

Nationwide House Energy Rating Scheme* — Class 2 summary



Certificate Number: **B17E7OGIPI**

Date of Certificate: **13 Dec 2019**

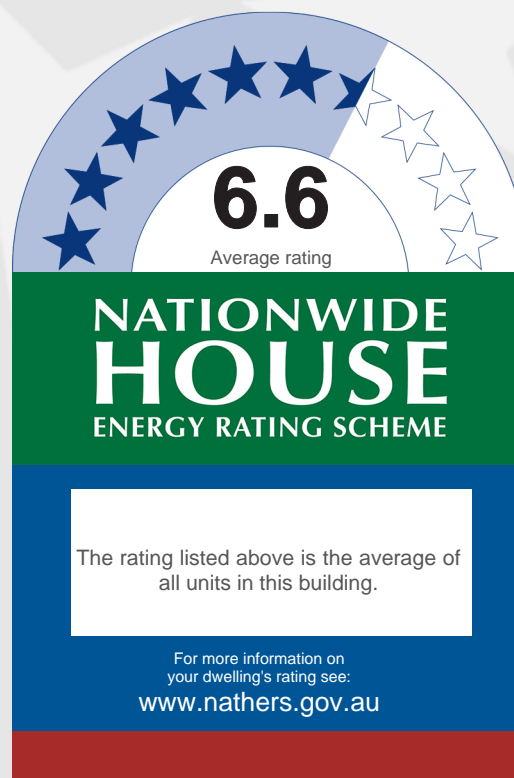
★ Average star rating: **6.6**

Assessor details

Accreditation number: **VIC/BDAV/14/1658**
Name: **Duncan Hope**
Organisation: **Senica Consultancy Group**
Email: **duncan@senica.com.au**
Phone: **61280067784**
Declaration of interest: **Employed by organisation constructing the building**
Software: **FirstRate5 v5.2.11**
AAO: **BDAV**

Dwelling details

Address: **21 Whistler Street**
Suburb: **MANLY**
State: **NSW**
Postcode: **2095**



Summary of all dwellings

Certification details

Certificate number	Unit number	Annual thermal performance loads (MJ/m2)			Star rating
		Heating load	Cooling load	Total load	
3C2RAU2QVC	101	25.8	17.9	43.7	6.6
JMK1PV3128	102	12.4	17.5	29.9	7.7
L6ZAJD4I29	201	34.4	16.7	51.1	5.9
RI86914L7X	202	13.9	17.3	31.2	7.6
QF9HUPU6FG	301	35.3	15.4	50.7	6
VAMZCH55ZE	302	14.7	16.7	31.4	7.5
3W38HDMKDS	401	42.4	19.5	61.9	5.3
N4DKTCFDC3	402	25.2	19.9	45.1	6.4

This building achieves an average star rating of: **6.6**

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 3C2RAU2QVC

Date of Certificate: 13 Dec 2019

★ Star rating: 6.6



Assessor details

Accreditation number: VIC/BDAV/14/1658
Name: Duncan Hope
Organisation: Senica Consultancy Group
Email: duncan@senica.com.au
Phone: 61280067784
Declaration of interest: Employed by organisation constructing the building
Software: FirstRate5: 5.2.11 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: 101, 21 Whistler Street
Suburb: MANLY
State: NSW Postcode: 2095
Type: New Home NCC Class: Class 2
Lot/DP number: - NatHERS climate zone: 56
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: As indicated
Roof: As indicated
Floor: As indicated
Insulation: Wall: As indicated
Roof: As indicated
Floor: As indicated
Glazing: As indicated
As indicated

Net floor area (m²)

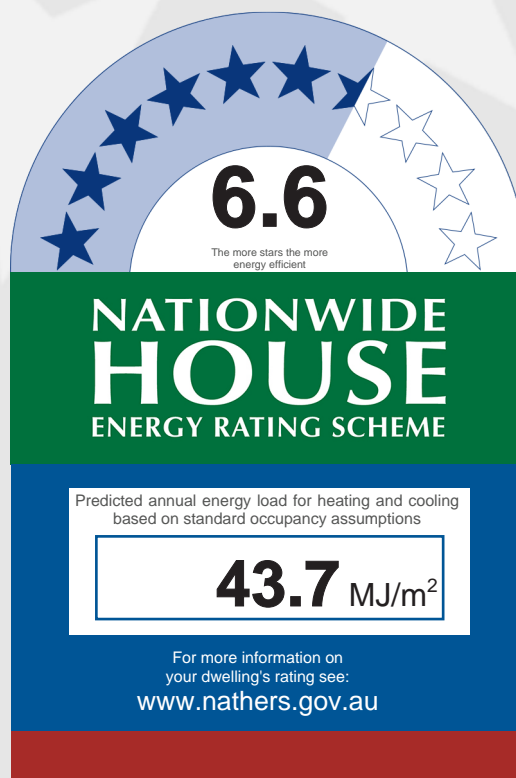
Conditioned: 76
Unconditioned: 3.2
Garage: -
TOTAL: 79.2

Annual thermal performance loads (MJ/m²)

Heating: 25.8
Cooling: 17.9
TOTAL: 43.7

Plan documents

Plan ref/date: Project No. 21806
Prepared by: Wolski Coppin Architecture



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: Compact fluorescent

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

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<https://www.fr5.com.au/QRCodeLand ing?PublicId=3C2RAU2QVC>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **3C2RAU2QVC**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.6**



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	24.30	1500	2951	ESE	Bedroom	No
ALM-002-01 A	Opening 14	1500	653	ESE	Ensuite	No
ALM-002-01 A	15.10dh	2400	1200	WNW	Bedroom	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	24.23sd	2400	600	NNE	Kitchen/Living	No
ALM-002-01 A	24.18c	2400	2100	WNW	Kitchen/Living	No
ALM-002-01 A	21.28SW	1800	2800	SSW	Kitchen/Living	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	NNE	Bathroom	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	10.9	NNE	Bedroom	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	8.3	ESE	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	2.4	ESE	Ensuite	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	SSW	Bedroom	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.3	NNE	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Bedroom	No	Yes

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 3C2RAU2QVC

Date of Certificate: 13 Dec 2019

★ Star rating: 6.6



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	2.7	NNE	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.2	NNE	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6	WNW	Entry	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	12.1	ESE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	NNE	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.4	SSW	Kitchen/Living	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	66.1	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Bathroom	FR5 - 150mm concrete slab Lined	3.2	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	15.7	Enclosed	R0.0	Tiles
Ensuite	FR5 - 150mm concrete slab Lined	2.9	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	9.7	Enclosed	R0.0	Tiles
Entry	FR5 - 150mm concrete slab Lined	8.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 150mm concrete slab Lined	39	Enclosed	R0.0	Tiles

Ceiling type

Location	Material	Added insulation	Roof space above
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Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Material	Added insulation	Roof colour
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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **3C2RAU2QVC**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.6**



Building Features

Slab: Slab - Suspended Slab : 150mm: 150mm Suspended Slab

0.0

medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 3C2RAU2QVC

Date of Certificate: 13 Dec 2019

★ Star rating: 6.6



Additional information

Explanatory notes

About this report

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General Information

A NatHERS House Energy Rating is a comprehensive, dynamic computer modelling evaluation of the floorplans, elevations and specifications to predict an energy load of a home. Not all of us use our homes in the same way, so ratings are generated using standard assumptions. This means homes can be compared across the country.

The actual energy consumption of your home may vary significantly from the predicted energy load figures in this 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 an 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).

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Disclaimer

The energy values quoted are for comparison purposes only; they are not a prediction of actual energy use. This rating only applies to the floor plan, construction details, orientation and climate as submitted and included in the attached drawing set that bears a stamp with the same number as this certificate. Changes to any of these details could affect the rating.

Contact

For more information on the Nationwide House Energy Rating Scheme (NatHERS), visit www.nathers.gov.au

For more information on energy efficient design and insulation visit www.yourhome.gov.au

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 3W38HDMKDS

Date of Certificate: 13 Dec 2019

★ Star rating: 5.3



Assessor details

Accreditation number: VIC/BDAV/14/1658
Name: Duncan Hope
Organisation: Senica Consultancy Group
Email: duncan@senica.com.au
Phone: 61280067784
Declaration of interest: Employed by organisation constructing the building
Software: FirstRate5: 5.2.11 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: 401, 21 Whistler Street
Suburb: MANLY
State: NSW Postcode: 2095
Type: New Home NCC Class: Class 2
Lot/DP number: - NatHERS climate zone: 56
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: As indicated
Roof: As indicated
Floor: As indicated
Insulation: Wall: As indicated
Roof: As indicated
Floor: As indicated
Glazing: As indicated
As indicated

Net floor area (m²)

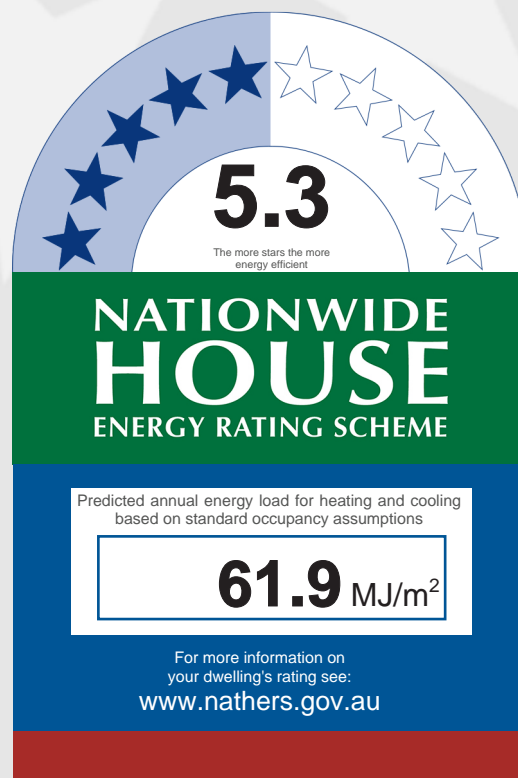
Conditioned: 119.4
Unconditioned: 0
Garage: -
TOTAL: 119.4

Annual thermal performance loads (MJ/m²)

Heating: 42.4
Cooling: 19.5
TOTAL: 61.9

Plan documents

Plan ref/date: Project No. 21806
Prepared by: Wolski Coppin Architecture



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: Compact fluorescent

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **3W38HDMKDS**

Date of Certificate: **13 Dec 2019**

★ Star rating: **5.3**



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	21.28SD	2100	2800	ESE	Bedroom 1	No
ALM-002-01 A	21.10SW	2100	1000	WNW	Entry/Study	No
ALM-002-01 A	21.10SW	2100	1000	WNW	Kitchen/Living	No
ALM-002-01 A	21.28SW	2100	2800	SSW	Kitchen/Living	No
ALM-002-01 A	21.08SW	2100	800	ESE	Kitchen/Living	No
ALM-002-01 A	21.08SW	2100	800	ESE	Kitchen/Living	No
ALM-002-01 A	21.24FD	2100	2400	NNE	Kitchen/Living	No
ALM-002-01 A	21.08FG	2100	800	ESE	Kitchen/Living	No
ALM-002-01 A	Opening 25	900	600	WNW	Ensuite	No
ALM-002-01 A	Opening 24	1500	3000	ESE	Bedroom 2	No
ALM-002-01 A	Opening 23	2100	4265	SSW	Bedroom 3	No
ALM-002-01 A	21.22SD	2100	2200	ESE	Bedroom 3	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.1	NNE	Ensuite	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	9.3	ESE	Bedroom 1	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	10.3	NNE	Bedroom 1	No	No

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **3W38HDMKDS**

Date of Certificate: **13 Dec 2019**

★ Star rating: **5.3**



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	6.2	WNW	Entry/Study	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.4	NNE	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Entry/Study	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	SSW	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	3.9	NNE	Entry/Study	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.5	NNE	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	SSW	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	10.9	ESE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.9	NNE	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	2.5	ESE	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	6.6	WNW	Ensuite	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	4.2	NNE	Ensuite	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	8.5	ESE	Bedroom 2	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	13.7	NNE	Bedroom 2	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	5.5	WNW	Bath	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	4.9	SSW	Bath	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.9	SSW	Bedroom 3	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9	ESE	Bedroom 3	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	5	WNW	Stairs	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.6	SSW	Stairs	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	5.3	NNE	Stairs	Yes	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	89.2	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Ensuite	FR5 - 150mm concrete slab Lined	4.3	Enclosed	R0.0	none
Bedroom 1	FR5 - 150mm concrete slab Lined	15.8	Enclosed	R0.0	none
Entry/Study	FR5 - 150mm concrete slab Lined	3.7	Enclosed	R0.0	none
Entry/Study	FR5 - 150mm concrete slab Lined	3.1	Enclosed	R0.0	none

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **3W38HDMKDS**

Date of Certificate: **13 Dec 2019**

★ Star rating: **5.3**



Building Features

Entry/Study	FR5 - 150mm concrete slab Lined	12.2	Enclosed	R0.0	none
Kitchen/Living	FR5 - 150mm concrete slab Lined	15.4	Enclosed	R0.0	none
Kitchen/Living	FR5 - 150mm concrete slab Lined	24.7	Enclosed	R0.0	none
Ensuite	FR5 - 150mm concrete slab Lined	3.8	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 150mm concrete slab Lined	14.6	Enclosed	R0.0	Carpet
Bath	FR5 - 150mm concrete slab Lined	3.7	Enclosed	R0.0	Carpet
Bedroom 3	FR5 - 150mm concrete slab Lined	13.9	Enclosed	R0.0	Carpet
Stairs	FR5 - 150mm concrete slab Lined	9.4	Enclosed	R0.0	Carpet

Ceiling type

Location	Material	Added insulation	Roof space above
Ensuite	FR5 - 150mm concrete slab Lined	R0.0	No
Ensuite	FR5 - 150mm concrete slab Lined	R0.0	No
Bedroom 1	FR5 - 150mm concrete slab Lined	R0.0	No
Bedroom 1	FR5 - 150mm concrete slab Lined	R0.0	No
Bedroom 1	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	Plasterboard	R3.0	No
Entry/Study	Plasterboard	R3.0	Yes
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	Plasterboard	R3.0	No
Ensuite	Plasterboard	R3.0	No
Bedroom 2	Plasterboard	R3.0	No
Bath	Plasterboard	R3.0	No
Bedroom 3	Plasterboard	R3.0	No
Stairs	Plasterboard	R3.0	No

Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **3W38HDMKDS**

Date of Certificate: **13 Dec 2019**

★ Star rating: **5.3**

Building Features

Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium
Cont:Attic-Continuous	0.0	medium
Framed:Flat - Flat Framed (Metal Deck)	0.0	medium

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Certificate Number: 3W38HDMKDS

Date of Certificate: 13 Dec 2019

★ Star rating: 5.3



Additional information

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: JMK1PV3128

Date of Certificate: 13 Dec 2019

★ Star rating: 7.7



Assessor details

Accreditation number: VIC/BDAV/14/1658
Name: Duncan Hope
Organisation: Senica Consultancy Group
Email: duncan@senica.com.au
Phone: 61280067784
Declaration of interest: Employed by organisation constructing the building
Software: FirstRate5: 5.2.11 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: 102, 21 Whistler Street
Suburb: MANLY
State: NSW Postcode: 2095
Type: New Home NCC Class: Class 2
Lot/DP number: - NatHERS climate zone: 56
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: As indicated
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Floor: As indicated
Insulation: Wall: As indicated
Roof: As indicated
Floor: As indicated
Glazing: As indicated
As indicated

Net floor area (m²)

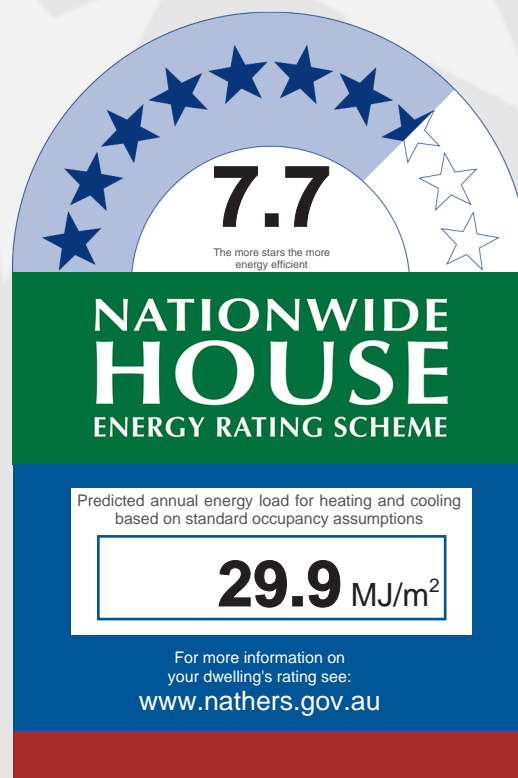
Conditioned: 73
Unconditioned: 3.2
Garage: -
TOTAL: 76.2

Annual thermal performance loads (MJ/m²)

Heating: 12.4
Cooling: 17.5
TOTAL: 29.9

Plan documents

Plan ref/date: Project No. 21806
Prepared by: Wolski Coppin Architecture



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: Compact fluorescent

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

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

If any of the windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be rerated to confirm compliance.

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



<https://www.fr5.com.au/QRCodeLand ing?PublicId=JMK1PV3128>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: JMK1PV3128

Date of Certificate: 13 Dec 2019

★ Star rating: 7.7



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	24.30	1500	2951	ESE	Bedroom	No
ALM-002-01 A	Opening 14	1500	800	ESE	Ensuite	No
ALM-002-01 A	15.10dh	2400	1200	WNW	Bedroom	No
ALM-002-01 A	21.28SW	1800	2800	NNE	Kitchen/Living	No
ALM-002-01 A	24.18c	2400	1800	WNW	Kitchen/Living	No
ALM-002-01 A	24.23sd	2400	600	SSW	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No
2 : FC Sheet - 90mm FC Sheet with R2.0	Glass fibre batt: R2.0 (R2.0)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	SSW	Bathroom	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	8.3	ESE	Bedroom	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	10.9	SSW	Bedroom	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	ESE	Ensuite	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Bedroom	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	1.3	SSW	Bedroom	Yes	Yes

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: JMK1PV3128

Date of Certificate: 13 Dec 2019

★ Star rating: 7.7



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	3.4	NNE	Bedroom	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	6	WNW	Entry	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	1.2	SSW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	2.7	SSW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	NNE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	5.6	WNW	Kitchen/Living	Yes	No
2 : FC Sheet - 90mm FC Sheet with R2.0	7.2	SSW	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	10.6	ESE	Kitchen/Living	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	65	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Bathroom	FR5 - 150mm concrete slab Lined	3.2	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	15.7	Enclosed	R0.0	Tiles
Ensuite	FR5 - 150mm concrete slab Lined	2.9	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	9.7	Enclosed	R0.0	Tiles
Entry	FR5 - 150mm concrete slab Lined	8.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 150mm concrete slab Lined	36.1	Enclosed	R0.0	Tiles

Ceiling type

Location	Material	Added insulation	Roof space above
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Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **JMK1PV3128**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.7**



Building Features

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **JMK1PV3128**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.7**



Additional information

Explanatory notes

About this report

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General Information

A NatHERS House Energy Rating is a comprehensive, dynamic computer modelling evaluation of the floorplans, elevations and specifications to predict an energy load of a home. Not all of us use our homes in the same way, so ratings are generated using standard assumptions. This means homes can be compared across the country.

The actual energy consumption of your home may vary significantly from the predicted energy load figures in this 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 an underlying engine developed by the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO).

All information relating to energy loads presented in this report is based on a range of standard assumptions in order to allow for comparisons with reports prepared for other homes and to demonstrate minimum regulatory compliance. The standard assumptions include figures for occupancy, indoor air temperature and are based on a unique climate file for your region.

Accredited Assessors

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If your assessor is unable to address your questions or concerns, please contact their AAO listed under 'assessor details'. You can also find a range of information about accredited assessors on the AAO websites.

Disclaimer

The energy values quoted are for comparison purposes only; they are not a prediction of actual energy use. This rating only applies to the floor plan, construction details, orientation and climate as submitted and included in the attached drawing set that bears a stamp with the same number as this certificate. Changes to any of these details could affect the rating.

Contact

For more information on the Nationwide House Energy Rating Scheme (NatHERS), visit www.nathers.gov.au

For more information on energy efficient design and insulation visit www.yourhome.gov.au

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **L6ZAJD4I29**

Date of Certificate: **13 Dec 2019**

★ Star rating: **5.9**



Assessor details

Accreditation number: **VIC/BDAV/14/1658**
Name: **Duncan Hope**
Organisation: **Senica Consultancy Group**
Email: **duncan@senica.com.au**
Phone: **61280067784**
Declaration of interest: **Employed by organisation constructing the building**
Software: **FirstRate5: 5.2.11 (3.13)**
AAO: **BDAV**

Overview

Dwelling details

Address: **201, 21 Whistler Street**
Suburb: **MANLY**
State: **NSW** Postcode: **2095**
Type: **New Home** NCC Class: **Class 2**
Lot/DP number: **-** NatHERS climate zone: **56**
Exposure: **suburban**

Key construction and insulation materials

(see following pages for details)

Construction: Wall: **As indicated**
Roof: **As indicated**
Floor: **As indicated**
Insulation: Wall: **As indicated**
Roof: **As indicated**
Floor: **As indicated**
Glazing: **As indicated**
As indicated

Net floor area (m²)

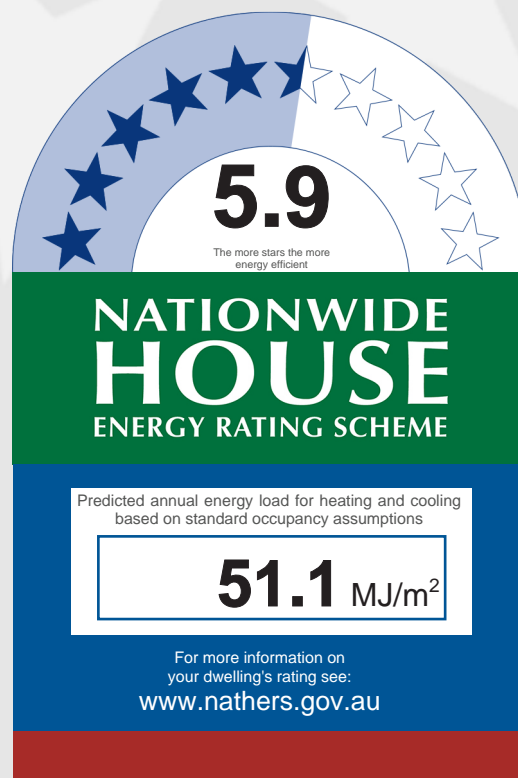
Conditioned: **75.7**
Unconditioned: **3.2**
Garage: **-**
TOTAL: **78.9**

Annual thermal performance loads (MJ/m²)

Heating: **34.4**
Cooling: **16.7**
TOTAL: **51.1**

Plan documents

Plan ref/date: **Project No. 21806**
Prepared by: **Wolski Coppin Architecture**



Ceiling penetrations

(see following pages for details)

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

Principal downlight type: **Compact fluorescent**

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: L6ZAJD4I29

Date of Certificate: 13 Dec 2019

★ Star rating: 5.9



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	24.30sd	2400	3000	ESE	Bedroom	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Bedroom	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	24.23sd	2400	2300	NNE	Kitchen/Living	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Kitchen/Living	No
ALM-002-01 A	21.28SW	1800	2800	SSW	Kitchen/Living	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No
2 : FC Sheet - 90mm FC Sheet with R2.0	Glass fibre batt: R2.0 (R2.0)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	NNE	Bathroom	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	11.2	NNE	Bedroom	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	8.3	ESE	Bedroom	Yes	Yes
2 : FC Sheet - 90mm FC Sheet with R2.0	3.4	ESE	Ensuite	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	SSW	Bedroom	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.3	NNE	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Bedroom	No	Yes

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: L6ZAJD4I29

Date of Certificate: 13 Dec 2019

★ Star rating: 5.9



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	2.7	NNE	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.2	NNE	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6	WNW	Entry	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.3	ESE	Kitchen/Living	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	6.5	NNE	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	SSW	Kitchen/Living	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	65.7	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Bathroom	FR5 - 150mm concrete slab Lined	3.2	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	16.1	Enclosed	R0.0	Tiles
Ensuite	FR5 - 150mm concrete slab Lined	3.1	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	9.7	Enclosed	R0.0	Tiles
Entry	FR5 - 150mm concrete slab Lined	8.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 150mm concrete slab Lined	38.2	Enclosed	R0.0	Tiles

Ceiling type

Location	Material	Added insulation	Roof space above
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Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **L6ZAJD4I29**

Date of Certificate: **13 Dec 2019**

★ Star rating: **5.9**

Building Features

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: L6ZAJD4I29

Date of Certificate: 13 Dec 2019

★ Star rating: 5.9



Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: N4DKTCFDC3

Date of Certificate: 13 Dec 2019

★ Star rating: 6.4



Assessor details

Accreditation number: VIC/BDAV/14/1658
Name: Duncan Hope
Organisation: Senica Consultancy Group
Email: duncan@senica.com.au
Phone: 61280067784
Declaration of interest: Employed by organisation constructing the building
Software: FirstRate5: 5.2.11 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: 402, 21 Whistler Street
Suburb: MANLY
State: NSW Postcode: 2095
Type: New Home NCC Class: Class 2
Lot/DP number: - NatHERS climate zone: 56
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: As indicated
Roof: As indicated
Floor: As indicated
Insulation: Wall: As indicated
Roof: As indicated
Floor: As indicated
Glazing: As indicated
As indicated

Net floor area (m²)

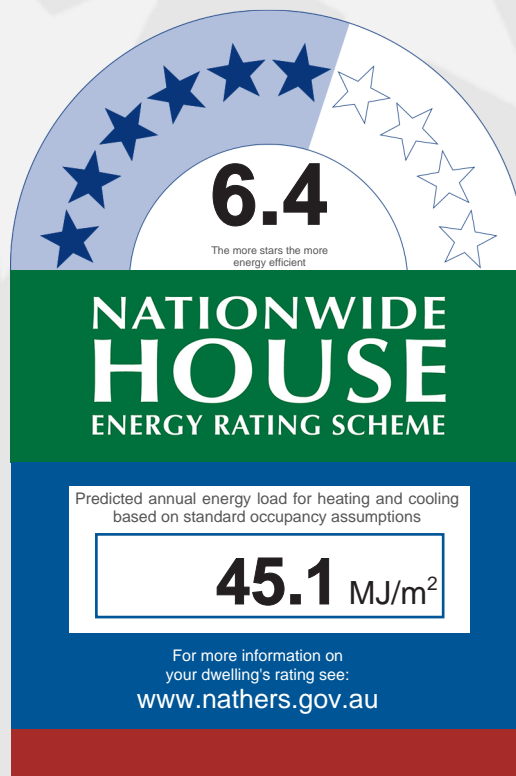
Conditioned: 119.4
Unconditioned: 0
Garage: -
TOTAL: 119.4

Annual thermal performance loads (MJ/m²)

Heating: 25.2
Cooling: 19.9
TOTAL: 45.1

Plan documents

Plan ref/date: Project No. 21806
Prepared by: Wolski Coppin Architecture



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: Compact fluorescent

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **N4DKTCFDC3**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.4**



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	21.28SD	2100	2800	ESE	Bedroom 1	No
ALM-002-01 A	21.10SW	2100	1000	WNW	Entry/Study	No
ALM-002-01 A	21.08FG	2100	800	ESE	Kitchen/Living	No
ALM-002-01 A	21.24FD	2100	2400	SSW	Kitchen/Living	No
ALM-002-01 A	21.08SW	2100	800	ESE	Kitchen/Living	No
ALM-002-01 A	21.08SW	2100	800	ESE	Kitchen/Living	No
ALM-002-01 A	21.28SW	2100	2800	NNE	Kitchen/Living	No
ALM-002-01 A	21.10SW	2100	1000	WNW	Kitchen/Living	No
ALM-002-01 A	Opening 25	900	600	WNW	Ensuite	No
ALM-002-01 A	Opening 24	1500	3000	ESE	Bedroom 2	No
ALM-002-01 A	21.22SD	2100	2200	ESE	Bedroom 3	No
ALM-002-01 A	Opening 23	2100	4265	NNE	Bedroom 3	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.1	SSW	Ensuite	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	10.3	SSW	Bedroom 1	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	9.3	ESE	Bedroom 1	Yes	Yes

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **N4DKTCFDC3**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.4**



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	1.5	SSW	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	3.9	SSW	Entry/Study	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	NNE	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Entry/Study	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.4	SSW	Entry/Study	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.2	WNW	Entry/Study	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	2.5	ESE	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	6.9	SSW	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	10.9	ESE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	NNE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	4.2	SSW	Ensuite	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.6	WNW	Ensuite	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	13.7	SSW	Bedroom 2	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	8.5	ESE	Bedroom 2	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	4.9	NNE	Bath	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	5.5	WNW	Bath	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9	ESE	Bedroom 3	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.9	NNE	Bedroom 3	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	5.3	SSW	Stairs	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.6	NNE	Stairs	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	5	WNW	Stairs	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	89.2	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Ensuite	FR5 - 150mm concrete slab Lined	4.3	Enclosed	R0.0	none
Bedroom 1	FR5 - 150mm concrete slab Lined	15.8	Enclosed	R0.0	none
Entry/Study	FR5 - 150mm concrete slab Lined	3.7	Enclosed	R0.0	none
Entry/Study	FR5 - 150mm concrete slab Lined	3.1	Enclosed	R0.0	none

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **N4DKTCFDC3**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.4**



Building Features

Entry/Study	FR5 - 150mm concrete slab Lined	12.2	Enclosed	R0.0	none
Kitchen/Living	FR5 - 150mm concrete slab Lined	15.4	Enclosed	R0.0	none
Kitchen/Living	FR5 - 150mm concrete slab Lined	24.7	Enclosed	R0.0	none
Ensuite	FR5 - 150mm concrete slab Lined	3.8	Enclosed	R0.0	Carpet
Bedroom 2	FR5 - 150mm concrete slab Lined	14.6	Enclosed	R0.0	Carpet
Bath	FR5 - 150mm concrete slab Lined	3.7	Enclosed	R0.0	Carpet
Bedroom 3	FR5 - 150mm concrete slab Lined	13.9	Enclosed	R0.0	Carpet
Stairs	FR5 - 150mm concrete slab Lined	9.4	Enclosed	R0.0	Carpet

Ceiling type

Location	Material	Added insulation	Roof space above
Ensuite	FR5 - 150mm concrete slab Lined	R0.0	No
Ensuite	FR5 - 150mm concrete slab Lined	R0.0	No
Bedroom 1	FR5 - 150mm concrete slab Lined	R0.0	No
Bedroom 1	FR5 - 150mm concrete slab Lined	R0.0	No
Bedroom 1	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	Plasterboard	R3.0	No
Entry/Study	Plasterboard	R3.0	Yes
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Entry/Study	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	FR5 - 150mm concrete slab Lined	R0.0	No
Kitchen/Living	Plasterboard	R3.0	No
Ensuite	Plasterboard	R3.0	No
Bedroom 2	Plasterboard	R3.0	No
Bath	Plasterboard	R3.0	No
Bedroom 3	Plasterboard	R3.0	No
Stairs	Plasterboard	R3.0	No

Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **N4DKTCFDC3**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.4**



Building Features

Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium
Cont:Attic-Continuous	0.0	medium
Framed:Flat - Flat Framed (Metal Deck)	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **N4DKTCFDC3**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6.4**



Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: QF9HUPU6FG

Date of Certificate: 13 Dec 2019

★ Star rating: 6



Assessor details

Accreditation number: VIC/BDAV/14/1658
Name: Duncan Hope
Organisation: Senica Consultancy Group
Email: duncan@senica.com.au
Phone: 61280067784
Declaration of interest: Employed by organisation constructing the building
Software: FirstRate5: 5.2.11 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: 301, 21 Whistler Street
Suburb: MANLY
State: NSW Postcode: 2095
Type: New Home NCC Class: Class 2
Lot/DP number: - NatHERS climate zone: 56
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: As indicated
Roof: As indicated
Floor: As indicated
Insulation: Wall: As indicated
Roof: As indicated
Floor: As indicated
Glazing: As indicated
As indicated

Net floor area (m²)

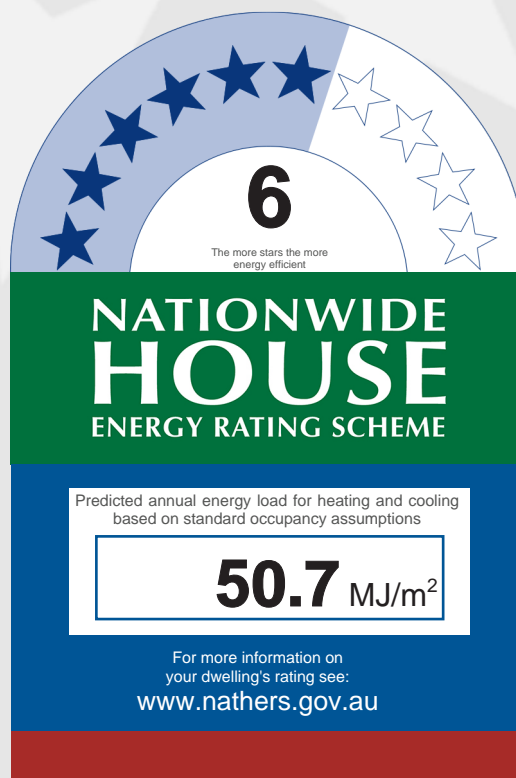
Conditioned: 75.7
Unconditioned: 3.2
Garage: -
TOTAL: 78.9

Annual thermal performance loads (MJ/m²)

Heating: 35.3
Cooling: 15.4
TOTAL: 50.7

Plan documents

Plan ref/date: Project No. 21806
Prepared by: Wolski Coppin Architecture



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: Compact fluorescent

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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

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

If any of the windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be rerated to confirm compliance.

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: QF9HUPU6FG

Date of Certificate: 13 Dec 2019

★ Star rating: 6



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	24.30sd	2400	3000	ESE	Bedroom	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Bedroom	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	24.23sd	2400	2300	NNE	Kitchen/Living	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Kitchen/Living	No
ALM-002-01 A	21.28SW	1800	2800	SSW	Kitchen/Living	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No
2 : FC Sheet - 90mm FC Sheet with R2.0	Glass fibre batt: R2.0 (R2.0)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	NNE	Bathroom	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	11.2	NNE	Bedroom	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	8.3	ESE	Bedroom	Yes	Yes
2 : FC Sheet - 90mm FC Sheet with R2.0	3.4	ESE	Ensuite	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	SSW	Bedroom	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.3	NNE	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Bedroom	No	Yes

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: QF9HUPU6FG

Date of Certificate: 13 Dec 2019

★Star rating: 6



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	2.7	NNE	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	1.2	NNE	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6	WNW	Entry	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.3	ESE	Kitchen/Living	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	6.5	NNE	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	SSW	Kitchen/Living	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	65.7	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Bathroom	FR5 - 150mm concrete slab Lined	3.2	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	16.1	Enclosed	R0.0	Tiles
Ensuite	FR5 - 150mm concrete slab Lined	3.1	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	9.7	Enclosed	R0.0	Tiles
Entry	FR5 - 150mm concrete slab Lined	8.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 150mm concrete slab Lined	38.2	Enclosed	R0.0	Tiles

Ceiling type

Location	Material	Added insulation	Roof space above
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Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **QF9HUPU6FG**

Date of Certificate: **13 Dec 2019**

★ Star rating: **6**



Building Features

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: QF9HUPU6FG

Date of Certificate: 13 Dec 2019

★ Star rating: 6



Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **RI86914L7X**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.6**



Assessor details

Accreditation number: **VIC/BDAV/14/1658**
Name: **Duncan Hope**
Organisation: **Senica Consultancy Group**
Email: **duncan@senica.com.au**
Phone: **61280067784**
Declaration of interest: **Employed by organisation constructing the building**
Software: **FirstRate5: 5.2.11 (3.13)**
AAO: **BDAV**

Overview

Dwelling details

Address: **202, 21 Whistler Street**
Suburb: **MANLY**
State: **NSW** Postcode: **2095**
Type: **New Home** NCC Class: **Class 2**
Lot/DP number: **-** NatHERS climate zone: **56**
Exposure: **suburban**

Key construction and insulation materials

(see following pages for details)

Construction: Wall: **As indicated**
Roof: **As indicated**
Floor: **As indicated**
Insulation: Wall: **As indicated**
Roof: **As indicated**
Floor: **As indicated**
Glazing: **As indicated**
As indicated

Net floor area (m²)

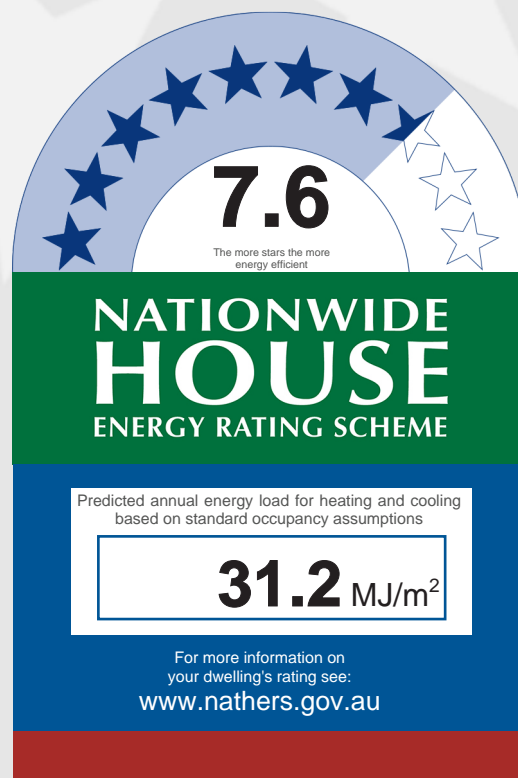
Conditioned: **75.7**
Unconditioned: **3.2**
Garage: **-**
TOTAL: **78.9**

Annual thermal performance loads (MJ/m²)

Heating: **13.9**
Cooling: **17.3**
TOTAL: **31.2**

Plan documents

Plan ref/date: **Project No. 21806**
Prepared by: **Wolski Coppin Architecture**



Ceiling penetrations

(see following pages for details)

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

Principal downlight type: **Compact fluorescent**

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

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Certificate Number: **RI86914L7X**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.6**



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	24.30sd	2400	2951	ESE	Bedroom	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Bedroom	No
ALM-002-01 A	21.28SW	1800	2800	NNE	Kitchen/Living	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Kitchen/Living	No
ALM-002-01 A	24.23sd	2400	2300	SSW	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No
2 : FC Sheet - 90mm FC Sheet with R2.0	Glass fibre batt: R2.0 (R2.0)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	SSW	Bathroom	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	8.3	ESE	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.2	SSW	Bedroom	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	3.4	ESE	Ensuite	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Bedroom	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	1.3	SSW	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	NNE	Bedroom	Yes	No

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **RI86914L7X**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.6**



Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	6	WNW	Entry	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	1.2	SSW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	2.7	SSW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	NNE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Kitchen/Living	Yes	No
2 : FC Sheet - 90mm FC Sheet with R2.0	6.5	SSW	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.3	ESE	Kitchen/Living	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	65.7	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Bathroom	FR5 - 150mm concrete slab Lined	3.2	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	16.1	Enclosed	R0.0	Tiles
Ensuite	FR5 - 150mm concrete slab Lined	3.1	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	9.7	Enclosed	R0.0	Tiles
Entry	FR5 - 150mm concrete slab Lined	8.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 150mm concrete slab Lined	38.2	Enclosed	R0.0	Tiles

Ceiling type

Location	Material	Added insulation	Roof space above
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Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **RI86914L7X**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.6**

Building Features

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **RI86914L7X**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.6**



Additional information

Explanatory notes

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Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **VAMZCH55ZE**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.5**



Assessor details

Accreditation number: **VIC/BDAV/14/1658**
Name: **Duncan Hope**
Organisation: **Senica Consultancy Group**
Email: **duncan@senica.com.au**
Phone: **61280067784**
Declaration of interest: **Employed by organisation constructing the building**
Software: **FirstRate5: 5.2.11 (3.13)**
AAO: **BDAV**

Overview

Dwelling details

Address: **302, 21 Whistler Street**
Suburb: **MANLY**
State: **NSW** Postcode: **2095**
Type: **New Home** NCC Class: **Class 2**
Lot/DP number: **-** NatHERS climate zone: **56**
Exposure: **suburban**

Key construction and insulation materials

(see following pages for details)

Construction: Wall: **As indicated**
Roof: **As indicated**
Floor: **As indicated**
Insulation: Wall: **As indicated**
Roof: **As indicated**
Floor: **As indicated**
Glazing: **As indicated**
As indicated

Net floor area (m²)

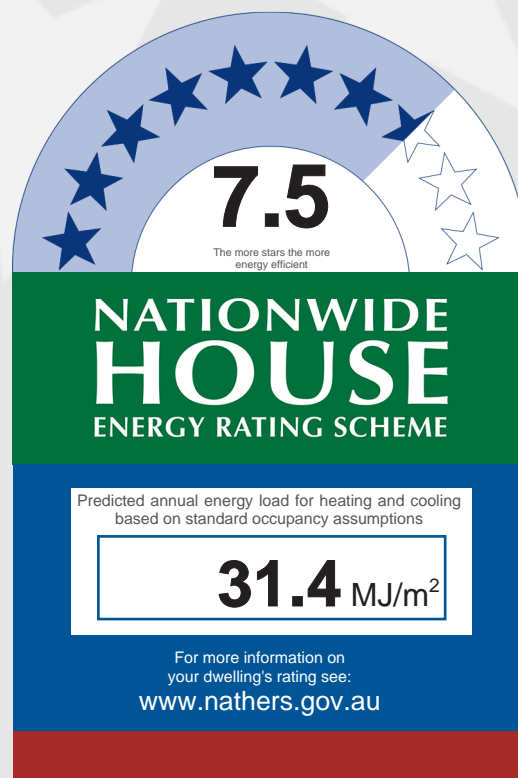
Conditioned: **75.7**
Unconditioned: **3.2**
Garage: **-**
TOTAL: **78.9**

Annual thermal performance loads (MJ/m²)

Heating: **14.7**
Cooling: **16.7**
TOTAL: **31.4**

Plan documents

Plan ref/date: **Project No. 21806**
Prepared by: **Wolski Coppin Architecture**



Ceiling penetrations

(see following pages for details)

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

Principal downlight type: **Compact fluorescent**

****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.

Window selection - default windows only

Note on allowable window values: Only a 5% tolerance to the nominated SHGC window values shown on page 2 can be used with this rating.

Note: Only a +/-5% SHGC tolerance is allowed with this rating.

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

If any of the windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be rerated to confirm compliance.

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



<https://www.fr5.com.au/QRCodeLand ing?PublicId=VAMZCH55ZE>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **VAMZCH55ZE**

Date of Certificate: **13 Dec 2019**

★ Star rating: **7.5**



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-002-01 A	24.30sd	2400	2951	ESE	Bedroom	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Bedroom	No
ALM-002-01 A	21.28SW	1800	2800	NNE	Kitchen/Living	No
ALM-002-01 A	15.10dh	1500	1000	WNW	Kitchen/Living	No
ALM-002-01 A	24.23sd	2400	2300	SSW	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No
ALM-002-01 A	18.09	1800	900	ESE	Kitchen/Living	No

Roof windows and skylight type and performance value

ID	Window type	U-value	SHGC
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Roof window and skylight schedule

ID	Roof window/ skylight no.	Area (m ²)	Orientation	Zone name	Outdoor shade	Indoor shade/diffuser
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External wall type

Type	Insulation	Wall wrap
1 : AFS - AFS 162mm (75mm Glasswool)	Rockwool batt (k = 0.033) (R2.3)	No
2 : FC Sheet - 90mm FC Sheet with R2.0	Glass fibre batt: R2.0 (R2.0)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : AFS - AFS 162mm (75mm Glasswool)	6.7	SSW	Bathroom	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	8.3	ESE	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.2	SSW	Bedroom	No	No
2 : FC Sheet - 90mm FC Sheet with R2.0	3.4	ESE	Ensuite	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	9.6	WNW	Bedroom	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	1.3	SSW	Bedroom	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	3.4	NNE	Bedroom	Yes	No

Nationwide House Energy Rating Scheme* Certificate

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Building Features

1 : AFS - AFS 162mm (75mm Glasswool)	6	WNW	Entry	No	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	1.2	SSW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	2.7	SSW	Entry	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	27.3	NNE	Kitchen/Living	No	No
1 : AFS - AFS 162mm (75mm Glasswool)	6.4	WNW	Kitchen/Living	Yes	No
1 : AFS - AFS 162mm (75mm Glasswool)	0.6	WNW	Kitchen/Living	Yes	No
2 : FC Sheet - 90mm FC Sheet with R2.0	6.5	SSW	Kitchen/Living	Yes	Yes
1 : AFS - AFS 162mm (75mm Glasswool)	11.3	ESE	Kitchen/Living	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	65.7	

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Bathroom	FR5 - 150mm concrete slab Lined	3.2	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	16.1	Enclosed	R0.0	Tiles
Ensuite	FR5 - 150mm concrete slab Lined	3.1	Enclosed	R0.0	Tiles
Bedroom	FR5 - 150mm concrete slab Lined	9.7	Enclosed	R0.0	Tiles
Entry	FR5 - 150mm concrete slab Lined	8.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - 150mm concrete slab Lined	38.2	Enclosed	R0.0	Tiles

Ceiling type

Location	Material	Added insulation	Roof space above
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Ceiling penetrations

Location	Number	Type	Width (mm)	Length (mm)	Seal/ unsealed
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Ceiling fans

Location	Number	Diameter (mm)
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Roof type

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **VAMZCH55ZE**

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Building Features

Material	Added insulation	Roof colour
Slab:Slab - Suspended Slab : 150mm: 150mm Suspended Slab	0.0	medium

Nationwide House Energy Rating Scheme* Certificate

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Additional information

Explanatory notes

About this report

Residential energy ratings address the quality of the building fabric i.e. walls, windows, floors and roof/ceilings. Ratings do not cover the energy or water efficiency of appliances including heating and cooling, hot water, dishwashers, ovens, fridges, TVs etc. or solar panel or water tank requirements. The efficiency or specification of these items is generally covered by other regulations, standards or guidelines.

General Information

A NatHERS House Energy Rating is a comprehensive, dynamic computer modelling evaluation of the floorplans, elevations and specifications to predict an energy load of a home. Not all of us use our homes in the same way, so ratings are generated using standard assumptions. This means homes can be compared across the country.

The actual energy consumption of your home may vary significantly from the predicted energy load figures in this 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 an underlying engine developed by the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO).

All information relating to energy loads presented in this report is based on a range of standard assumptions in order to allow for comparisons with reports prepared for other homes and to demonstrate minimum regulatory compliance. The standard assumptions include figures for occupancy, indoor air temperature and are based on a unique climate file for your region.

Accredited Assessors

To ensure you get a high-quality, professional NatHERS House Energy Rating report, you should always use an accredited assessor, accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

AAOs have specific quality assurance processes in place and continuing professional development requirements to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any on-going training requirements.

If you have any questions or concerns about this report, please direct them to your assessor in the first instance.

If your assessor is unable to address your questions or concerns, please contact their AAO listed under 'assessor details'. You can also find a range of information about accredited assessors on the AAO websites.

Disclaimer

The energy values quoted are for comparison purposes only; they are not a prediction of actual energy use. This rating only applies to the floor plan, construction details, orientation and climate as submitted and included in the attached drawing set that bears a stamp with the same number as this certificate. Changes to any of these details could affect the rating.

Contact

For more information on the Nationwide House Energy Rating Scheme (NatHERS), visit www.nathers.gov.au

For more information on energy efficient design and insulation visit www.yourhome.gov.au