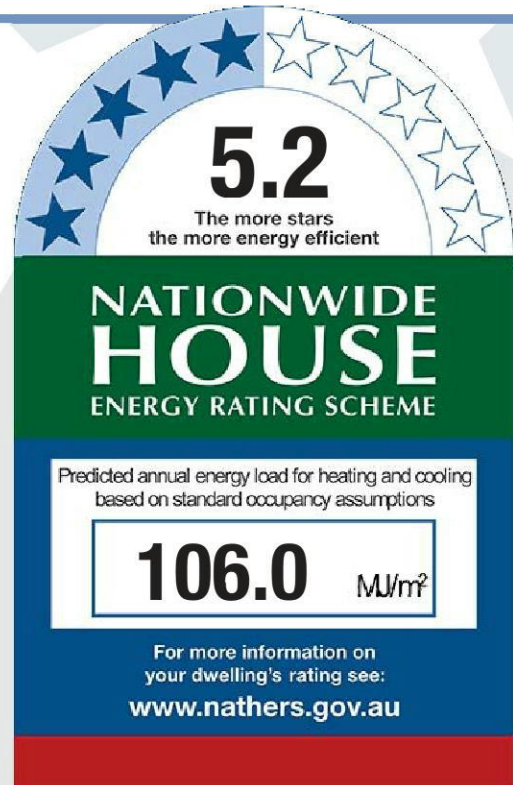
Conditioned: **50.0**  
Unconditioned: **4.0**  
Garage:  
TOTAL: **54.0**

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

Heating: **59.0**  
Cooling: **47.0**  
TOTAL: **106.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**  
Prepared by: **CAD Plans**



### Ceiling penetrations

(see following pages for details)

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

\*\*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: **No downlights modelled**

### 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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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001498971-01** Certificate Date: **21 Sep 2017** ★ 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

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	03	1800	2300	NE	None
Living / Dining / Kitchen	ALM-002-01 A	01	2400	3000	SE	None
Bedroom 1	ALM-002-01 A	02	2400	1800	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Glass fibre batt: R1.0	No
EW-013	Concrete wall/Plasterboard	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	6800	2700	NE	Yes	1700
Living / Dining / Kitchen	EW-003	4000	2700	SE	Yes	1000
Bedroom 1	EW-003	3900	2700	SE	Yes	1000
Bedroom 1	EW-006	1900	2700	SE	No	
Bedroom 1	EW-013	2400	2700	SE	No	
Bedroom 1	EW-003	1300	2700	SW	No	
Bathroom	EW-013	2200	2700	SE	No	
Entry Hall	EW-013	2400	2700	SE	No	
Entry Hall	EW-006	1800	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	28.6		No
IW-002	Plasterboard	23.5		No

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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001498971-01** Certificate Date: **21 Sep 2017** ★ Star rating: **5.2**

## 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 - carpet - concrete 200mm	27.1		R1.5	Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	12.9		R1.5	Carpet 10 + rubber underlay 8
Bathroom/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	3.6		R1.5	Ceramic tile
Entry Hall/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	5.9		R1.5	Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No
Neighbour/Entry Hall	carpet - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Entry Hall	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001498971-01

Certificate Date: 21 Sep 2017

★ Star rating: 5.2



## 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.

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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

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

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001498989-01

Certificate Date: 21 Sep 2017

★ Star rating: 5.8



## Assessor details

### Accreditation

number: **VIC/BDAV/12/1475**

Name: **Robert Mallindine**

Organisation: **AGA Consultants Pty Ltd**

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, 29-31 Castlereagh Street**

Suburb: **Penrith**

State: **NSW**

Postcode: **2750**

Type: **New**

NCC Class: **2**

NatHERS

climate zone: **28**

Lot/DP

number: -

Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Brick Veneer**

**Concrete roof/Plasterboard Slab**

Insulation: **R2.0 wall insulation  
Ceiling (uninsulated)**

**R2.0 floor insulation**

Glazing: **Aluminium B SG Clear**

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

Conditioned: **70.0**

Unconditioned: **5.0**

Garage:

TOTAL: **75.0**

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

Heating: **63.0**

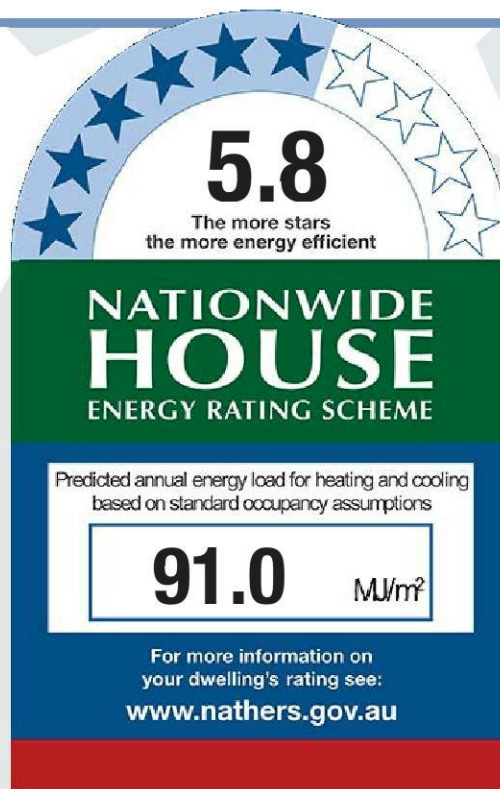
Cooling: **28.0**

TOTAL: **91.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**

Prepared by: **CAD Plans**



### Ceiling penetrations

(see following pages for details)

Sealed: **0**

Unsealed: **0**

TOTAL:\*\* **0**

\*\*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: **No downlights modelled**

### 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 **5.8**

+10% SHGC **5.8**

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: **0001498989-01** Certificate Date: **21 Sep 2017** ★ Star rating: **5.8**

## 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

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	2400	3000	SE	None
Bedroom 1	ALM-002-01 A	02	2400	1800	SE	None
Bedroom 2	ALM-001-01 A	03	1200	1200	SW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Glass fibre batt: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	4000	2700	SE	No	
Living / Dining / Kitchen	EW-006	5800	2700	SE	No	
Bedroom 1	EW-003	4000	2700	SE	Yes	1100
Bedroom 1	EW-003	3800	2700	SW	No	
Bedroom 1 Ens	EW-003	1000	2700	SE	Yes	1100
Bedroom 2	EW-003	3800	2700	SW	No	
Entry Hall	EW-006	4300	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	61.6		No
IW-002	Plasterboard	32.9		No

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001498989-01

Certificate Date:

21 Sep 2017

★ Star rating:

5.8

## Building features continued

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	32.0		R2.0	Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 4.0	4.0		R2.0	Ceramic tile
Bedroom 1/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	13.8		R2.0	Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 3.1	3.1		R2.0	Ceramic tile
Bedroom 2/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	12.1		R2.0	Carpet 10 + rubber underlay 8
Bathroom/Outdoor Air	R1.5 - CP - tiles - concrete 200mm 4.9	4.9		R2.0	Ceramic tile
Entry Hall/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	4.5		R2.0	Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	tiles - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Entry Hall	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Entry Hall	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0001498989-01** Certificate Date: **21 Sep 2017** ★ Star rating: **5.8**



## Building features continued

### Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium

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Certificate number: 0001498989-01

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★ Star rating: 5.8



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## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001498997-01

Certificate Date: 21 Sep 2017

★ Star rating: 5.1



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
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 7, 29-31 Castlereagh Street**  
Suburb: **Penrith**  
State: **NSW** Postcode: **2750**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **28**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Brick Veneer**  
**Concrete roof/Plasterboard Slab**  
Insulation: **R2.0 wall insulation**  
**Ceiling (uninsulated)**  
**Floor (uninsulated)**  
Glazing: **Aluminium B SG High Solar Gain Low-E**

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

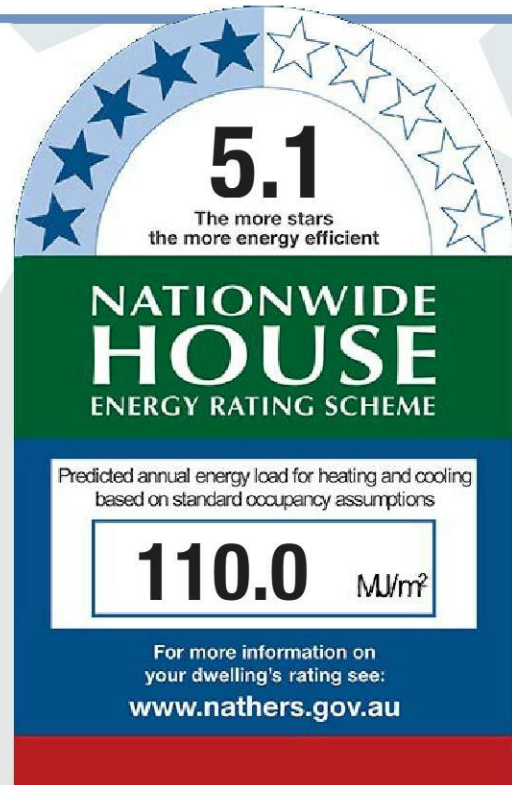
Conditioned: **62.0**  
Unconditioned: **5.0**  
Garage:  
TOTAL: **67.0**

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

Heating: **63.0**  
Cooling: **46.0**  
TOTAL: **110.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**  
Prepared by: **CAD Plans**



### Ceiling penetrations

(see following pages for details)

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

\*\*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: **No downlights modelled**

### 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 **5.1**  
+10% SHGC **5.0**

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



Certificate number: **0001498997-01** Certificate Date: **21 Sep 2017** ★ Star rating: **5.1**

## 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

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	1300	1800	NW	None
Living / Dining / Kitchen	ALM-002-01 A	02	1300	1800	NW	None
Living / Dining / Kitchen	ALM-002-03 A	02	2400	2900	SW	None
Bedroom 1	ALM-002-01 A	04	2400	1600	NE	None
Bedroom 2	ALM-001-01 A	05	1200	1200	SW	None
Hall / Laundry	ALM-002-03 A	06	2400	3000	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Glass fibre batt: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	5000	2700	NW	No	
Living / Dining / Kitchen	EW-003	3000	2700	SW	Yes	3000
Living / Dining / Kitchen	EW-006	2400	2700	SE	No	
Bedroom 1	EW-003	4400	2700	NW	No	
Bedroom 1	EW-003	2900	2700	NE	Yes	3000
Bedroom 1	EW-003	3000	2700	SW	No	
Bedroom 2	EW-003	3100	2700	SW	No	
Hall / Laundry	EW-003	3300	2700	NW	Yes	3000

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001498997-01** Certificate Date: **21 Sep 2017** ★ Star rating: **5.1**

## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	39.2		No
IW-002	Plasterboard	45.9		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	24.9			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Living / Dining / Kitchen/Outdoor Air	carpet - concrete 200mm	3.8			Carpet 10 + rubber underlay 8
Bedroom 1/Neighbour	carpet - concrete 200mm	12.7			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	9.0			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.9			Ceramic tile
Hall / Laundry/Neighbour	carpet - concrete 200mm	7.7			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall / Laundry	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Laundry	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

\* 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)

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001498997-01** Certificate Date: **21 Sep 2017** ★ Star rating: **5.1**

## Building features continued

### Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001498997-01

Certificate Date: 21 Sep 2017

★ Star rating: 5.1



## 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.

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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.

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.

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### Accredited Assessors

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### Disclaimer

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### Contact

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499003-01

Certificate Date: 21 Sep 2017

★ Star rating: 4.9



## Assessor details

### Accreditation

number: **VIC/BDAV/12/1475**

Name: **Robert Mallindine**

Organisation: **AGA Consultants Pty Ltd**

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, 29-31 Castlereagh Street**

Suburb: **Penrith**

State: **NSW**

Postcode: **2750**

Type: **New**

NCC Class: **2**

NatHERS

climate zone: **28**

Lot/DP

number: -

Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Brick Veneer**

**Roof - N/A**

**Slab**

Insulation: **R2.0 wall insulation**

**Ceiling (uninsulated)**

**Floor (uninsulated)**

Glazing: **Aluminium A SG Clear**

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

Conditioned: **46.0**

Unconditioned: **5.0**

Garage:

TOTAL: **51.0**

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

Heating: **53.0**

Cooling: **61.0**

TOTAL: **114.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**

Prepared by: **CAD Plans**

**4.9**  
The more stars  
the more energy efficient

**NATIONWIDE HOUSE**  
ENERGY RATING SCHEME

Predicted annual energy load for heating and cooling  
based on standard occupancy assumptions

**114.0** MJ/m<sup>2</sup>

For more information on  
your dwelling's rating see:  
[www.nathers.gov.au](http://www.nathers.gov.au)

### Ceiling penetrations

(see following pages for details)

Sealed: **0**

Unsealed: **0**

TOTAL:\*\* **0**

\*\*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: **No downlights modelled**

### 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 **4.9**

+10% SHGC **4.9**

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



Certificate number: **0001499003-01** Certificate Date: **21 Sep 2017** ★ Star rating: **4.9**

## 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-002-04 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	1800	1800	NE	None
Living / Dining / Kitchen	ALM-002-01 A	03	2700	3000	SE	None
Bedroom 1	ALM-001-01 A	04	2700	2400	SE	None
Bathroom	ALM-001-01 A	05	2700	2400	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	4300	2700	NE	No	
Living / Dining / Kitchen	EW-003	3100	2700	SE	Yes	3700
Living / Dining / Kitchen	EW-003	600	2700	NE	Yes	3500
Living / Dining / Kitchen	EW-006	6100	2700	SE	No	
Bedroom 1	EW-003	3700	2700	SE	No	
Bedroom 1	EW-003	600	2700	SW	No	
Bedroom 1	EW-006	4700	2700	SE	No	
Bathroom	EW-003	2700	2700	SE	Yes	1100
Bathroom	EW-003	1800	2700	NE	Yes	3500

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499003-01

Certificate Date:

21 Sep 2017

★ Star rating:

4.9



## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	19.4		No
IW-002	Plasterboard	25.4		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	23.9			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Living / Dining / Kitchen/Outdoor Air	carpet - concrete 200mm	5.7			Carpet 10 + rubber underlay 8
Bedroom 1/Neighbour	carpet - concrete 200mm	12.2			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.9			Ceramic tile

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499003-01

Certificate Date: 21 Sep 2017

★ Star rating: 4.9



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499011-01

Certificate Date: 21 Sep 2017

★ Star rating: 6.2



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
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, 29-31 Castlereagh Street**  
Suburb: **Penrith**  
State: **NSW** Postcode: **2750**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **28**  
Lot/DP number: - Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Brick Veneer**  
**Concrete roof/Plasterboard Slab**  
Insulation: **R2.0 wall insulation**  
**Ceiling (uninsulated)**  
**R2.0 floor insulation**  
Glazing: **Aluminium B SG Clear**

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

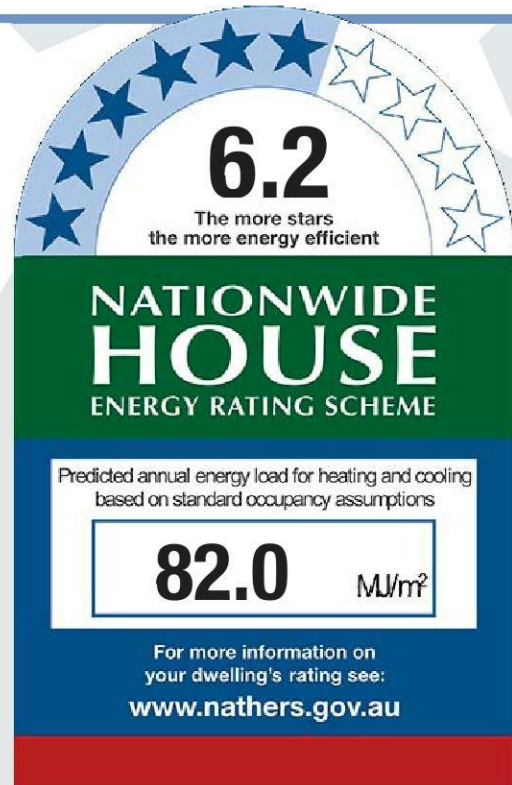
Conditioned: **68.0**  
Unconditioned: **5.0**  
Garage:  
TOTAL: **73.0**

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

Heating: **59.0**  
Cooling: **23.0**  
TOTAL: **82.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**  
Prepared by: **CAD Plans**



### Ceiling penetrations

(see following pages for details)

Sealed: **1**  
Unsealed: **0**  
TOTAL:\*\* **1**

\*\*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: **No downlights modelled**

### 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 **6.2**  
+10% SHGC **6.3**

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.**

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



# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499011-01

Certificate Date:

21 Sep 2017

★ Star rating:

6.2

## 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

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	2400	3600	NW	None
Bedroom 1	ALM-002-01 A	02	2400	1600	NW	None
Bedroom 1 Ens	ALM-002-01 A	03	600	900	NW	None
Bedroom 2	ALM-001-01 A	04	1200	1200	SW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Glass fibre batt: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	4000	2700	NW	No	
Living / Dining / Kitchen	EW-003	1600	2700	NE	Yes	4100
Living / Dining / Kitchen	EW-006	2000	2700	SE	No	
Bedroom 1	EW-003	5200	2700	NW	No	
Bedroom 1	EW-003	3000	2700	SW	No	
Bedroom 1 Ens	EW-003	1000	2700	NW	No	
Bedroom 2	EW-003	3400	2700	SW	No	
Laundry	EW-003	2300	2700	NW	Yes	3000
Laundry	EW-006	2300	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	67.2		No

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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499011-01

Certificate Date:

21 Sep 2017

★ Star rating:

6.2

## Building features continued

IW-002	Plasterboard	32.9	No
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### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	29.4		R2.0	Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Outdoor Air	R1.5 - CP - tiles - concrete 200mm	4.0		R2.0	Ceramic tile
Bedroom 1/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	14.9		R2.0	Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Outdoor Air	R1.5 - CP - tiles - concrete 200mm	2.9		R2.0	Ceramic tile
Bedroom 2/Outdoor Air	R1.5 - CP - carpet - concrete 200mm	11.3		R2.0	Carpet 10 + rubber underlay 8
Bathroom/Outdoor Air	R1.5 - CP - tiles - concrete 200mm	4.8		R2.0	Ceramic tile
Laundry/Outdoor Air	R1.5 - CP - tiles - concrete 200mm	5.3		R2.0	Ceramic tile

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Laundry	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Laundry	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		



# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499011-01** Certificate Date: **21 Sep 2017** ★ Star rating: **6.2**

## Building features continued

### Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499011-01

Certificate Date: 21 Sep 2017

★ Star rating: 6.2



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499029

Certificate Date: 21 May 2017

★ Star rating: 5.1



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: Brick Veneer  
Concrete roof/Plasterboard Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

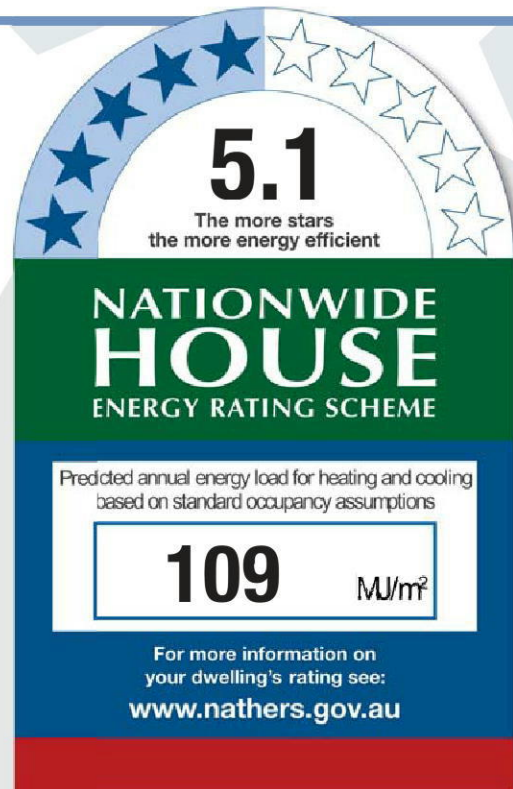
Conditioned: 63  
Unconditioned: 4  
Garage:  
TOTAL: 67

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

Heating: 54  
Cooling: 55  
TOTAL: 109

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 5.0

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



Certificate number: 0001499029

Certificate Date:

21 May 2017

★ Star rating:

5.1

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	2700	2400	SE	None
Bedroom 1	ALM-002-01 A	02	2700	2400	SE	None
Bedroom 2	ALM-001-01 A	03	2700	2400	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	3200	2700	SE	No	
Living / Dining / Kitchen	EW-003	5500	2700	SW	No	
Living / Dining / Kitchen	EW-006	1200	2700	SE	No	
Bedroom 1	EW-003	1400	2700	NE	No	
Bedroom 1	EW-003	4000	2700	SE	No	
Bedroom 1	EW-006	3100	2700	SE	No	
Bedroom 2	EW-003	2900	2700	SE	Yes	1000
Bedroom 2	EW-003	2100	2700	SW	No	
Bathroom	EW-006	2300	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	40.5		No
IW-002	Plasterboard	27.5		No

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499029

Certificate Date:

21 May 2017

★ Star rating:

5.1



## Building features continued

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	36.7			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	10.0			Carpet 10 + rubber underlay 8
Bedroom 1/Outdoor Air	carpet - concrete 200mm	1.6			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	10.4			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.1			Ceramic tile

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499029

Certificate Date: 21 May 2017

★ Star rating: 5.1



## Additional information

## Explanatory notes

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### General Information

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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.

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499037

Certificate Date: 21 May 2017

★ Star rating: 8.0



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: Brick Veneer  
Concrete roof/Plasterboard Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
R1.5 floor insulation  
Glazing: Aluminium B SG Clear

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

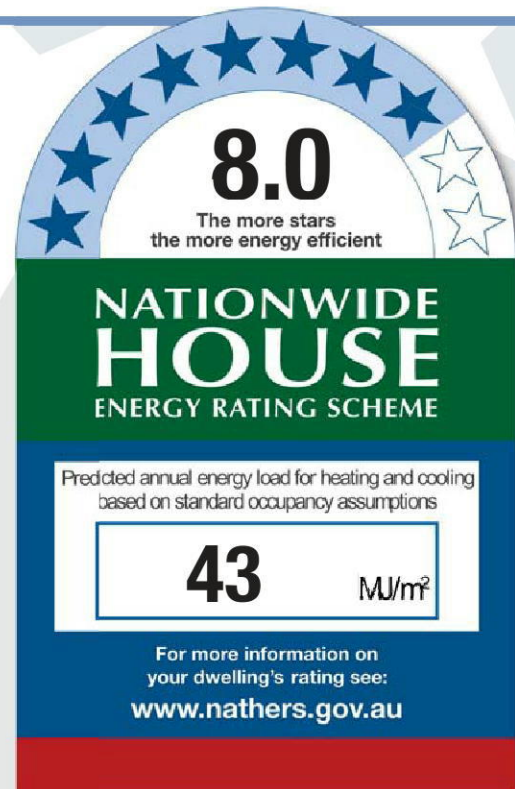
Conditioned: 63  
Unconditioned: 6  
Garage: -  
TOTAL: 69

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

Heating: 16  
Cooling: 27  
TOTAL: 43

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 7.9  
+10% SHGC 8.0

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: 0001499037

Certificate Date:

21 May 2017

★ Star rating:

8.0

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	2400	2300	NE	None
Bedroom 1	ALM-002-01 A	02	1300	1200	NW	None
Bedroom 2	ALM-002-01 A	03	1300	1200	NW	None
Bathroom	ALM-002-01 A	04	600	1200	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	4800	2700	NE	No	
Living / Dining / Kitchen	EW-003	1100	2700	SE	Yes	8000
Living / Dining / Kitchen	EW-006	4200	2700	SE	No	
Bedroom 1	EW-003	3600	2700	NW	No	
Bedroom 1	EW-003	2800	2700	SW	Yes	4100
Bedroom 1	EW-006	500	2700	SE	No	
Bedroom 2	EW-003	3300	2700	NW	No	
Bedroom 2	EW-003	3400	2700	NE	No	
Bathroom	EW-003	1800	2700	NW	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	44.6		No
IW-002	Plasterboard	24.3		No



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0001499037**

Certificate Date:

**21 May 2017**

★ Star rating:

**8.0**



## 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 - carpet - concrete 200mm	35.0		R1.5	Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	4.0		R1.5	Ceramic tile
Bedroom 1/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	12.6		R1.5	Carpet 10 + rubber underlay 8
Bedroom 2/Outdoor Air	R1.0 - CP - carpet - concrete 200mm	11.4		R1.5	Carpet 10 + rubber underlay 8
Bathroom/Outdoor Air	R1.0 - CP - tiles - concrete 200mm	5.7		R1.5	Ceramic tile

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
none - Concrete slab 200mm - Drained Tile walking surface - no insulation - Suspended Ceiling under		Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499037

Certificate Date: 21 May 2017

★ Star rating: 8.0



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499045

Certificate Date: 21 May 2017

★ Star rating: 7.4



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 9, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Roof - N/A  
Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

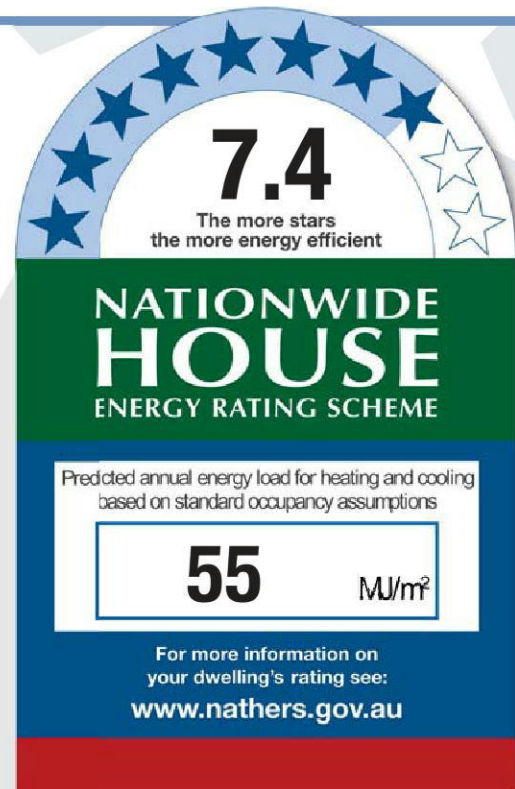
Conditioned: 67  
Unconditioned: 5  
Garage:  
TOTAL: 72

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

Heating: 28  
Cooling: 27  
TOTAL: 55

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 7.4  
+10% SHGC 7.5

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



Certificate number: 0001499045

Certificate Date:

21 May 2017

★ Star rating:

7.4

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	900	1800	NE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	3000	SE	None
Bedroom 1	ALM-001-01 A	03	900	1200	NE	None
Bedroom 1 Ens	ALM-001-01 A	04	900	600	NE	None
Bedroom 2	ALM-001-01 A	05	900	1800	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	5000	2700	NE	No	
Living / Dining / Kitchen	EW-010	3200	2700	SE	Yes	3000
Living / Dining / Kitchen	EW-010	1700	2700	NE	Yes	3800
Living / Dining / Kitchen	EW-010	2800	2700	SE	Yes	800
Bedroom 1	EW-010	3400	2700	NE	No	
Bedroom 1 Ens	EW-010	3500	2700	NW	Yes	3000
Bedroom 1 Ens	EW-010	900	2700	NE	No	
Bedroom 2	EW-010	3600	2700	SE	No	
Bedroom 2	EW-010	700	2700	SW	No	
Bedroom 2	EW-006	4800	2700	SE	No	
Bathroom	EW-006	2300	2700	SE	No	
Entry Hall	EW-006	4000	2700	SE	No	

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499045**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.4**

## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	52.1		No
IW-002	Plasterboard	23.8		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	27.0			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	12.9			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.2			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	11.7			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.9			Ceramic tile
Entry Hall/Neighbour	carpet - concrete 200mm	7.8			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	tiles - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Entry Hall	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499045**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.4**

## Building features continued

Location	Number	Diameter (mm)
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None Present		
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## Roof type

Construction	Added insulation	Roof colour
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None Present		
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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499045

Certificate Date: 21 May 2017

★ Star rating: 7.4



## Additional information

## Explanatory notes

### About this report

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499052

Certificate Date: 21 May 2017

★ Star rating: 8.3



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 8, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: Brick Veneer  
Roof - N/A  
Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

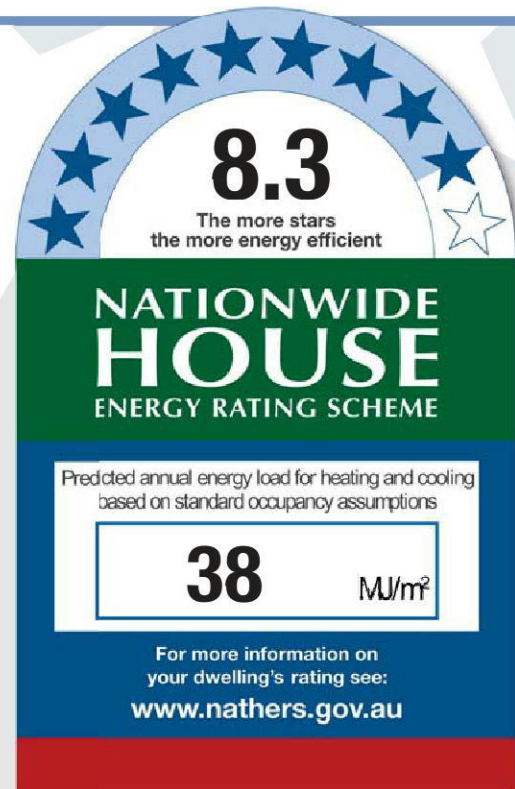
Conditioned: 62  
Unconditioned: 4  
Garage:  
TOTAL: 66

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

Heating: 9  
Cooling: 29  
TOTAL: 38

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 8.4  
+10% SHGC 8.2

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



Certificate number: 0001499052

Certificate Date:

21 May 2017

★ Star rating:

8.3

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	2400	3000	NW	None
Living / Dining / Kitchen	ALM-002-01 A	02	1800	1800	NE	None
Bedroom 1	ALM-002-01 A	04	2400	1800	NE	None
Bedroom 2	ALM-001-01 A	05	1300	1200	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-003	Brick Veneer	Glass fibre batt: R2.0	No
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-003	3400	2700	NW	Yes	3000
Living / Dining / Kitchen	EW-003	4200	2700	NE	No	
Bedroom 1	EW-003	3900	2700	NW	No	
Bedroom 1	EW-003	2900	2700	NE	Yes	3400
Bedroom 2	EW-003	3600	2700	NW	No	
Hall / Laundry	EW-006	2100	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	49.7		No
IW-002	Plasterboard	42.7		No

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0001499052**

Certificate Date:

**21 May 2017**

★ Star rating:

**8.3**



## Building features continued

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	27.3			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	11.3			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	10.4			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.5			Ceramic tile
Hall / Laundry/Neighbour	carpet - concrete 200mm	9.1			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall / Laundry	carpet - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Laundry	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499052

Certificate Date: 21 May 2017

★ Star rating: 8.3



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499078

Certificate Date: 21 May 2017

★ Star rating: 7.2



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 10, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Roof - N/A  
Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

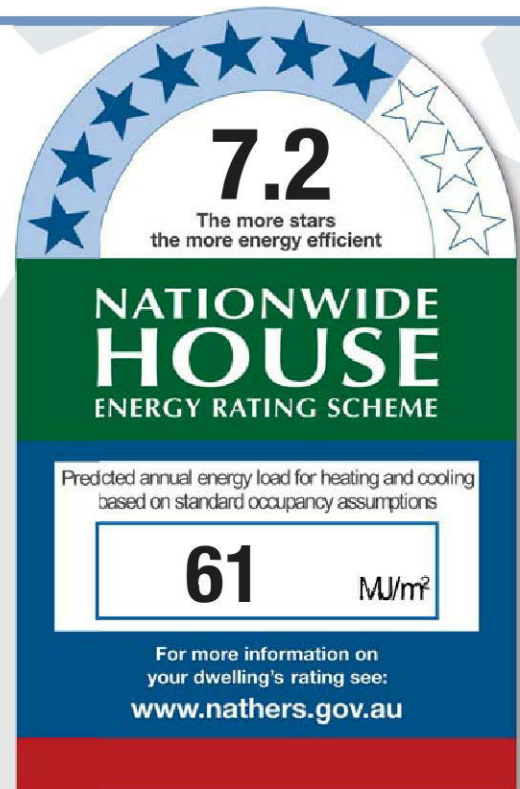
Conditioned: 85  
Unconditioned: 6  
Garage:  
TOTAL: 91

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

Heating: 34  
Cooling: 26  
TOTAL: 61

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 7.2  
+10% SHGC 7.2

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



Certificate number: **0001499078**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.2**

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	900	1800	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	2200	SE	None
Bedroom 1	ALM-002-01 A	03	1300	1800	NW	None
Bedroom 1 Ens	ALM-002-01 A	06	900	1000	SW	None
Bedroom 2	ALM-002-01 A	04	1300	1800	NW	None
Bedroom 3	ALM-002-01 A	05	1500	1400	SW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	600	2700	NE	No	
Living / Dining / Kitchen	EW-010	5100	2700	SE	No	
Living / Dining / Kitchen	EW-010	1800	2700	SW	Yes	3600
Living / Dining / Kitchen	EW-010	3800	2700	SE	Yes	3200
Living / Dining / Kitchen	EW-010	4000	2700	SW	No	
Living / Dining / Kitchen	EW-006	11500	2700	SE	No	
Bedroom 1	EW-010	3900	2700	NW	No	
Bedroom 1	EW-010	3500	2700	SW	No	
Bedroom 1 Ens	EW-010	1400	2700	SW	No	
Bedroom 2	EW-010	3000	2700	NW	No	
Bedroom 3	EW-010	3000	2700	SW	No	

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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499078**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.2**

## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	73.2		No
IW-002	Plasterboard	25.9		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	39.3			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	13.2			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.3			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	10.5			Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	9.9			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.8			Ceramic tile
Hall/Neighbour	carpet - concrete 200mm	4.9			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	tiles - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	tiles - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499078**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.2**

## Building features continued

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499078

Certificate Date: 21 May 2017

★ Star rating: 7.2



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## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499086

Certificate Date: 21 May 2017

★ Star rating: 8.9



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 11, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Roof - N/A  
Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

Conditioned: 62  
Unconditioned: 6  
Garage:  
TOTAL: 68

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

Heating: 7  
Cooling: 16  
TOTAL: 24

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 8.9  
+10% SHGC 8.9

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



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499086

Certificate Date:

21 May 2017

★ Star rating:

8.9



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	02	2400	2200	NE	None
Bedroom 1	ALM-001-01 A	03	1300	1800	NW	None
Bedroom 2	ALM-001-01 A	04	1300	1200	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	4000	2700	NW	No	
Living / Dining / Kitchen	EW-006	1700	2700	SE	No	
Living / Dining / Kitchen	EW-010	2700	2700	NE	Yes	3600
Bedroom 1	EW-010	3000	2700	NW	No	
Bedroom 2	EW-010	3200	2700	NW	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	52.1		No
IW-002	Plasterboard	50.0		No

### Floors

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: **0001499086**

Certificate Date:

**21 May 2017**

★ Star rating:

**8.9**



## Building features continued

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	31.7			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	10.5			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	11.2			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.6			Ceramic tile
Hall / Laundry/Neighbour	carpet - concrete 200mm	4.3			Carpet 10 + rubber underlay 8

## Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall / Laundry	tiles - concrete 200mm		No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Laundry	1	Ceiling exhaust fan	160	Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499086

Certificate Date: 21 May 2017

★ Star rating: 8.9



## Additional information

## Explanatory notes

### About this report

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### Disclaimer

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### Contact

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For more details see [www.nathers.gov.au](http://www.nathers.gov.au)

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499094

Certificate Date: 21 May 2017

★ Star rating: 8.4



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 14, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Concrete roof/Plasterboard Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

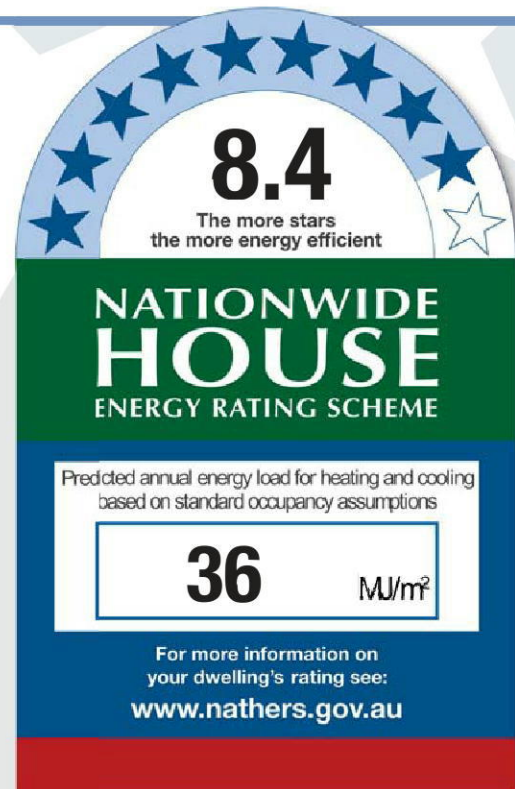
Conditioned: 62  
Unconditioned: 6  
Garage:  
TOTAL: 68

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

Heating: 5  
Cooling: 31  
TOTAL: 36

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 8.4  
+10% SHGC 8.3

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.**

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



# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499094

Certificate Date:

21 May 2017

★ Star rating:

8.4

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	02	2400	2200	NE	None
Bedroom 1	ALM-001-01 A	03	1300	1800	NW	None
Bedroom 2	ALM-001-01 A	04	1300	1200	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	4000	2700	NW	No	
Living / Dining / Kitchen	EW-006	1700	2700	SE	No	
Living / Dining / Kitchen	EW-010	2700	2700	NE	No	
Bedroom 1	EW-010	3000	2700	NW	No	
Bedroom 2	EW-010	3200	2700	NW	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	52.1		No
IW-002	Plasterboard	50.0		No

### Floors

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499094**

Certificate Date:

**21 May 2017**

★ Star rating:

**8.4**

## Building features continued

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	31.7			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	10.5			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	11.2			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.6			Ceramic tile
Hall / Laundry/Neighbour	carpet - concrete 200mm	4.3			Carpet 10 + rubber underlay 8

## Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall / Laundry	tiles - concrete 200mm		No

## Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
Hall / Laundry	1	Ceiling exhaust fan	160	Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499094

Certificate Date: 21 May 2017

★ Star rating: 8.4



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499102

Certificate Date: 21 May 2017

★ Star rating: 7.4



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 12, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Roof - N/A  
Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

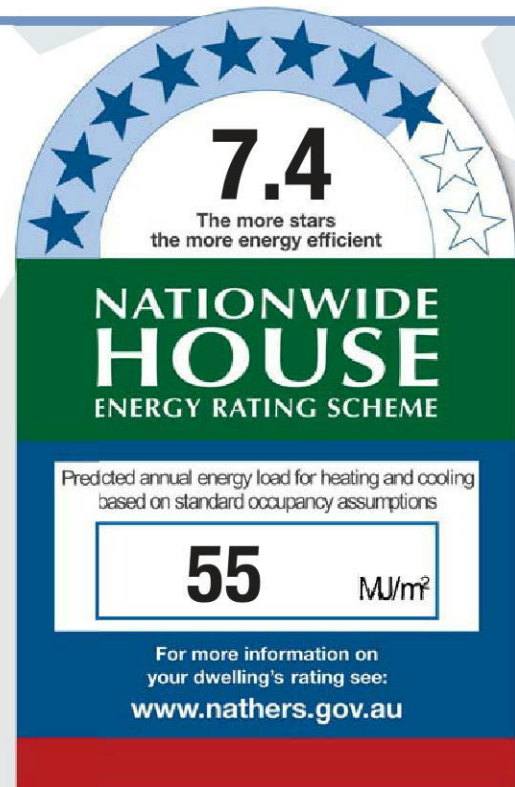
Conditioned: 67  
Unconditioned: 5  
Garage:  
TOTAL: 72

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

Heating: 28  
Cooling: 27  
TOTAL: 55

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 7.4  
+10% SHGC 7.5

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



Certificate number: **0001499102**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.4**

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	900	1800	NE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	3000	SE	None
Bedroom 1	ALM-001-01 A	03	900	1200	NE	None
Bedroom 1 Ens	ALM-001-01 A	04	900	600	NE	None
Bedroom 2	ALM-001-01 A	05	900	1800	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	5000	2700	NE	No	
Living / Dining / Kitchen	EW-010	3200	2700	SE	Yes	3000
Living / Dining / Kitchen	EW-010	1700	2700	NE	Yes	3800
Living / Dining / Kitchen	EW-010	2800	2700	SE	Yes	800
Bedroom 1	EW-010	3400	2700	NE	No	
Bedroom 1 Ens	EW-010	3500	2700	NW	No	
Bedroom 1 Ens	EW-010	900	2700	NE	No	
Bedroom 2	EW-010	3600	2700	SE	No	
Bedroom 2	EW-010	700	2700	SW	No	
Bedroom 2	EW-006	4800	2700	SE	No	
Bathroom	EW-006	2300	2700	SE	No	
Entry Hall	EW-006	4000	2700	SE	No	

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499102**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.4**

## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	52.1		No
IW-002	Plasterboard	23.8		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	27.0			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	12.9			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.2			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	11.7			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.9			Ceramic tile
Entry Hall/Neighbour	carpet - concrete 200mm	7.8			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	tiles - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Entry Hall	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

### Ceiling fans

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499102**

Certificate Date:

**21 May 2017**

★ Star rating:

**7.4**

## Building features continued

Location	Number	Diameter (mm)
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None Present		
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## Roof type

Construction	Added insulation	Roof colour
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None Present		
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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499102

Certificate Date: 21 May 2017

★ Star rating: 7.4



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499110

Certificate Date: 21 May 2017

★ Star rating: 6.8



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 13, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Suburban

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Concrete roof/Plasterboard Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

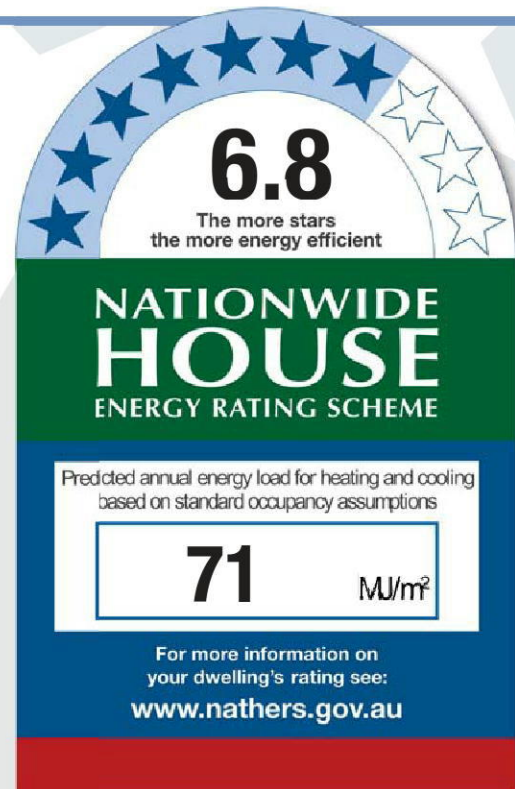
Conditioned: 85  
Unconditioned: 6  
Garage:  
TOTAL: 91

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

Heating: 39  
Cooling: 33  
TOTAL: 71

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 6.8  
+10% SHGC 6.8

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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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499110

Certificate Date:

21 May 2017

★ Star rating:

6.8

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	900	1800	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	2200	SE	None
Bedroom 1	ALM-002-01 A	03	1300	1800	NW	None
Bedroom 1 Ens	ALM-002-01 A	06	900	1000	SW	None
Bedroom 2	ALM-002-01 A	04	1300	1800	NW	None
Bedroom 3	ALM-002-01 A	05	1500	1400	SW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	600	2700	NE	No	
Living / Dining / Kitchen	EW-010	5100	2700	SE	No	
Living / Dining / Kitchen	EW-010	1800	2700	SW	Yes	1700
Living / Dining / Kitchen	EW-010	3800	2700	SE	Yes	2200
Living / Dining / Kitchen	EW-010	4000	2700	SW	No	
Living / Dining / Kitchen	EW-006	11500	2700	SE	No	
Bedroom 1	EW-010	3900	2700	NW	No	
Bedroom 1	EW-010	3500	2700	SW	No	
Bedroom 1 Ens	EW-010	1400	2700	SW	No	
Bedroom 2	EW-010	3000	2700	NW	No	
Bedroom 3	EW-010	3000	2700	SW	No	

\* 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)

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499110

Certificate Date:

21 May 2017

★ Star rating:

6.8



## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	73.2		No
IW-002	Plasterboard	25.9		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	39.3			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	13.2			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.3			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	10.5			Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	9.9			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.8			Ceramic tile
Hall/Neighbour	carpet - concrete 200mm	4.9			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	tiles - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	tiles - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall	tiles - concrete 200mm		No

### Ceiling penetrations

Location	Number	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed



# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499110

Certificate Date:

21 May 2017

★ Star rating:

6.8



## Building features continued

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R1.0 - Concrete slab 200mm - Drained Tile walking surface - R1.0 insulation under slab - Susp. Ceiling under	R1.0	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499110

Certificate Date: 21 May 2017

★ Star rating: 6.8



## Additional information

## Explanatory notes

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### Disclaimer

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### Contact

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499128

Certificate Date: 21 May 2017

★ Star rating: 6.8



## Assessor details

### Accreditation

number: VIC/BDAV/12/1475

Name: Robert Mallindine

Organisation: AGA Consultants Pty Ltd

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 15, 29-31 Castlereagh Street

Suburb: Penrith

State: NSW

Postcode: 2750

Type: New

NCC Class: 2

NatHERS

climate zone: 28

Lot/DP

number: -

Exposure: Open

### Key construction and insulation materials

(see following pages for details)

Construction: AAC

Roof - N/A

Slab

Insulation: R2.0 wall insulation

Ceiling (uninsulated)

Floor (uninsulated)

Glazing: Aluminium A SG Clear

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

Conditioned: 63

Unconditioned: 5

Garage:

TOTAL: 68

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

Heating: 36

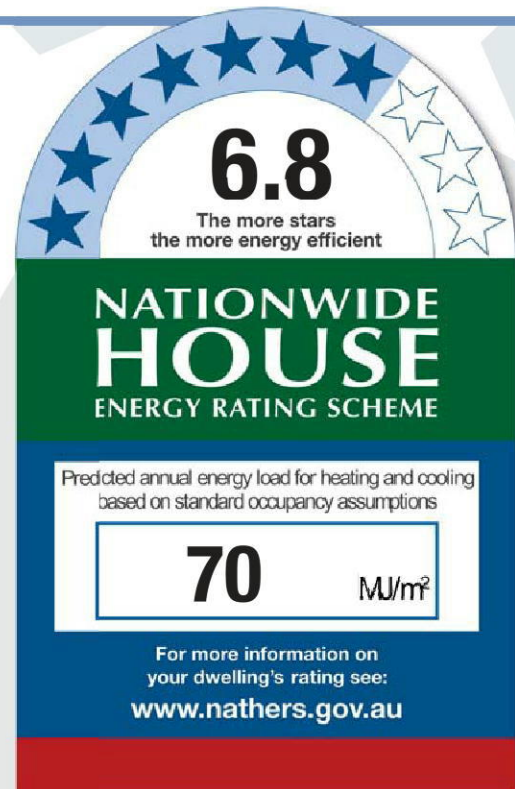
Cooling: 34

TOTAL: 70

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith

Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

Sealed: 0

Unsealed: 0

TOTAL:\*\* 0

\*\*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: No downlights modelled

### 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 6.8

+10% SHGC 6.8

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



Certificate number: 0001499128

Certificate Date:

21 May 2017

★ Star rating:

6.8

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	900	1800	NE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	3000	SE	None
Living / Dining / Kitchen	ALM-001-01 A	03	1500	2400	SE	None
Bedroom 1	ALM-001-01 A	04	1300	1200	NW	None
Bedroom 2	ALM-001-01 A	05	900	1200	NE	None
Bathroom	ALM-001-01 A	06	1500	2000	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	4000	2700	NE	No	
Living / Dining / Kitchen	EW-010	3400	2700	SE	Yes	2500
Living / Dining / Kitchen	EW-010	1300	2700	NE	Yes	3700
Living / Dining / Kitchen	EW-010	3600	2700	SE	Yes	1000
Living / Dining / Kitchen	EW-006	6100	2700	SE	No	
Bedroom 1	EW-010	4200	2700	NW	No	
Bedroom 1	EW-010	3000	2700	NE	No	
Bedroom 2	EW-010	2900	2700	NE	No	
Bathroom	EW-010	2700	2700	SE	No	
Bathroom	EW-006	1900	2700	SE	No	

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499128

Certificate Date:

21 May 2017

★ Star rating:

6.8



## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	44.6		No
IW-002	Plasterboard	20.5		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	33.2			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	13.0			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	9.9			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.1			Ceramic tile
Hall/Neighbour	carpet - concrete 200mm	2.7			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall	tiles - concrete 200mm		No

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: **0001499128**

Certificate Date:

**21 May 2017**

★ Star rating:

**6.8**

## Building features continued

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499128

Certificate Date: 21 May 2017

★ Star rating: 6.8



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499136

Certificate Date: 21 May 2017

★ Star rating: 8.4



## Assessor details

### Accreditation

number: VIC/BDAV/12/1475

Name: Robert Mallindine

Organisation: AGA Consultants Pty Ltd

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 17, 29-31 Castlereagh Street

Suburb: Penrith

State: NSW

Postcode: 2750

Type: New

NCC Class: 2

NatHERS

climate zone: 28

Lot/DP

number: -

Exposure: Open

### Key construction and insulation materials

(see following pages for details)

Construction: AAC

Roof - N/A

Slab

Insulation: R2.0 wall insulation

Ceiling (uninsulated)

Floor (uninsulated)

Glazing: Aluminium B SG Clear

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

Conditioned: 48

Unconditioned: 4

Garage:

TOTAL: 52

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

Heating: 17

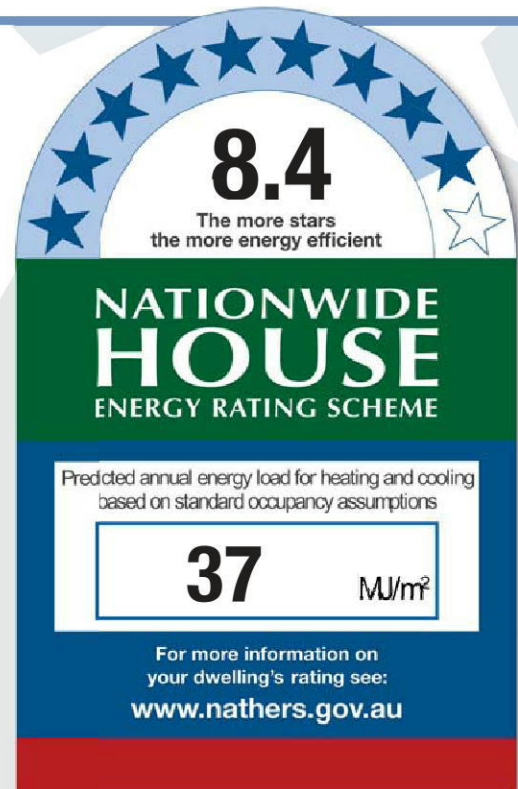
Cooling: 19

TOTAL: 37

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith

Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

Sealed: 0

Unsealed: 0

TOTAL:\*\* 0

\*\*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: No downlights modelled

### 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 8.2

+10% SHGC 8.4

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: 0001499136

Certificate Date:

21 May 2017

★ Star rating:

8.4

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	1300	2200	NE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	1800	NE	None
Bedroom 1	ALM-001-01 A	03	1600	1200	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	3600	2700	NW	No	
Living / Dining / Kitchen	EW-010	2700	2700	NE	No	
Living / Dining / Kitchen	EW-010	3000	2700	NE	Yes	2700
Living / Dining / Kitchen	EW-010	2600	2700	NW	Yes	3000
Living / Dining / Kitchen	EW-006	4600	2700	SE	No	
Bedroom 1	EW-010	2900	2700	NW	No	
Bedroom 1	EW-010	2800	2700	SW	Yes	3000
Bathroom	EW-006	3000	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	19.2		No

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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499136

Certificate Date:

21 May 2017

★ Star rating:

8.4

## Building features continued

IW-002	Plasterboard	42.7	No
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## Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	30.7			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	13.7			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.2			Ceramic tile

## Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No

## Ceiling penetrations

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

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499136

Certificate Date: 21 May 2017

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## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499144

Certificate Date: 21 May 2017

★ Star rating: 6.3



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 16, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Open

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Roof - N/A  
Slab  
Insulation: R2.0 wall insulation  
Ceiling (uninsulated)  
Floor (uninsulated)  
Glazing: Aluminium A SG Clear

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

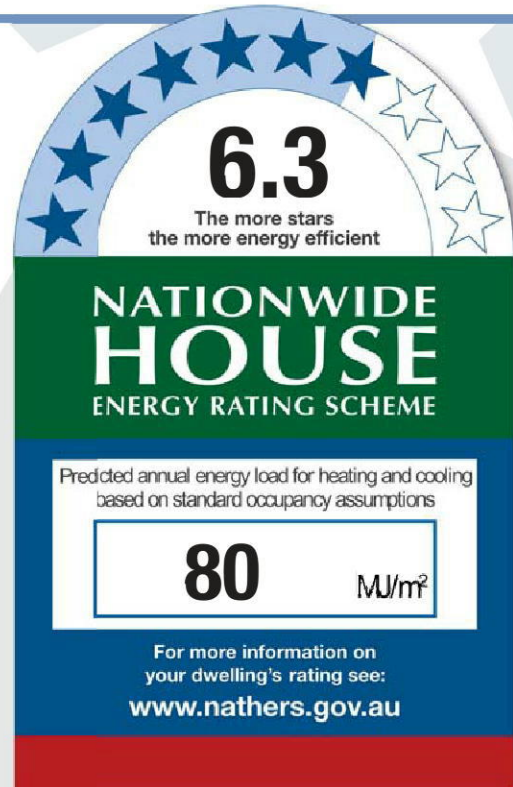
Conditioned: 65  
Unconditioned: 5  
Garage:  
TOTAL: 70

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

Heating: 50  
Cooling: 30  
TOTAL: 80

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

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

\*\*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: No downlights modelled

### 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 6.3  
+10% SHGC 6.3

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.**

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



# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499144

Certificate Date:

21 May 2017

★ Star rating:

6.3

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-001-01 A	01	1500	4800	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	1800	SW	None
Bedroom 1	ALM-002-01 A	03	600	1800	SW	None
Bedroom 2	ALM-002-01 A	04	600	1800	SW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	6800	2700	SE	No	
Living / Dining / Kitchen	EW-010	7100	2700	SW	Yes	2000
Living / Dining / Kitchen	EW-006	8200	2700	SE	No	
Bedroom 1	EW-010	3300	2700	NW	No	
Bedroom 1	EW-010	4100	2700	SW	No	
Bedroom 2	EW-010	3000	2700	SW	Yes	2000
Bathroom	EW-010	1800	2700	NW	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	46.2		No
IW-002	Plasterboard	23.0		No

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499144

Certificate Date:

21 May 2017

★ Star rating:

6.3



## Building features continued

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	29.6			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	2.4			Carpet 10 + rubber underlay 8
Bedroom 1/Neighbour	carpet - concrete 200mm	13.7			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	10.7			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.2			Ceramic tile
Hall/Neighbour	carpet - concrete 200mm	4.2			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bedroom	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No
Neighbour/Hall	tiles - concrete 200mm		No

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
None Present		

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499144

Certificate Date: 21 May 2017

★ Star rating: 6.3



## Additional information

## Explanatory notes

### About this report

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### Contact

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For more details see [www.nathers.gov.au](http://www.nathers.gov.au)

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499151-01

Certificate Date: 21 Sep 2017

★ Star rating: 4.9



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
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 18, 29-31 Castlereagh Street**  
Suburb: **Penrith**  
State: **NSW** Postcode: **2750**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **28**  
Lot/DP number: - Exposure: **Open**

### Key construction and insulation materials

(see following pages for details)

Construction: **AAC**  
**Metal roof/Plasterboard Slab**  
Insulation: **R2.0 wall insulation**  
**Floor (uninsulated)**  
Glazing: **Aluminium A SG Low Solar Gain Low-E**

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

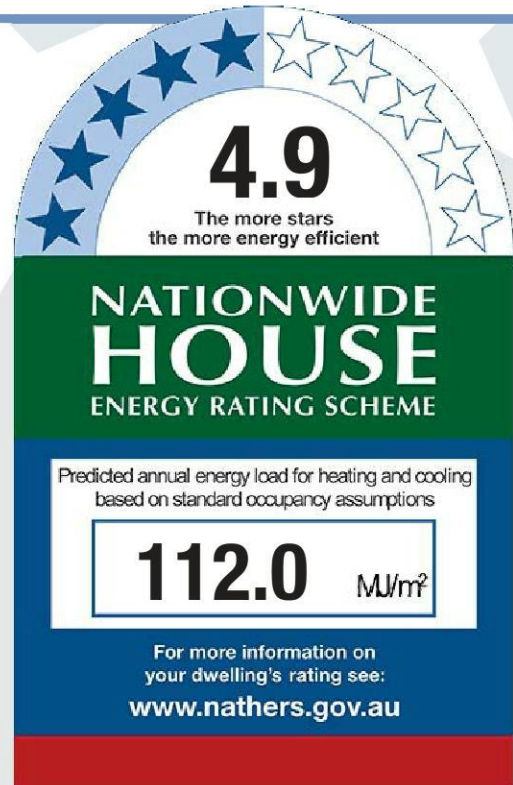
Conditioned: **63.0**  
Unconditioned: **5.0**  
Garage: **68.0**  
TOTAL: **68.0**

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

Heating: **50.0**  
Cooling: **62.0**  
TOTAL: **112.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**  
Prepared by: **CAD Plans**



### Ceiling penetrations

(see following pages for details)

Sealed: **2**  
Unsealed: **0**  
TOTAL:\*\* **2**

\*\*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: **No downlights modelled**

### 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 **5.1**  
+10% SHGC **4.9**

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

Certificate number: 0001499151-01

Certificate Date:

21 Sep 2017

★ Star rating:

4.9



## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-04 A	DEFAULTS: Aluminium A SG Low Solar Gain Low-E	5.6	0.36
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	900	1800	NE	None
Living / Dining / Kitchen	ALM-002-04 A	02	2400	3000	SE	None
Living / Dining / Kitchen	ALM-001-04 A	03	1500	2400	SE	None
Bedroom 1	ALM-001-04 A	04	1300	1200	NW	None
Bedroom 2	ALM-001-04 A	05	900	1200	NE	None
Bathroom	ALM-001-04 A	06	1500	2000	SE	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	4000	2700	NE	No	
Living / Dining / Kitchen	EW-010	3400	2700	SE	Yes	2400
Living / Dining / Kitchen	EW-010	1300	2700	NE	Yes	900
Living / Dining / Kitchen	EW-010	3600	2700	SE	Yes	800
Living / Dining / Kitchen	EW-006	6100	2700	SE	No	
Bedroom 1	EW-010	4200	2700	NW	No	
Bedroom 1	EW-010	3000	2700	NE	No	
Bedroom 2	EW-010	2900	2700	NE	No	
Bathroom	EW-010	2700	2700	SE	Yes	800
Bathroom	EW-006	1900	2700	SE	No	

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# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499151-01

Certificate Date:

21 Sep 2017

★ Star rating:

4.9

## Building features continued

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	44.6		No
IW-002	Plasterboard	20.5		No

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	33.2			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	13.0			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	9.9			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.1			Ceramic tile
Hall/Neighbour	carpet - concrete 200mm	2.7			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
None Present			

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour
R2.5 - Metal Deck - Horiz pitch Colourbond steel roof with R2.5 bulk insul + Plasterb'd ceiling under	R2.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499151-01

Certificate Date: 21 Sep 2017

★ Star rating: 4.9



## Additional information

## Explanatory notes

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499169-01

Certificate Date: 21 Sep 2017

★ Star rating: 4.7



## Assessor details

Accreditation number: **VIC/BDAV/12/1475**  
Name: **Robert Mallindine**  
Organisation: **AGA Consultants Pty Ltd**  
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 19, 29-31 Castlereagh Street**  
Suburb: **Penrith**  
State: **NSW** Postcode: **2750**  
Type: **New** NCC Class: **2**  
NatHERS climate zone: **28**  
Lot/DP number: - Exposure: **Open**

### Key construction and insulation materials

(see following pages for details)

Construction: **AAC**  
**Metal roof/Plasterboard Slab**  
Insulation: **R2.0 wall insulation**  
**Floor (uninsulated)**  
Glazing: **Aluminium A SG Clear**

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

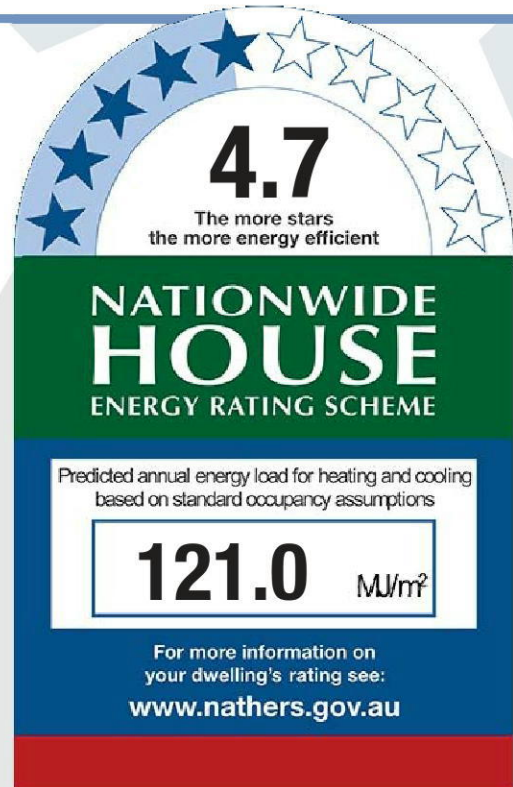
Conditioned: **65.0**  
Unconditioned: **5.0**  
Garage:  
TOTAL: **70.0**

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

Heating: **62.0**  
Cooling: **60.0**  
TOTAL: **121.0**

### Plan documents

Plan ref/date: **29-31 Castlereagh Street, Penrith**  
Prepared by: **CAD Plans**



### Ceiling penetrations

(see following pages for details)

Sealed: **2**  
Unsealed: **0**  
TOTAL:\*\* **2**

\*\*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: **No downlights modelled**

### 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 **4.7**  
+10% SHGC **4.6**

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**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: **0001499169-01** Certificate Date: **21 Sep 2017** ★ Star rating: **4.7**

## 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

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-001-01 A	01	1500	4800	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	1800	SW	None
Bedroom 1	ALM-002-01 A	03	600	1800	SW	None
Bedroom 2	ALM-002-01 A	04	600	1800	SW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-010	AAC	Polystyrene extruded: R2.0	No
EW-013	Concrete wall/Plasterboard	Polystyrene extruded: R1.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	6800	2700	SE	Yes	800
Living / Dining / Kitchen	EW-010	7100	2700	SW	No	
Living / Dining / Kitchen	EW-013	8200	2700	SE	No	
Bedroom 1	EW-010	3300	2700	NW	No	
Bedroom 1	EW-010	4100	2700	SW	No	
Bedroom 2	EW-010	3000	2700	SW	No	
Bathroom	EW-010	1800	2700	NW	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	46.2		No
IW-002	Plasterboard	23.0		No

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499169-01

Certificate Date:

21 Sep 2017

★ Star rating:

4.7



## Building features continued

### Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	29.6			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	2.4			Carpet 10 + rubber underlay 8
Bedroom 1/Neighbour	carpet - concrete 200mm	13.7			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	10.7			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	5.2			Ceramic tile
Hall/Neighbour	carpet - concrete 200mm	4.2			Carpet 10 + rubber underlay 8

### Ceiling type

Location	Construction	Added insulation	Roof space above
None Present			

### Ceiling penetrations

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

### Ceiling fans

Location	Number	Diameter (mm)
None Present		

### Roof type

Construction	Added insulation	Roof colour	
R2.5 - Metal Deck - Horiz pitch + Plasterb'd ceiling under	Colourbond steel roof with R2.5 bulk insul	R2.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499169-01

Certificate Date: 21 Sep 2017

★ Star rating: 4.7



## Additional information

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# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499177

Certificate Date: 21 May 2017

★ Star rating: 6.4



## Assessor details

Accreditation number: VIC/BDAV/12/1475  
Name: Robert Mallindine  
Organisation: AGA Consultants Pty Ltd  
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 20, 29-31 Castlereagh Street  
Suburb: Penrith  
State: NSW Postcode: 2750  
Type: New NCC Class: 2  
NatHERS climate zone: 28  
Lot/DP number: - Exposure: Open

### Key construction and insulation materials

(see following pages for details)

Construction: AAC  
Metal roof/Plasterboard Slab  
Insulation: R2.0 wall insulation  
Floor (uninsulated)  
Glazing: Aluminium B SG Clear

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

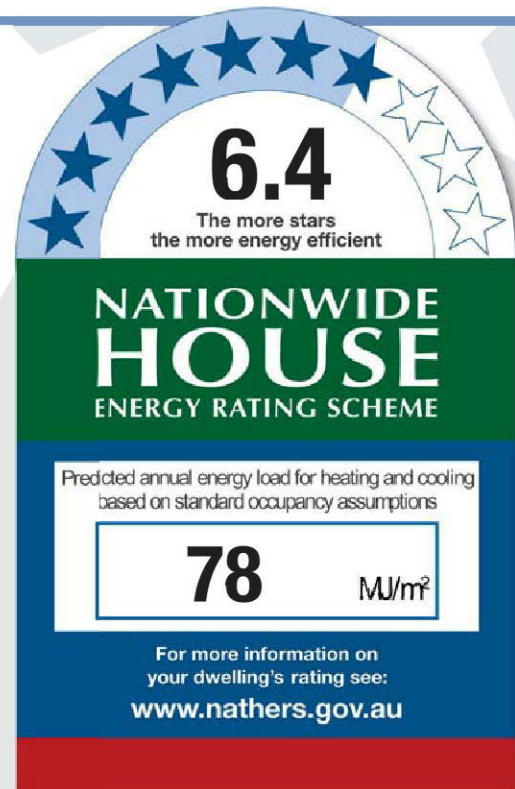
Conditioned: 48  
Unconditioned: 4  
Garage:  
TOTAL: 52

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

Heating: 34  
Cooling: 44  
TOTAL: 78

### Plan documents

Plan ref/date: 29-31 Castlereagh Street, Penrith  
Prepared by: CAD Plans



### Ceiling penetrations

(see following pages for details)

Sealed: 2  
Unsealed: 0  
TOTAL:\*\* 2

\*\*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: No downlights modelled

### 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 6.4  
+10% SHGC 6.4

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



Certificate number: 0001499177

Certificate Date:

21 May 2017

★ Star rating:

6.4

## Building features

### Window type and performance value

Window ID	Window type	U-value	SHGC
ALM-001-01 A	DEFAULTS: Aluminium A SG Clear	6.70	0.57
ALM-002-01 A	DEFAULTS: Aluminium B SG Clear	6.70	0.70

### Window schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Outdoor shade
Living / Dining / Kitchen	ALM-002-01 A	01	1300	2200	NE	None
Living / Dining / Kitchen	ALM-002-01 A	02	2400	1800	NE	None
Bedroom 1	ALM-001-01 A	03	1300	1200	NW	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 (m <sup>2</sup> )	Orientation	Outdoor shade	Indoor shade/diffuser
None Present						

### External wall type

ID	Wall type	Insulation	Wall wrap or foil
EW-006	AAC	Polystyrene expanded (k = 0.039): R0.5	No
EW-010	AAC	Polystyrene extruded: R2.0	No

### External wall schedule

Location	ID	Width (mm)	Height (mm)	Orientation	Fixed Shade	Eaves (mm)
Living / Dining / Kitchen	EW-010	3600	2700	NW	No	
Living / Dining / Kitchen	EW-010	2700	2700	NE	No	
Living / Dining / Kitchen	EW-010	3000	2700	NE	Yes	2700
Living / Dining / Kitchen	EW-010	2600	2700	NW	Yes	3000
Living / Dining / Kitchen	EW-006	4600	2700	SE	No	
Bedroom 1	EW-010	2900	2700	NW	No	
Bedroom 1	EW-010	2800	2700	SW	Yes	3000
Bathroom	EW-006	3000	2700	SE	No	

### Internal wall type

ID	Wall type	Area (m <sup>2</sup> )	Insulation	Wall wrap or foil
IW-001	Plasterboard	19.2		No

\* 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)

# Nationwide House Energy Rating Scheme\* Certificate



Certificate number: 0001499177

Certificate Date:

21 May 2017

★ Star rating:

6.4

## Building features continued

IW-002	Plasterboard	42.7	No
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## Floors

Location	Construction	Area (m <sup>2</sup> )	Sub floor ventilation	Added insulation	Covering
Living / Dining / Kitchen/Neighbour	carpet - concrete 200mm	30.7			Carpet 10 + rubber underlay 8
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	4.0			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	13.7			Carpet 10 + rubber underlay 8
Bathroom/Neighbour	tiles - concrete 200mm	4.2			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	1	Ceiling exhaust fan	160	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

## Ceiling fans

Location	Number	Diameter (mm)
None Present		

## Roof type

Construction	Added insulation	Roof colour	
R2.5 - Metal Deck - Horiz pitch + Plasterb'd ceiling under	Colourbond steel roof with R2.5 bulk insul	R2.5	Medium

# Nationwide House Energy Rating Scheme\* Certificate

Certificate number: 0001499177

Certificate Date: 21 May 2017

★ Star rating: 6.4



## 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 (NatHERS) is an initiative of the Australian, state and territory governments.

For more details see [www.nathers.gov.au](http://www.nathers.gov.au)