

Nationwide House Energy Rating Scheme* — Class 2 summary



Certificate Number: **F96M7Q1S8Q**

Date of Certificate: **3 Oct 2018**

★ Average star rating: **5.9**

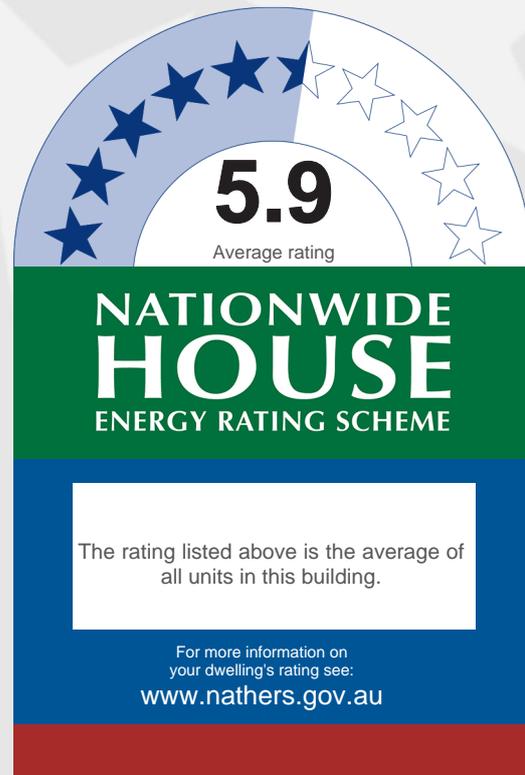
Assessor details

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 v5.2.9**
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/m ²) | | | Star rating |
|--------------------|-------------|-------------------------------------------------------|--------------|------------|-------------|
| | | Heating load | Cooling load | Total load | |
| 00VB9O20A4 | 101 | 39.5 | 20 | 59.5 | 5.4 |
| 4YNZJ6IZR4 | 102 | 18.5 | 21.7 | 40.2 | 6.9 |
| DVV3MJSYN4 | 201 | 23.4 | 18.8 | 42.2 | 6.7 |
| Q64JOXDGAT | 202 | 44 | 21.7 | 65.7 | 5 |
| BW2VH8T1CL | 301 | 24.3 | 17.9 | 42.2 | 6.7 |
| 4CEEIT3O2L | 302 | 45 | 20.7 | 65.7 | 5 |
| KEOCEM3VXC | 401 | 39.5 | 15.2 | 54.7 | 5.7 |
| 9CYD5R29VN | 402 | 33.7 | 15 | 48.7 | 6.2 |

This building achieves an average star rating of: **5.9**

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 00VB9020A4

Date of Certificate: 3 Oct 2018

★ Star rating: 5.4

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: 5.2.9 (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)

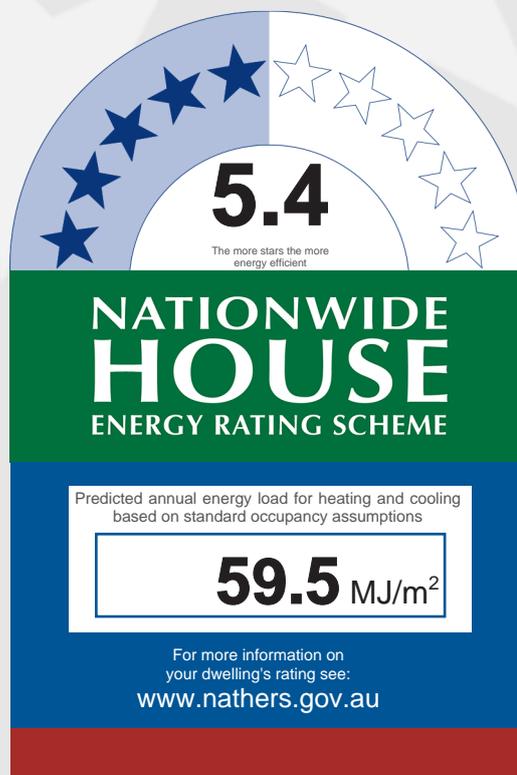
Conditioned: **71.6**
Unconditioned: **5**
Garage: **-**
TOTAL: **76.6**

Annual thermal performance loads (MJ/m²)

Heating: **39.5**
Cooling: **20**
TOTAL: **59.5**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=00VB9020A4>

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 00VB9020A4

Date of Certificate: 3 Oct 2018

★ Star rating: 5.4

Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|-------------------------------------|---------|------|
| TND-017-01 A | Trend AI Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend AI Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-004-06 A | Trend Quantum Sliding Window SG 5EA | 4.71 | 0.55 |
| TND-001-02 A | Trend AI Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 900 | WNW | Bedroom 2 | No |
| TND-004-06 A | Opening 5 | 1200 | 350 | SSW | Bath | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | SSW | Kitchen/Living | No |
| TND-001-02 A | 21.32 | 2100 | 3200 | ESE | Kitchen/Living | No |
| TND-001-02 A | Opening 12 | 1500 | 1200 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|-----------------------------------------|-----------|
| 1 : AFS - AFS 225 with 10mm EPS | Polystyrene expanded (k = 0.039) (R0.3) | 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 225 with 10mm EPS | 10.9 | SSW | Bedroom 1 | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 8.2 | ESE | Bedroom 1 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 8.2 | WNW | Bedroom 2 | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 9.8 | SSW | Bedroom 2 | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 5.2 | WNW | Bath | No | No |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 00VB9020A4

Date of Certificate: 3 Oct 2018

★ Star rating: 5.4

Building Features

| | | | | | |
|----------------------------------------|-----|-----|----------------|-----|-----|
| 1 : AFS - AFS 225 with 10mm EPS | 2.2 | SSW | Bath | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 8.1 | WNW | Entry | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 4.1 | NNE | Entry | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 0.9 | WNW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 5.7 | SSW | Kitchen/Living | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 0.5 | ESE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 0.8 | SSW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 9.2 | ESE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 1.2 | NNE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 1 | ESE | Kitchen/Living | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 24 | NNE | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 3.5 | ESE | Ensuite | Yes | Yes |

Internal wall type

| Type | Area (m ²) | Insulation |
|-------------------------------------------|------------------------|------------|
| 1 : FR5 - Internal Plasterboard Stud Wall | 66.3 | |

Floors

| Location | Construction | Area (m ²) | Sub floor ventilation | Added insulation | Covering |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 16.5 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.4 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 5 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 5.3 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 36.1 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.4 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------|----------|------------------|------------------|
|----------|----------|------------------|------------------|

Ceiling penetrations

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 00VB9020A4

Date of Certificate: 3 Oct 2018

★ Star rating: 5.4



Building Features

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|----------------------------------------------------------|------------------|-------------|
| Slab:Slab - Suspended Slab : 175mm: 175mm Suspended Slab | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 00VB9O20A4

Date of Certificate: 3 Oct 2018

★ Star rating: 5.4



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 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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 4CEEIT3O2L

Date of Certificate: 3 Oct 2018

★ Star rating: 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: 5.2.9 (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)

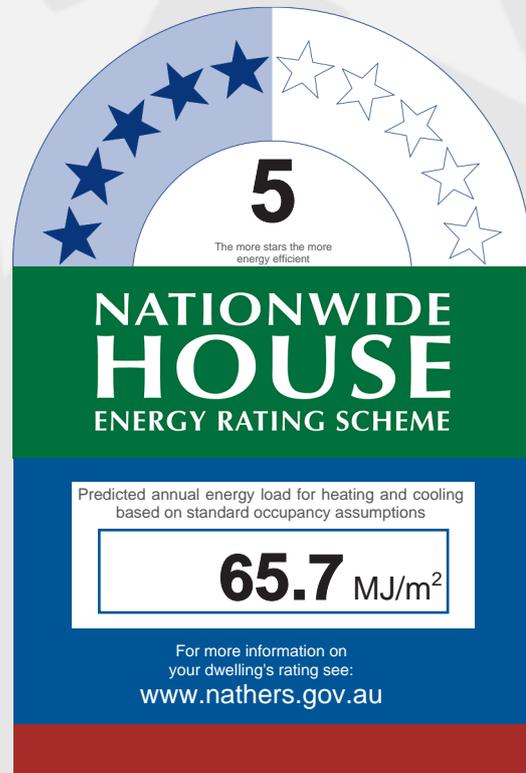
Conditioned: **72.2**
Unconditioned: **3.3**
Garage: **-**
TOTAL: **75.5**

Annual thermal performance loads (MJ/m²)

Heating: **45**
Cooling: **20.7**
TOTAL: **65.7**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=4CEEIT3O2L>

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 4CEEIT3O2L

Date of Certificate: 3 Oct 2018

★ Star rating: 5

Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|---------------------------------|---------|------|
| TND-017-01 A | Trend AI Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend AI Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-001-02 A | Trend AI Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 900 | WNW | Bedroom 2 | No |
| TND-001-02 A | Opening 15 | 2100 | 300 | WNW | Bath | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | SSW | Kitchen/Living | No |
| TND-001-02 A | 21.32 | 2100 | 3200 | ESE | Kitchen/Living | No |
| TND-001-02 A | Opening 12 | 1500 | 1200 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|-----------------------------------------|-----------|
| 1 : AFS - AFS 225 with 10mm EPS | Polystyrene expanded (k = 0.039) (R0.3) | 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 225 with 10mm EPS | 10.6 | SSW | Bedroom 1 | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 8.1 | ESE | Bedroom 1 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 3.9 | WNW | Bedroom 2 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 1.6 | NNE | Bedroom 2 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 4.3 | WNW | Bedroom 2 | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 10.1 | SSW | Bedroom 2 | No | No |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 4CEEIT302L

Date of Certificate: 3 Oct 2018

★ Star rating: 5

Building Features

| | | | | | |
|----------------------------------------|------|-----|----------------|-----|-----|
| 1 : AFS - AFS 225 with 10mm EPS | 2.7 | WNW | Bath | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 3.8 | SSW | Bath | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 10.6 | WNW | Entry | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 4 | NNE | Entry | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 0.9 | WNW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 5.7 | SSW | Kitchen/Living | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 0.5 | ESE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 0.8 | SSW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 9.2 | ESE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 1.2 | NNE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 1 | ESE | Kitchen/Living | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 24.1 | NNE | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 3.5 | ESE | Ensuite | Yes | Yes |

Internal wall type

| Type | Area (m ²) | Insulation |
|-------------------------------------------|------------------------|------------|
| 1 : FR5 - Internal Plasterboard Stud Wall | 65.1 | |

Floors

| Location | Construction | Area (m ²) | Sub floor ventilation | Added insulation | Covering |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 15.4 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.4 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 3.3 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 6.2 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 36.6 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.5 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------|----------|------------------|------------------|
|----------|----------|------------------|------------------|

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 4CEEIT302L

Date of Certificate: 3 Oct 2018

★ Star rating: 5

Building Features

Ceiling penetrations

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|----------------------------------------------------------|------------------|-------------|
| Slab:Slab - Suspended Slab : 175mm: 175mm Suspended Slab | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 4CEEIT3O2L

Date of Certificate: 3 Oct 2018

★ Star rating: 5



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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 9CYD5R29VN

Date of Certificate: 3 Oct 2018

★ Star rating: 6.2

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: 5.2.9 (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: **open**

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)

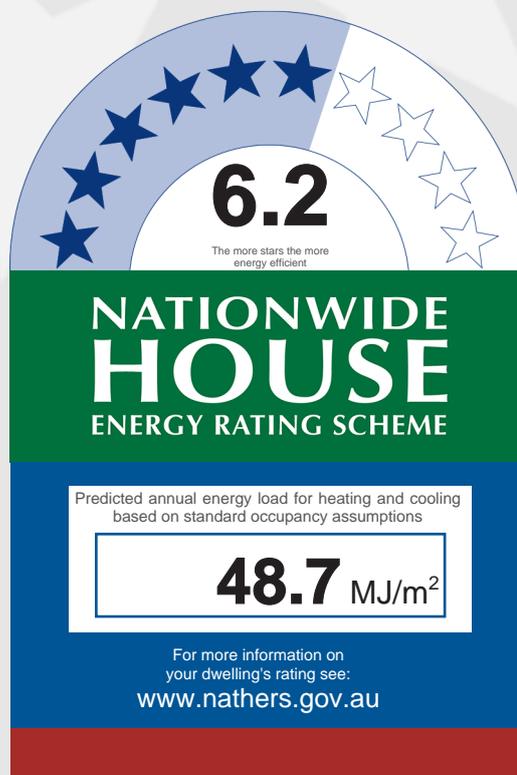
Conditioned: **71.5**
Unconditioned: **3.3**
Garage: **-**
TOTAL: **74.8**

Annual thermal performance loads (MJ/m²)

Heating: **33.7**
Cooling: **15**
TOTAL: **48.7**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=9CYD5R29VN>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 9CYD5R29VN

Date of Certificate: 3 Oct 2018

★ Star rating: 6.2



Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|---------------------------------|---------|------|
| TND-017-01 A | Trend AI Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend AI Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-001-02 A | Trend AI Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 900 | WNW | Bedroom 2 | No |
| TND-001-02 A | Opening 15 | 2100 | 300 | WNW | Bath | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | SSW | Kitchen/Living | No |
| TND-001-02 A | 21.32 | 2100 | 3200 | ESE | Kitchen/Living | No |
| TND-001-02 A | Opening 12 | 1500 | 700 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|--------------------------------------------------------|-----------|
| 1 : AFS - AFS 200mm (75mm Glasswool) | Glass fibre batt (k = 0.044 density = 12 kg/m3) (R1.7) | 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 200mm (75mm Glasswool) | 10.6 | SSW | Bedroom 1 | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 8.1 | ESE | Bedroom 1 | Yes | Yes |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 3.9 | WNW | Bedroom 2 | Yes | Yes |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 1.6 | NNE | Bedroom 2 | Yes | Yes |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 4.3 | WNW | Bedroom 2 | Yes | No |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 10.1 | SSW | Bedroom 2 | No | No |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **9CYD5R29VN**

Date of Certificate: **3 Oct 2018**

★ Star rating: **6.2**



Building Features

| | | | | | |
|----------------------------------------|------|-----|----------------|-----|-----|
| 1 : AFS - AFS 200mm (75mm Glasswool) | 2.7 | WNW | Bath | No | No |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 3.8 | SSW | Bath | Yes | Yes |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 10.6 | WNW | Entry | No | No |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 4 | NNE | Entry | No | No |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 0.9 | WNW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 5 | SSW | Kitchen/Living | Yes | Yes |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 12 | ESE | Kitchen/Living | No | Yes |
| 1 : AFS - AFS 200mm (75mm Glasswool) | 24.1 | NNE | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 2.5 | ESE | Ensuite | Yes | Yes |

Internal wall type

| Type | Area (m ²) | Insulation |
|-------------------------------------------|------------------------|------------|
| 1 : FR5 - Internal Plasterboard Stud Wall | 66.2 | |

Floors

| Location | Construction | Area (m ²) | Sub floor ventilation | Added insulation | Covering |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 15.4 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.4 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 3.3 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 6.2 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 35.9 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.5 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------------|--------------|------------------|------------------|
| Bedroom 1 | Plasterboard | 3.0 | No |
| Bedroom 2 | Plasterboard | 3.0 | No |
| Bath | Plasterboard | 3.0 | No |
| Entry | Plasterboard | 3.0 | No |
| Kitchen/Living | Plasterboard | 3.0 | No |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 9CYD5R29VN

Date of Certificate: 3 Oct 2018

★ Star rating: 6.2



Building Features

Ensuite Plasterboard 3.0 No

Ceiling penetrations

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|-----------------------------------------------------------------------------------------------|------------------|-------------|
| SlabExt:Slab - Suspended Slab - External Insul : 175mm: 175mm Suspended Slab - External Insul | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 9CYD5R29VN

Date of Certificate: 3 Oct 2018

★ Star rating: 6.2



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 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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: BW2VH8T1CL

Date of Certificate: 3 Oct 2018

★ Star rating: 6.7

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: 5.2.9 (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)

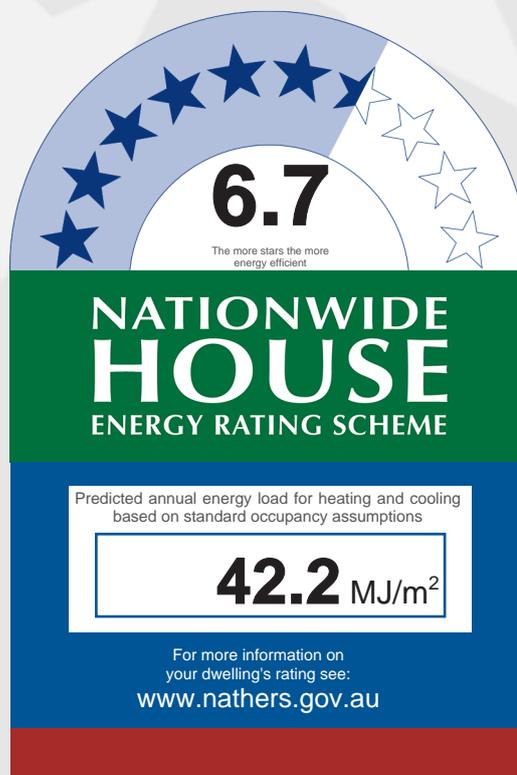
Conditioned: **71.7**
Unconditioned: **3.2**
Garage: **-**
TOTAL: **74.9**

Annual thermal performance loads (MJ/m²)

Heating: **24.3**
Cooling: **17.9**
TOTAL: **42.2**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=BW2VH8T1CL>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **BW2VH8T1CL**

Date of Certificate: **3 Oct 2018**

★ Star rating: **6.7**



Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|---------------------------------|---------|------|
| TND-017-01 A | Trend Al Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend Al Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-001-02 A | Trend Al Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 1021 | WNW | Bedroom 2 | No |
| TND-017-01 A | Opening 15 | 2100 | 350 | WNW | Bath | No |
| TND-001-02 A | 21.32 | 2100 | 2504 | ESE | Kitchen/Living | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | NNE | Kitchen/Living | No |
| TND-001-02 A | Opening 12 | 1500 | 1200 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|-----------------------------------------|-----------|
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | Glass fibre batt: R2.0 (R2.0) | No |
| 2 : AFS - AFS 225 with 10mm EPS | Polystyrene expanded (k = 0.039) (R0.3) | No |

External wall schedule

| Wall type | Area (m ²) | Orientation | Zone name | Fixed shade | Eaves |
|----------------------------------------|------------------------|-------------|-----------|-------------|-------|
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 8.3 | ESE | Bedroom 1 | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 10.6 | NNE | Bedroom 1 | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 10.1 | NNE | Bedroom 2 | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 4 | WNW | Bedroom 2 | Yes | No |
| 2 : AFS - AFS 225 with 10mm EPS | 1.6 | SSW | Bedroom 2 | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 3.8 | WNW | Bedroom 2 | Yes | Yes |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **BW2VH8T1CL**

Date of Certificate: **3 Oct 2018**

★ Star rating: **6.7**

Building Features

| | | | | | |
|----------------------------------------|------|-----|----------------|-----|-----|
| 2 : AFS - AFS 225 with 10mm EPS | 3.7 | NNE | Bath | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 2.7 | WNW | Bath | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 4 | SSW | Entry | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 10.6 | WNW | Entry | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 24.2 | SSW | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 2.8 | ESE | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 1.3 | SSW | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 7.3 | ESE | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 0.8 | NNE | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 0.5 | ESE | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 5.7 | NNE | Kitchen/Living | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 0.9 | WNW | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 3.5 | ESE | Ensuite | Yes | Yes |

Internal wall type

| Type | Area (m ²) | Insulation |
|-------------------------------------------|------------------------|------------|
| 1 : FR5 - Internal Plasterboard Stud Wall | 65.3 | |

Floors

| Location | Construction | Area (m ²) | Sub floor ventilation | Added insulation | Covering |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 15.5 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.2 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 3.2 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 6.1 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 36.3 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.6 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------|----------|------------------|------------------|
|----------|----------|------------------|------------------|

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **BW2VH8T1CL**

Date of Certificate: **3 Oct 2018**

★ Star rating: **6.7**

Building Features

Ceiling penetrations

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|----------------------------------------------------------|------------------|-------------|
| Slab:Slab - Suspended Slab : 175mm: 175mm Suspended Slab | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **BW2VH8T1CL**

Date of Certificate: **3 Oct 2018**

★ Star rating: **6.7**



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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: DVV3MJSYN4

Date of Certificate: 3 Oct 2018

★ Star rating: 6.7

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: 5.2.9 (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)

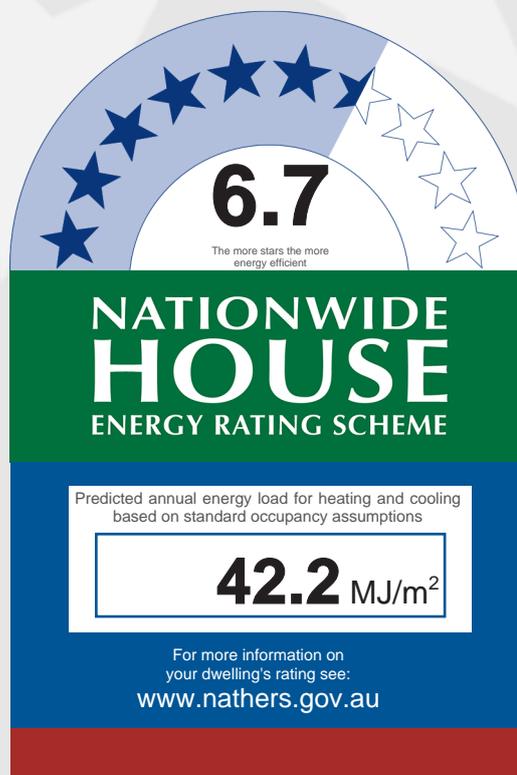
Conditioned: **71.7**
Unconditioned: **3.2**
Garage: **-**
TOTAL: **74.9**

Annual thermal performance loads (MJ/m²)

Heating: **23.4**
Cooling: **18.8**
TOTAL: **42.2**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=DVV3MJSYN4>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: DVV3MJSYN4

Date of Certificate: 3 Oct 2018

★ Star rating: 6.7



Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|---------------------------------|---------|------|
| TND-017-01 A | Trend AI Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend AI Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-001-02 A | Trend AI Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 1021 | WNW | Bedroom 2 | No |
| TND-017-01 A | Opening 15 | 2100 | 350 | WNW | Bath | No |
| TND-001-02 A | 21.32 | 2100 | 2504 | ESE | Kitchen/Living | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | NNE | Kitchen/Living | No |
| TND-001-02 A | Opening 12 | 1500 | 1200 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|-----------------------------------------|-----------|
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | Glass fibre batt: R2.0 (R2.0) | No |
| 2 : AFS - AFS 225 with 10mm EPS | Polystyrene expanded (k = 0.039) (R0.3) | No |

External wall schedule

| Wall type | Area (m ²) | Orientation | Zone name | Fixed shade | Eaves |
|----------------------------------------|------------------------|-------------|-----------|-------------|-------|
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 8.3 | ESE | Bedroom 1 | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 10.6 | NNE | Bedroom 1 | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 10.1 | NNE | Bedroom 2 | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 4 | WNW | Bedroom 2 | Yes | No |
| 2 : AFS - AFS 225 with 10mm EPS | 1.6 | SSW | Bedroom 2 | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 3.8 | WNW | Bedroom 2 | Yes | Yes |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **DVV3MJSYN4**

Date of Certificate: **3 Oct 2018**

★ Star rating: **6.7**

Building Features

| | | | | | |
|----------------------------------------|------|-----|----------------|-----|-----|
| 2 : AFS - AFS 225 with 10mm EPS | 3.7 | NNE | Bath | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 2.7 | WNW | Bath | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 4 | SSW | Entry | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 10.6 | WNW | Entry | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 24.2 | SSW | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 2.8 | ESE | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 1.3 | SSW | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 7.3 | ESE | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 0.8 | NNE | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 0.5 | ESE | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 5.7 | NNE | Kitchen/Living | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 0.9 | WNW | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 3.5 | ESE | Ensuite | Yes | Yes |

Internal wall type

| Type | Area (m ²) | Insulation |
|-------------------------------------------|------------------------|------------|
| 1 : FR5 - Internal Plasterboard Stud Wall | 65.3 | |

Floors

| Location | Construction | Area (m ²) | Sub floor ventilation | Added insulation | Covering |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 15.5 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.2 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 3.2 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 6.1 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 36.3 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.6 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------|----------|------------------|------------------|
|----------|----------|------------------|------------------|

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: DVV3MJSYN4

Date of Certificate: 3 Oct 2018

★ Star rating: 6.7

Building Features

Ceiling penetrations

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|----------------------------------------------------------|------------------|-------------|
| Slab:Slab - Suspended Slab : 175mm: 175mm Suspended Slab | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: DVV3MJSYN4

Date of Certificate: 3 Oct 2018

★ Star rating: 6.7



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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **KEOCEM3VXC**

Date of Certificate: **3 Oct 2018**

★ Star rating: **5.7**

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: 5.2.9 (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: **open**

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)

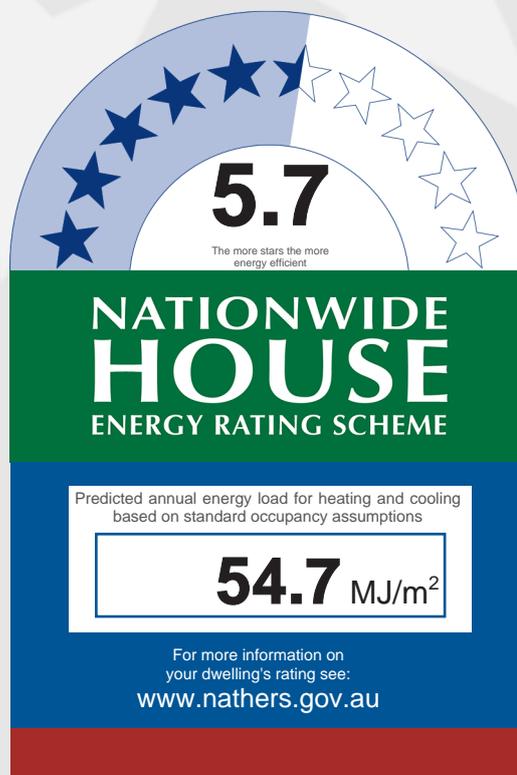
Conditioned: **71**
Unconditioned: **3.7**
Garage: **-**
TOTAL: **74.7**

Annual thermal performance loads (MJ/m²)

Heating: **39.5**
Cooling: **15.2**
TOTAL: **54.7**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=KEOCEM3VXC>

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **KEOCEM3VXC**

Date of Certificate: **3 Oct 2018**

★ Star rating: **5.7**

Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|---------------------------------|---------|------|
| TND-017-01 A | Trend Al Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend Al Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-001-02 A | Trend Al Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 1021 | WNW | Bedroom 2 | No |
| TND-017-01 A | Opening 15 | 2100 | 350 | WNW | Bath | No |
| TND-001-02 A | 21.32 | 2100 | 2800 | ESE | Kitchen/Living | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | NNE | Kitchen/Living | No |
| TND-017-01 A | Opening 18 | 2100 | 776 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|-----------------------------------------|-----------|
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | Glass fibre batt: R2.0 (R2.0) | No |
| 2 : AFS - AFS 225 with 10mm EPS | Polystyrene expanded (k = 0.039) (R0.3) | No |

External wall schedule

| Wall type | Area (m ²) | Orientation | Zone name | Fixed shade | Eaves |
|----------------------------------------|------------------------|-------------|-----------|-------------|-------|
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 8.3 | ESE | Bedroom 1 | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 10.6 | NNE | Bedroom 1 | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 10.1 | NNE | Bedroom 2 | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 4 | WNW | Bedroom 2 | Yes | No |
| 2 : AFS - AFS 225 with 10mm EPS | 1.6 | SSW | Bedroom 2 | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 3.8 | WNW | Bedroom 2 | Yes | Yes |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: **KEOCEM3VXC**

Date of Certificate: **3 Oct 2018**

★ Star rating: **5.7**



Building Features

| | | | | | |
|----------------------------------------|------|-----|----------------|-----|-----|
| 2 : AFS - AFS 225 with 10mm EPS | 3.7 | NNE | Bath | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 3.9 | WNW | Bath | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 4 | SSW | Entry | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 9.2 | WNW | Entry | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 24.3 | SSW | Kitchen/Living | No | No |
| 2 : AFS - AFS 225 with 10mm EPS | 11.8 | ESE | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 5 | NNE | Kitchen/Living | Yes | Yes |
| 2 : AFS - AFS 225 with 10mm EPS | 1 | WNW | Kitchen/Living | No | No |
| 1 : FC Sheet - 90mm FC Sheet with R2.0 | 2.8 | ESE | Ensuite | Yes | Yes |

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 |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 15.5 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.2 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 3.7 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 5.8 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 36 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.5 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------------|--------------|------------------|------------------|
| Bedroom 1 | Plasterboard | 3.0 | No |
| Bedroom 2 | Plasterboard | 3.0 | No |
| Bath | Plasterboard | 3.0 | No |
| Entry | Plasterboard | 3.0 | No |
| Kitchen/Living | Plasterboard | 3.0 | No |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **KEOCEM3VXC**

Date of Certificate: **3 Oct 2018**

★ Star rating: **5.7**

Building Features

Ensuite Plasterboard 3.0 No

Ceiling penetrations

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|-----------------------------------------------------------------------------------------------|------------------|-------------|
| SlabExt:Slab - Suspended Slab - External Insul : 175mm: 175mm Suspended Slab - External Insul | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: **KEOCEM3VXC**

Date of Certificate: **3 Oct 2018**

★ Star rating: **5.7**

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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: Q64JOXDGAT

Date of Certificate: 3 Oct 2018

★ Star rating: 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: 5.2.9 (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)

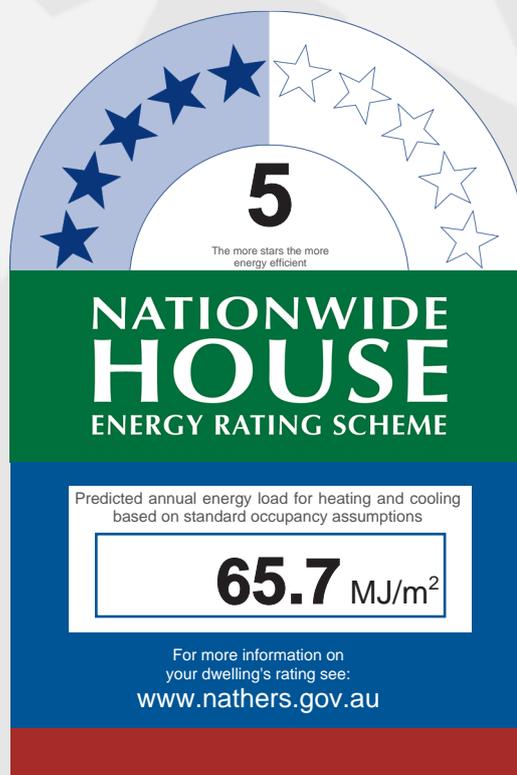
Conditioned: **72.2**
Unconditioned: **3.3**
Garage: **-**
TOTAL: **75.5**

Annual thermal performance loads (MJ/m²)

Heating: **44**
Cooling: **21.7**
TOTAL: **65.7**

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:

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.

Compact fluorescent

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/QRCodeLanding?PublicId=Q64JOXDGAT>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: Q64JOXDGAT

Date of Certificate: 3 Oct 2018

★ Star rating: 5



Building Features

Windows type and performance value

| Window ID | Window type | U-value | SHGC |
|--------------|---------------------------------|---------|------|
| TND-017-01 A | Trend Al Sliding Door SG 4Clr | 6.18 | 0.73 |
| TND-021-01 A | Trend Al Hinged Door SG 4Clr T | 6.03 | 0.61 |
| TND-001-02 A | Trend Al Sliding Window SG 4Clr | 6.41 | 0.72 |

Windows schedule

| Window ID | Window no. | Height (mm) | Width (mm) | Orientation | Zone name | Outdoor shade |
|--------------|------------|-------------|------------|-------------|----------------|---------------|
| TND-017-01 A | Opening 11 | 2100 | 2900 | ESE | Bedroom 1 | No |
| TND-021-01 A | Opening 6 | 2040 | 900 | WNW | Bedroom 2 | No |
| TND-001-02 A | Opening 15 | 2100 | 300 | WNW | Bath | No |
| TND-017-01 A | 21.18 | 2100 | 1800 | SSW | Kitchen/Living | No |
| TND-001-02 A | 21.32 | 2100 | 3200 | ESE | Kitchen/Living | No |
| TND-001-02 A | Opening 12 | 1500 | 1200 | ESE | Ensuite | No |

Roof windows and skylight type and performance value

| ID | Window type | U-value | SHGC |
|----|-------------|---------|------|
|----|-------------|---------|------|

Roof window and skylight schedule

| ID | Roof window/ skylight no. | Area (m ²) | Orientation | Zone name | Outdoor shade | Indoor shade/diffuser |
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|
|----|---------------------------|------------------------|-------------|-----------|---------------|-----------------------|

External wall type

| Type | Insulation | Wall wrap |
|----------------------------------------|-----------------------------------------|-----------|
| 1 : AFS - AFS 225 with 10mm EPS | Polystyrene expanded (k = 0.039) (R0.3) | 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 225 with 10mm EPS | 10.6 | SSW | Bedroom 1 | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 8.1 | ESE | Bedroom 1 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 3.9 | WNW | Bedroom 2 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 1.6 | NNE | Bedroom 2 | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 4.3 | WNW | Bedroom 2 | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 10.1 | SSW | Bedroom 2 | No | No |

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: Q64JOXDGAT

Date of Certificate: 3 Oct 2018

★ Star rating: 5

Building Features

| | | | | | |
|----------------------------------------|------|-----|----------------|-----|-----|
| 1 : AFS - AFS 225 with 10mm EPS | 2.7 | WNW | Bath | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 3.8 | SSW | Bath | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 10.6 | WNW | Entry | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 4.1 | NNE | Entry | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 0.9 | WNW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 5.7 | SSW | Kitchen/Living | Yes | Yes |
| 1 : AFS - AFS 225 with 10mm EPS | 0.5 | ESE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 0.8 | SSW | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 9.2 | ESE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 1.2 | NNE | Kitchen/Living | No | No |
| 1 : AFS - AFS 225 with 10mm EPS | 1 | ESE | Kitchen/Living | Yes | No |
| 1 : AFS - AFS 225 with 10mm EPS | 24 | NNE | Kitchen/Living | No | No |
| 2 : FC Sheet - 90mm FC Sheet with R2.0 | 3.5 | ESE | Ensuite | Yes | Yes |

Internal wall type

| Type | Area (m ²) | Insulation |
|-------------------------------------------|------------------------|------------|
| 1 : FR5 - Internal Plasterboard Stud Wall | 65.1 | |

Floors

| Location | Construction | Area (m ²) | Sub floor ventilation | Added insulation | Covering |
|----------------|---------------------------------------|------------------------|-----------------------|------------------|----------|
| Bedroom 1 | SuspSlab : 175mm: 175mm concrete slab | 15.4 | Enclosed | 0.0 | Carpet |
| Bedroom 2 | SuspSlab : 175mm: 175mm concrete slab | 10.4 | Enclosed | 0.0 | Carpet |
| Bath | SuspSlab : 175mm: 175mm concrete slab | 3.3 | Enclosed | 0.0 | Tiles |
| Entry | SuspSlab : 175mm: 175mm concrete slab | 6.6 | Enclosed | 0.0 | Tiles |
| Kitchen/Living | SuspSlab : 175mm: 175mm concrete slab | 36.2 | Enclosed | 0.0 | Tiles |
| Ensuite | SuspSlab : 175mm: 175mm concrete slab | 3.5 | Enclosed | 0.0 | Tiles |

Ceiling type

| Location | Material | Added insulation | Roof space above |
|----------|----------|------------------|------------------|
|----------|----------|------------------|------------------|

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: Q64JOXDGAT

Date of Certificate: 3 Oct 2018

★ Star rating: 5



Building Features

Ceiling penetrations

| Location | Number | Type | Width (mm) | Length (mm) | Seal/ unsealed |
|----------|--------|------|------------|-------------|----------------|
|----------|--------|------|------------|-------------|----------------|

Ceiling fans

| Location | Number | Diameter (mm) |
|----------|--------|---------------|
|----------|--------|---------------|

Roof type

| Material | Added insulation | Roof colour |
|----------------------------------------------------------|------------------|-------------|
| Slab:Slab - Suspended Slab : 175mm: 175mm Suspended Slab | 0.0 | medium |

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: Q64JOXDGAT

Date of Certificate: 3 Oct 2018

★ Star rating: 5



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