

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



Certificate number: **0003988870**

Certificate Date: **01 Jul 2019**

★ Average Star rating: **5.4**

### Assessor details

Accreditation number: **VIC/BDAV/18/1887**  
Name: **Marcello Belcastro**  
Organisation: **Evergreen Energy Consultants**  
Email: **marcello@evergreenec.com.au**  
Phone: **0428612398**  
Declaration of interest: **The Assessor has provided design advice to the Applicant**  
Software: **BERS Pro v4.3.0.2d (3.13)**  
AAO: **BDAV**

### Dwelling details

Street: **20 Bubalo Street**  
Suburb: **Warriewood**  
State: **NSW**  
Postcode: **2102**

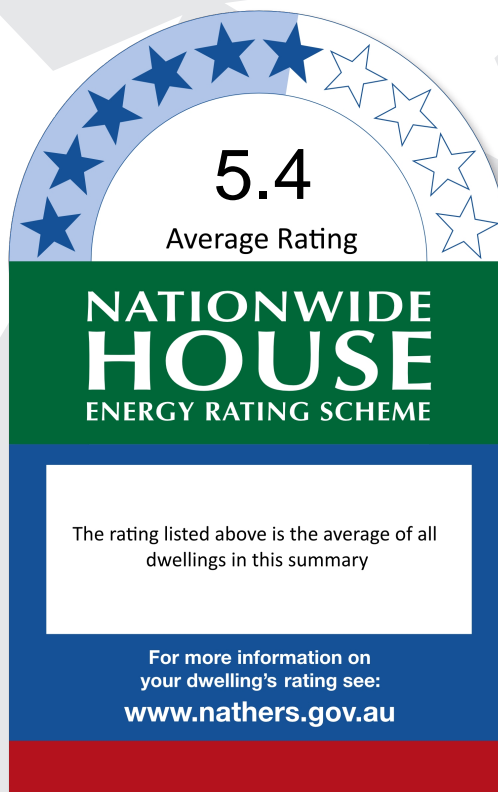
Scan to access this certificate online and confirm this is valid.



## Summary of all dwellings

### Certificate Details

| Certificate number | Dwelling/Unit number | Heating load | Cooling load | Total load | Star Rating |
|--------------------|----------------------|--------------|--------------|------------|-------------|
| 0003988862         |                      | 35.4         | 24.5         | 60.0       | 5.4         |



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BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

## Assessor details

Accreditation

number: **VIC/BDAV/18/1887**

Name: **Marcello Belcastro**

Organisation: **Evergreen Energy Consultants**

Email: **marcello@evergreenec.com.au**

Phone: **0428612398**

Declaration of interest: **The Assessor has provided design advice to the Applicant**

Software: **BERS Pro v4.3.0.2d (3.13)**

AAO: **BDAV**

## Overview

### Dwelling details

Street: **20 Bubalo Street**

Suburb: **Warriewood**

State: **NSW**

Postcode: **2102**

Type: **New Dwelling**

NCC Class: **1A**

NatHERS

climate zone: **56**

Lot/DP

number: **30/Unregistered**

Exposure: **Suburban**

### Key construction and insulation materials

(see following pages for details)

Construction: **Fibro Cavity Panel Direct Fix Roof Tiles**

**Suspended Timber Floor**

Insulation: **R2.5 wall insulation**

**R3.5 ceiling insulation**

**No floor insulation**

Glazing: **ALM-002-01 A Aluminium B SG Clear**

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

Conditioned: **208.0**

Unconditioned: **36.0**

Garage: **19.0**

TOTAL: **244.0**

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

Heating: **35.4**

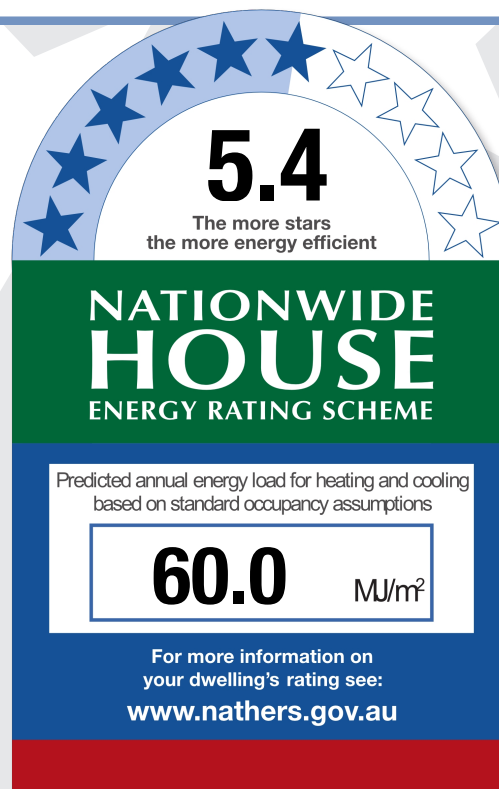
Cooling: **24.5**

TOTAL: **60.0**

### Plan documents

Plan ref/date: **N195509**

Prepared by: **#Drawn By**



### Ceiling penetrations

(see following pages for details)

Sealed: **6**

Unsealed: **0**

TOTAL:\*\* **6**

\*\*NOTE: This total is the maximum number of ceiling penetrations allowed to a ceiling (under a roof) for this certificate. **If this number is exceeded in construction then this certificate IS NOT VALID and a new certificate is required.** Loss of ceiling insulation for the penetrations listed has been taken into account with the rating.

Principle downlight type: **Unknown**

### 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 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.



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**5.4**



## Building features

### Window type and performance value

| Window ID    | Window type                       | U-value | SHGC |
|--------------|-----------------------------------|---------|------|
| ALM-002-01 A | ALM-002-01 A Aluminium B SG Clear | 6.7     | 0.70 |
| ALM-001-01 A | ALM-001-01 A Aluminium A SG Clear | 6.7     | 0.57 |

### Window schedule

| Location       | Window ID    | Window no. | Height (mm) | Width (mm) | Orientation | Outdoor shade |
|----------------|--------------|------------|-------------|------------|-------------|---------------|
| Pantry         | ALM-002-01 A | n/a        | 600         | 1210       | SW          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 600         | 1810       | SW          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 1200        | 2170       | SW          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 2100        | 4304       | NW          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 1800        | 850        | NE          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 1800        | 850        | NE          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 1800        | 1450       | NE          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 1800        | 850        | NE          | No Shading    |
| Kitchen/Living | ALM-002-01 A | n/a        | 600         | 1090       | NE          | No Shading    |
| Kitchen/Living | ALM-001-01 A | n/a        | 1370        | 850        | SE          | No Shading    |
| Powder         | ALM-002-01 A | n/a        | 772         | 730        | NE          | No Shading    |
| Laundry        | ALM-001-01 A | n/a        | 772         | 610        | NE          | No Shading    |
| Media          | ALM-002-01 A | n/a        | 1030        | 1810       | NE          | No Shading    |
| Media          | ALM-002-01 A | n/a        | 1200        | 1090       | NE          | No Shading    |
| Media          | ALM-002-01 A | n/a        | 1200        | 850        | SE          | No Shading    |
| Media          | ALM-002-01 A | n/a        | 1200        | 850        | SE          | No Shading    |
| Bedroom 1      | ALM-002-01 A | n/a        | 772         | 1570       | SW          | No Shading    |
| Bedroom 1      | ALM-002-01 A | n/a        | 860         | 3010       | NW          | No Shading    |
| Ensuite        | ALM-002-01 A | n/a        | 600         | 850        | NW          | No Shading    |
| Ensuite        | ALM-002-01 A | n/a        | 170         | 1690       | NE          | No Shading    |
| Ensuite        | ALM-002-01 A | n/a        | 944         | 730        | NE          | No Shading    |
| Bedroom 2      | ALM-002-01 A | n/a        | 1030        | 1810       | SW          | No Shading    |
| Bedroom 3      | ALM-002-01 A | n/a        | 1030        | 1810       | SW          | No Shading    |
| Bedroom 4      | ALM-002-01 A | n/a        | 1200        | 1810       | SE          | No Shading    |
| Bedroom 5      | ALM-002-01 A | n/a        | 1030        | 1570       | NE          | No Shading    |
| Bath           | ALM-002-01 A | n/a        | 944         | 730        | NE          | No Shading    |
| Powder         | ALM-002-01 A | n/a        | 944         | 730        | NE          | No Shading    |

### Roof window and skylight type and performance value

| ID           | Window type | U-value | SHGC |
|--------------|-------------|---------|------|
| None Present |             |         |      |

### Roof window and skylight schedule

| Location     | ID | Roof window/skylight no. | Area (m <sup>2</sup> ) | Orientation | Outdoor shade | Indoor shade/diffuser |
|--------------|----|--------------------------|------------------------|-------------|---------------|-----------------------|
| None Present |    |                          |                        |             |               |                       |

### External wall type

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## Building features continued

| ID   | Wall type                          | Insulation                            | Wall wrap or foil |
|------|------------------------------------|---------------------------------------|-------------------|
| EW-1 | Brick Veneer                       | Anti-glare foil with bulk no gap R2.5 | Yes               |
| EW-2 | Metal Clad Cavity Panel Direct Fix | Anti-glare foil with bulk no gap R2.5 | Yes               |
| EW-3 | Fibro Cavity Panel Direct Fix      | Anti-glare foil with bulk no gap R2.5 | Yes               |

### External wall schedule

| Location       | ID   | Width (mm) | Height (mm) | Orientation | Fixed Shade | Eaves (mm) |
|----------------|------|------------|-------------|-------------|-------------|------------|
| Garage         | EW-1 | 5700       | 2600        | SW          | No          | 100        |
| Garage         | EW-1 | 900        | 2600        | NW          | No          | 100        |
| Garage         | EW-1 | 3295       | 2600        | SE          | No          | 2400       |
| Pantry         | EW-1 | 2090       | 2600        | SW          | No          | 100        |
| Kitchen/Living | EW-1 | 8695       | 2600        | SW          | No          | 100        |
| Kitchen/Living | EW-1 | 6600       | 2600        | NW          | No          | 3600       |
| Kitchen/Living | EW-1 | 10395      | 2600        | NE          | No          | 100        |
| Kitchen/Living | EW-1 | 3595       | 2600        | NE          | No          | 100        |
| Kitchen/Living | EW-1 | 4200       | 2600        | SE          | No          | 1300       |
| Kitchen/Living | EW-1 | 1100       | 2600        | SW          | No          | 3400       |
| Powder         | EW-1 | 1390       | 2600        | NE          | No          | 100        |
| Laundry        | EW-1 | 2190       | 2600        | NE          | No          | 100        |
| Media          | EW-2 | 1095       | 500         | SW          | No          | 0          |
| Media          | EW-3 | 1095       | 1950        | SW          | No          | 3000       |
| Media          | EW-3 | 7495       | 2450        | NE          | No          | 600        |
| Media          | EW-3 | 4200       | 2450        | SE          | No          | 600        |
| Bedroom 1      | EW-3 | 5095       | 2450        | SW          | No          | 600        |
| Bedroom 1      | EW-3 | 4695       | 2450        | NW          | No          | 600        |
| Bedroom 1      | EW-3 | 1390       | 2450        | NE          | No          | 600        |
| Ensuite        | EW-3 | 1895       | 2450        | NW          | No          | 600        |
| Ensuite        | EW-3 | 4295       | 2450        | NE          | No          | 600        |
| Bedroom 2      | EW-3 | 6190       | 2450        | SW          | No          | 600        |
| Bedroom 3      | EW-3 | 4790       | 2450        | SW          | No          | 600        |
| Bedroom 4      | EW-3 | 3895       | 2450        | SW          | No          | 600        |
| Bedroom 4      | EW-2 | 2400       | 500         | SE          | No          | 0          |
| Bedroom 4      | EW-3 | 2400       | 1950        | SE          | No          | 600        |
| Bedroom 5      | EW-3 | 3390       | 2450        | NE          | No          | 600        |
| Bath           | EW-3 | 3490       | 2450        | NE          | No          | 600        |
| Powder         | EW-3 | 990        | 2450        | NE          | No          | 600        |

### Internal wall type

| Wall type   | Area (m²) | Insulation                       | Wall wrap or foil |
|---|-----------|----------------------------------|-------------------|
| IW-1 - Cavity wall, direct fix plasterboard, single gap | 24.0      | Bulk Insulation, No Air Gap R2.5 | No                |
| IW-2 - Cavity wall, direct fix plasterboard, single gap | 174.0     | No insulation                    | No                |

### Floors

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## Building features continued

| Location                 | Construction                   | Area (m <sup>2</sup> ) | Sub floor ventilation | Added insulation | Covering                    |
|--------------------------|--------------------------------|------------------------|-----------------------|------------------|-----------------------------|
| Garage                   | Concrete Slab on Ground 100mm  | 19.1                   | None                  | No Insulation    | Bare                        |
| Pantry                   | Concrete Slab on Ground 100mm  | 4.9                    | None                  | No Insulation    | Vinyl 3mm                   |
| Kitchen/Living           | Concrete Slab on Ground 100mm  | 83.5                   | None                  | No Insulation    | Vinyl 3mm                   |
| Powder                   | Concrete Slab on Ground 100mm  | 4.0                    | None                  | No Insulation    | Ceramic Tiles 8mm           |
| Laundry                  | Concrete Slab on Ground 100mm  | 4.8                    | None                  | No Insulation    | Ceramic Tiles 8mm           |
| Media/Kitchen/Living     | Timber Above Plasterboard 19mm | 22.1                   |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Media/Powder             | Timber Above Plasterboard 19mm | 4.2                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Media/Laundry            | Timber Above Plasterboard 19mm | 4.9                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 1/Kitchen/Living | Timber Above Plasterboard 19mm | 14.3                   |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 1                | Suspended Timber Floor 19mm    | 16.0                   | Totally Open          | No Insulation    | Carpet+Rubber Underlay 18mm |
| Ensuite/Kitchen/Living   | Timber Above Plasterboard 19mm | 1.5                    |                       | No Insulation    | Ceramic Tiles 8mm           |
| Ensuite                  | Suspended Timber Floor 19mm    | 6.4                    | Totally Open          | No Insulation    | Ceramic Tiles 8mm           |
| Bedroom 2/Kitchen/Living | Timber Above Plasterboard 19mm | 16.9                   |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 3/Garage         | Timber Above Plasterboard 19mm | 4.4                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 3/Pantry         | Timber Above Plasterboard 19mm | 5.0                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 3/Kitchen/Living | Timber Above Plasterboard 19mm | 7.3                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 4/Garage         | Timber Above Plasterboard 19mm | 9.5                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 4/Kitchen/Living | Timber Above Plasterboard 19mm | 4.4                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bedroom 5/Kitchen/Living | Timber Above Plasterboard 19mm | 6.8                    |                       | No Insulation    | Carpet+Rubber Underlay 18mm |
| Bath/Kitchen/Living      | Timber Above Plasterboard 19mm | 6.4                    |                       | No Insulation    | Ceramic Tiles 8mm           |
| Powder/Kitchen/Living    | Timber Above Plasterboard 19mm | 1.9                    |                       | No Insulation    | Ceramic Tiles 8mm           |

## Ceiling type

| Location       | Construction              | Added insulation     | Roof space above |
|----------------|---------------------------|----------------------|------------------|
| Garage         | Plasterboard              | Bulk Insulation R3.5 | Yes              |
| Garage         | Timber Above Plasterboard | No Insulation        | No               |
| Pantry         | Timber Above Plasterboard | No Insulation        | No               |
| Kitchen/Living | Timber Above Plasterboard | No Insulation        | No               |

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## Building features continued

|           |                           |                      |     |
|-----------|---------------------------|----------------------|-----|
| Powder    | Timber Above Plasterboard | No Insulation        | No  |
| Laundry   | Timber Above Plasterboard | No Insulation        | No  |
| Media     | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Bedroom 1 | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Ensuite   | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Bedroom 2 | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Bedroom 3 | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Bedroom 4 | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Bedroom 5 | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Bath      | Plasterboard              | Bulk Insulation R3.5 | Yes |
| Powder    | Plasterboard              | Bulk Insulation R3.5 | Yes |

## Ceiling penetrations

| Location       | Number | Type         | Diameter (mm) | Sealed/unsealed |
|----------------|--------|--------------|---------------|-----------------|
| Kitchen/Living | 1      | Exhaust Fans | 200           | Sealed          |
| Powder         | 1      | Exhaust Fans | 200           | Sealed          |
| Laundry        | 1      | Exhaust Fans | 200           | Sealed          |
| Ensuite        | 1      | Exhaust Fans | 200           | Sealed          |
| Bath           | 1      | Exhaust Fans | 200           | Sealed          |
| Powder         | 1      | Exhaust Fans | 200           | Sealed          |

## Ceiling fans

| Location     | Number | Diameter (mm) |
|--------------|--------|---------------|
| None Present |        |               |

## Roof type

| Construction | Added insulation                                     | Roof colour |
|--------------|--|-------------|
| Roof Tiles   | Foil, Gap Above, Reflective Side Down, Anti-glare Up | Dark        |



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## Additional information

run 2 = default glass

## Explanatory notes

### About this report

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

### General Information

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

The actual energy consumption of your home may vary significantly from the predicted energy load figures in the report depending on issues such as the size of your household and your personal preferences, e.g. in terms of heating or cooling.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparative purposes between different house designs and for demonstrating that the design meets the required regulatory compliance.

Homes that are energy efficient use less energy, are warmer in winter, cooler in summer and cost less to run. The higher the star rating the more energy efficient.

This NatHERS House Energy Rating report was carefully prepared by your assessor on the basis of comprehensive modelling using standard procedures to rate your home using the underlying engine developed by the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO).

All information relating to energy loads presented in this report is based on a range of standard assumptions in order to allow for comparisons with reports prepared for other homes and to demonstrate minimum regulatory compliance.

The standard assumptions include figures for occupancy, indoor air temperature and are based on a unique climate file for your region.

### Accredited Assessors

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

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

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

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

### Disclaimer

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

### Contact

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

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