

THERMAL PERFORMANCE ASSESSMENT

Unit 1 and 2, 60 Patty Street,
Mentone

STUDIO DESIGN + DRAFTING

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O V E R V I E W

Client: Peter Wright and Associates
Project: Two unit development
Job Address: 60 Patty Street, Mentone
Date: 07.03.2018

S U M M A R Y O F E N E R G Y R A T I N G R E Q U I R E M E N T S

The incorporation of these design options are required to achieve the rating shown in the first rate report. This list is only a guide to the range of options that could be used. For any variations to these design options a re-rating is required. Where information is not supplied conditions and standard building practices/construction that comply with all Australian Standards, NCC. and other regulatory standards have been assumed.

Unit 1- 6.0Stars

Floor

Waffle slab to garage floor

Walls

Brick Veneer walls to have R2.5 batts

Internal garage wall to have R2.5 batts

100mm polystyrene cladding to have R2.5 batts

Ceiling

R5.0 batts to ceiling – ground and first floor

Windows

Double glazed windows – 4.5 UValue and 0.61 SHGC

W01, W03, W04, D08, W05, W09, W10, D15, W11, W12

Remaining windows to be single glazed

Unit 2 – 6.1 Stars

Floor

Waffle slab to garage floor

Walls

Brick Veneer walls to have R2.5 batts

Internal garage wall to have R2.5 batts

100mm polystyrene cladding to have R2.5 batts

Ceiling

R5.0 batts to ceiling – ground and first floor

Windows

Double glazed windows – 4.5 UValue and 0.61 SHGC

W17, W18, W19, W22, W23, W24 and D22

Remanning windows to be single glazed

Note:

1. UValue and SHGC take precedence over description of windows in report – Due to the lamination in windows available in the FirstRate 5 Program.
2. Please refer to WERS database (www.wers.net) to find suitable windows

Air leakage details

1. Seal exhaust fans - (install exhaust/Tastic fans with self-shutting louvers) it is assumed that the range hood is vented to external air (installed with self-shutting louvers)
2. Seal external doors (entry) weather seals to the bottom of the doors and weather strips between the doors and door frame.

G e n e r a l i n f o r m a t i o n

INSULATION

Reflective foil: insulation products Reflective foil only provides an insulating effect when it faces an air space, because it works by reducing radiant heat flow across this air space. If reflective foil does not face an air space then it cannot be considered in the total R value of the roof or wall system. Reflective foil must be used in conjunction with an air space and air must not be allowed to leak from one side of the foil to another. Particular care must be taken during construction, to ensure that all penetrations through the foil and joins are effectively sealed by taping around the joins and penetrations. Reflective foil product tests often show the R value of the whole building element, whereas bulk insulation tests usually show the R value of the insulation alone.

Bulk insulation: loose fill products will typically settle after a few years to provide a lower depth than originally installed, Batt and blanket products can suffer significant degradation of their RValue through poor installation. To maintain the effectiveness of the insulation products builders must ensure that:

- Insulation fits snugly against all framing members and that where gaps exist, offcuts of batts are used to fill these gaps;
- Bulk insulation is not compressed. Note: It is important that the width of insulation provided in a wall frame matches the width of the stud; and
- Insulation placed near lamps, luminaires and associated transformers is installed in accordance with AS 3000-2007 Amt 2 (refer NatHERS Technical Note) or in accordance with manufactures instructions where specifically designed low watt and heat generating luminaires are being installed.
- Insulation must comply with AS/NZS 4859.1.

When determining whether to place part of the required insulation at the roof level consideration must be given to the condensation that may form within the roof space.

SEALING OF GAPS AND CRACKS

Gaps and cracks in buildings can contribute significantly to the inefficient use of heating and cooling systems therefore it is important that they are adequately sealed.

In addition to using the NatHERS software to demonstrate compliance with NCC/BCA energy efficiency requirements, the following provisions of BCA Part 3.12.3 must be met.

Seals are to be provided to:

- I. Chimney and flues
- II. Roof lights
- III. Around external doors and windows and
- IV. Exhaust fans.

Sealing can also be achieved by providing close fitting internal lining systems at the ceiling, wall and floor junctions or by caulking, skirting's architraves and cornices or the like.

ARTIFICIAL LIGHTING

Artificial lighting

The NCC incorporates provisions to address artificial lighting. It provides for the maximum power that will be consumed by the lights in a space including any lamps, ballasts current regulators and control device in (W/m²). BCA Part 3.12.5.5 sets out the requirements for artificial lighting. 3.12.5.5 requires the lamp power density or illumination power density of artificial lighting excluding heaters that emit light not to exceed the allowance of:

- I. 5 W/m² in a class 1 building
- II. 4 W/m² on a verandah or balcony or the like attached to the class 1 building
- III. 3 W/m². in a class 10 building associated with a class 1 building Perimeter lighting must be controlled by daylight sensors or have an average light source efficacy of not less than 40 lumens/W. (i.e. efficient lighting)

Refer to Volume One BCA J6.2 for similar provisions for Class 2 (SOUs) and Class 4 parts of a building.

Refer to Lighting table on stamped drawing for W/m² for each room



Nicole Eveston
Studio Design and Drafting

Disclaimer:

This report only applies to the supplied plans, any changes to the design and/or details on the plans may affect compliance with the DTS provisions of the BCA 2015.

This report is intended as a guide to meet the requirements of BCA 2014 Vol2 Part 3.12, it is the responsibility of the owner/builder to comply with and the Relevant Building Surveyor should check and confirm all items prior to construction, and check compliance of construction/installation during inspections prior to occupancy, It is not the responsibility of Studio Design and Drafting.

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 13JDJD0CBV

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1

Assessor details

Accreditation number: VIC/BDAV/10/0105
Name: Nicole Eveston
Organisation: Studio Design + Drafting
Email: nicole@studiodesigndrafting.com.au
Phone: 0403337752
Declaration of interest: Employed by designer of the building
Software: FirstRate5: 5.2.1 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: Unit 1, 60 Patty Street
Suburb: Metone
State: VIC Postcode: 3194
Type: New Home NCC Class: Class 1a
Lot/DP number: - NatHERS climate zone: 62
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: 'As Per Drawing Set'
Roof: 'As Per Drawing Set'
Insulation: Floor: 'As Per Drawing Set'
Wall: 'As Per Drawing Set'
Roof: 'As Per Drawing Set'
Floor: 'As Per Drawing Set'
Glazing: 'As Per Drawing Set'
'As Per Drawing Set'

Net floor area (m²)

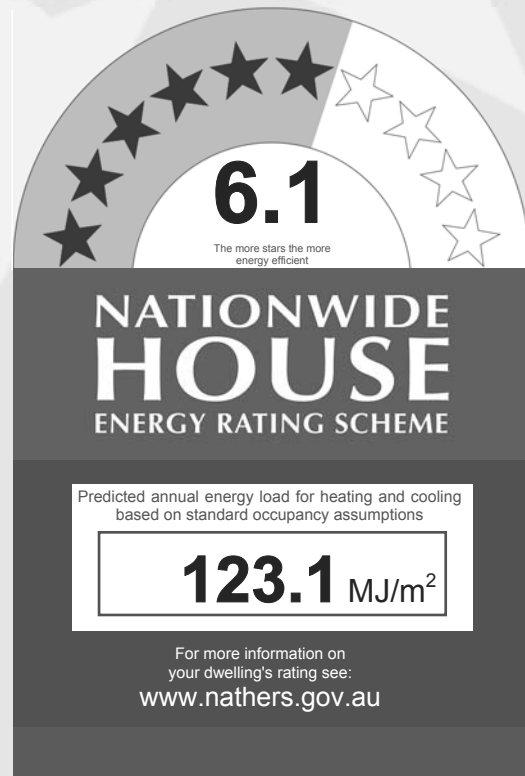
Conditioned: 150.7
Unconditioned: 11.3
Garage: 25.9
TOTAL: 187.9

Annual thermal performance loads (MJ/m²)

Heating: 95.4
Cooling: 27.7
TOTAL: 123.1

Plan documents

Plan ref/date: -
Prepared by: -



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: LED

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

Window selection - default windows only

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

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

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

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

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



<https://www.fr5.com.au/QRCodeLanding?PubliId=13JDJD0CBV>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 13JDJD0CBV

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-006-01 A	Aluminium B DG Argon Fill Clear-Clear	4.5	0.61
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-006-01 A	W05	2400	2440	E	Kitchen/Living 1	No
ALM-002-01 A	W06	2400	910	E	Kitchen/Living 1	No
ALM-006-01 A	D08	2400	3590	N	Kitchen/Living 1	No
ALM-006-01 A	W04	2400	2100	E	Kitchen/Living 1	No
ALM-006-01 A	W03	2400	3000	N	Kitchen/Living 1	Yes
ALM-002-01 A	W02	2400	560	N	Kitchen/Living 1	No
ALM-006-01 A	W01	2400	2400	W	Study	No
ALM-002-01 A	Opening 8	2400	910	E	l'dry	No
ALM-006-01 A	W09	1500	2440	W	Bedroom 1	No
ALM-006-01 A	W10	1500	2440	N	Bedroom 1	No
ALM-002-01 A	W08	1500	750	W	ens	No
ALM-002-01 A	W15	1500	750	S	ens	No
ALM-002-01 A	W14	1500	750	S	bathroom	No
ALM-002-01 A	W13	1500	750	S	pwd	No
ALM-006-01 A	W12	1500	2420	E	Bedroom 2	No
ALM-006-01 A	Opening 17	2400	2700	N	sitting	No
ALM-006-01 A	W11	1500	2440	N	Bedroom 3	No

Roof windows and skylight type and performance value

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

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

Type	Insulation	Wall wrap
1 : FR5 - Brick Veneer	Glass fibre batt: R2.5 (R2.5)	No

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Building Features

2 : SD - Party Wall - SmartRate	Glass fibre batt: R2.5 (R2.5)	No
3 : FR5 - 100mm Expanded Polystyrene Clad	Glass fibre batt: R2.5 (R2.5)	No

External wall schedule

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : FR5 - Brick Veneer	5.7	W	Kitchen/Living 1	No	No
1 : FR5 - Brick Veneer	18.1	E	Kitchen/Living 1	No	No
1 : FR5 - Brick Veneer	10.1	N	Kitchen/Living 1	Yes	Yes
1 : FR5 - Brick Veneer	6.3	E	Kitchen/Living 1	Yes	Yes
1 : FR5 - Brick Veneer	16.9	N	Kitchen/Living 1	No	No
1 : FR5 - Brick Veneer	1.8	W	Kitchen/Living 1	Yes	No
1 : FR5 - Brick Veneer	6.6	N	Kitchen/Living 1	Yes	Yes
1 : FR5 - Brick Veneer	11.2	W	Study	No	No
1 : FR5 - Brick Veneer	1.6	S	Study	Yes	No
1 : FR5 - Brick Veneer	10.3	W	Garage	Yes	No
2 : SD - Party Wall - SmartRate	16.1	S	Garage	No	No
2 : SD - Party Wall - SmartRate	3.2	S	pwd	No	No
2 : SD - Party Wall - SmartRate	2.1	S	l'dry	No	No
1 : FR5 - Brick Veneer	5.2	S	l'dry	No	No
1 : FR5 - Brick Veneer	4.9	E	l'dry	No	No
2 : SD - Party Wall - SmartRate	4.5	S	air lock	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	9.1	W	Bedroom 1	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	2.3	E	Bedroom 1	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	9.7	N	Bedroom 1	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	5.5	W	wir	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	1.5	S	wir	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	4.9	W	ens	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	7	S	ens	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	7	S	bathroom	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	4.8	S	pwd	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	8.9	S	Bedroom 2	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	9.4	E	Bedroom 2	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	9.2	N	sitting	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	1.4	W	Bedroom 3	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	9.4	E	Bedroom 3	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	10.6	N	Bedroom 3	No	Yes

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 13JDJD0CBV

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★ Star rating: 6.1



Building Features

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	131.7	
2 : FR5 - Internal Plasterboard Stud Wall	22.8	Glass fibre batt: R2.5 (R2.5)

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living 1	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	58.1	Enclosed	0.0	none
Kitchen/Living 1	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	6.3	Enclosed	0.0	none
Kitchen/Living 1	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	2.6	Enclosed	0.0	none
Kitchen/Living 1	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	5	Enclosed	0.0	none
Study	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	6.5	Enclosed	0.0	none
Study	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	5.5	Enclosed	0.0	none
Garage	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	7.8	Enclosed	0.0	none
Garage	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	17.8	Enclosed	0.0	none
pwd	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	2.1	Enclosed	0.0	none
l'dry	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	4.9	Enclosed	0.0	none
air lock	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	3.1	Enclosed	0.0	none
Bedroom 1	Timber	13.6	Enclosed	0.0	none
wir	Timber	3.8	Enclosed	0.0	none
ens	Timber	4.7	Enclosed	0.0	none
bathroom	Timber	4.8	Enclosed	0.0	none
pwd	Timber	1.6	Enclosed	0.0	none
Bedroom 2	Timber	13.1	Enclosed	0.0	none
sitting	Timber	18.9	Enclosed	0.0	none
Bedroom 3	Timber	13.6	Enclosed	0.0	none

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: 13JDJD0CBV

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1



Building Features

Ceiling type

Location	Material	Added insulation	Roof space above
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	5.0	No
Kitchen/Living 1	Plasterboard	5.0	No
Kitchen/Living 1	Plasterboard	5.0	No
Study	Plasterboard	0.0	No
Study	Plasterboard	0.0	No
Study	Plasterboard	0.0	No
Study	Plasterboard	5.0	No
Garage	Plasterboard	0.0	No
Garage	Plasterboard	0.0	No
Garage	Plasterboard	0.0	No
Garage	Plasterboard	5.0	No
pwd	Plasterboard	5.0	No
l'dry	Plasterboard	5.0	No
air lock	Plasterboard	5.0	No
Bedroom 1	Plasterboard	5.0	Yes
wir	Plasterboard	5.0	Yes
ens	Plasterboard	5.0	Yes
bathroom	Plasterboard	5.0	Yes
pwd	Plasterboard	5.0	Yes
Bedroom 2	Plasterboard	5.0	Yes
sitting	Plasterboard	5.0	Yes
Bedroom 3	Plasterboard	5.0	Yes

Ceiling penetrations

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

Nationwide House Energy Rating Scheme* Certificate



Certificate Number: 13JDJD0CBV

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1

Building Features

Location	Number	Diameter (mm)
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Roof type

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

Nationwide House Energy Rating Scheme* Certificate

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Date of Certificate: 7 Mar 2018

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Additional information

Explanatory notes

About this report

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

General Information

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

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

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

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

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

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

Accredited Assessors

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

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

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

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

Disclaimer

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

Contact

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

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

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: VJSTCCMC6Y

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1



Assessor details

Accreditation number: VIC/BDAV/10/0105
Name: Nicole Eveston
Organisation: Studio Design + Drafting
Email: nicole@studiodesigndrafting.com.au
Phone: 0403337752
Declaration of interest: Employed by designer of the building
Software: FirstRate5: 5.2.1 (3.13)
AAO: BDAV

Overview

Dwelling details

Address: Unit 2, 60 Patty Street
Suburb: Metone
State: VIC Postcode: 3194
Type: New Home NCC Class: Class 1a
Lot/DP number: - NatHERS climate zone: 62
Exposure: suburban

Key construction and insulation materials

(see following pages for details)

Construction: Wall: 'As Per Drawing Set'
Roof: 'As Per Drawing Set'
Insulation: Floor: 'As Per Drawing Set'
Wall: 'As Per Drawing Set'
Roof: 'As Per Drawing Set'
Floor: 'As Per Drawing Set'
Glazing: 'As Per Drawing Set'
'As Per Drawing Set'

Net floor area (m²)

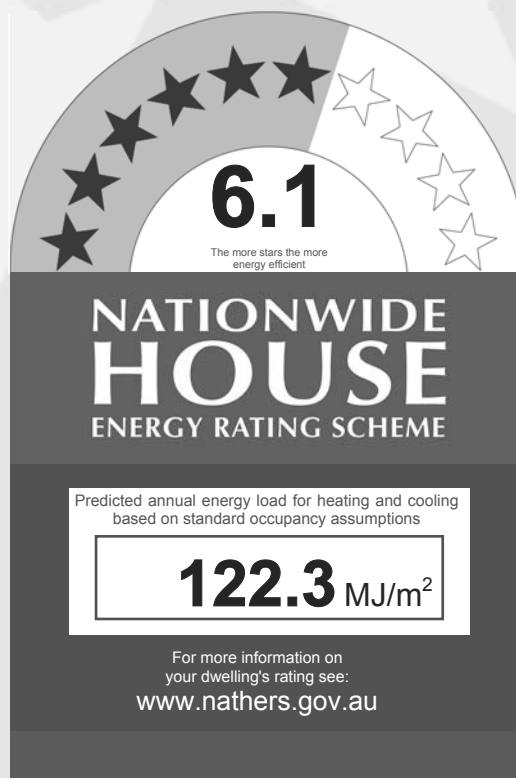
Conditioned: 149.1
Unconditioned: 5.1
Garage: 22.5
TOTAL: 176.1

Annual thermal performance loads (MJ/m²)

Heating: 100.2
Cooling: 22.1
TOTAL: 122.3

Plan documents

Plan ref/date: -
Prepared by: -



Ceiling penetrations

(see following pages for details)

Sealed: 0
Unsealed: 0
TOTAL:** 0

Principal downlight type: LED

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

Window selection - default windows only

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

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

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

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

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



<https://www.fr5.com.au/QRCodeLandIng?PublId=VJSTCCMC6Y>

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: VJSTCCMC6Y

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1



Building Features

Windows type and performance value

Window ID	Window type	U-value	SHGC
ALM-006-01 A	Aluminium B DG Argon Fill Clear-Clear	4.5	0.61
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7

Windows schedule

Window ID	Window no.	Height (mm)	Width (mm)	Orientation	Zone name	Outdoor shade
ALM-006-01 A	Opening 2	2400	2440	W	Kitchen/Living 1	No
ALM-002-01 A	Opening 1	2400	560	W	Kitchen/Living 1	No
ALM-006-01 A	Opening 5	2400	2440	E	Kitchen/Living 1	No
ALM-006-01 A	Opening 4	2400	1810	N	Kitchen/Living 1	No
ALM-006-01 A	Opening 3	2400	3600	E	Kitchen/Living 1	No
ALM-002-01 A	Opening 6	2100	910	E	Unconditioned 5	No
ALM-006-01 A	Opening 21	1500	2440	W	Bedroom 6	No
ALM-002-01 A	Opening 27	1500	750	W	Night 8	No
ALM-002-01 A	Opening 26	1500	750	E	Night 8	No
ALM-006-01 A	Opening 22	1500	3674	N	Day 9	No
ALM-002-01 A	Opening 25	1500	2440	S	Day 12	No
ALM-002-01 A	Opening 24	1500	2440	S	Bedroom 13	No
ALM-006-01 A	Opening 23	1500	2440	N	Bedroom 14	No

Roof windows and skylight type and performance value

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

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

Type	Insulation	Wall wrap
1 : FR5 - Brick Veneer	Glass fibre batt: R2.5 (R2.5)	No
2 : SD - Party Wall - SmartRate		No
3 : FR5 - 100mm Expanded Polystyrene Clad	Glass fibre batt: R2.5 (R2.5)	No

External wall schedule

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: VJSTCCMC6Y

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1



Building Features

Wall type	Area (m ²)	Orientation	Zone name	Fixed shade	Eaves
1 : FR5 - Brick Veneer	8.9	W	Kitchen/Living 1	No	No
1 : FR5 - Brick Veneer	3.2	S	Kitchen/Living 1	Yes	No
1 : FR5 - Brick Veneer	5.3	W	Kitchen/Living 1	Yes	No
1 : FR5 - Brick Veneer	9	E	Kitchen/Living 1	No	No
1 : FR5 - Brick Veneer	4.9	N	Kitchen/Living 1	Yes	No
1 : FR5 - Brick Veneer	9.8	E	Kitchen/Living 1	Yes	Yes
2 : SD - Party Wall - SmartRate	25	N	Kitchen/Living 1	No	No
1 : FR5 - Brick Veneer	9	W	Garage 2	Yes	No
1 : FR5 - Brick Veneer	14.4	S	Garage 2	No	No
1 : FR5 - Brick Veneer	1.8	N	Garage 2	Yes	No
1 : FR5 - Brick Veneer	4	S	Day 3	No	No
1 : FR5 - Brick Veneer	2.9	S	Day 4	No	No
1 : FR5 - Brick Veneer	6.5	S	Unconditioned 5	No	No
1 : FR5 - Brick Veneer	4.6	E	Unconditioned 5	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	8.8	W	Bedroom 6	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	3.3	S	Bedroom 6	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	8.3	N	Bedroom 6	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	5.1	W	Night 7	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	4.4	W	Night 8	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	7	S	Night 8	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	4.4	E	Night 8	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	1.8	N	Night 8	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	11.1	N	Day 9	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	11.2	S	Day 12	Yes	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	9.8	S	Bedroom 13	Yes	No
3 : FR5 - 100mm Expanded Polystyrene Clad	7	E	Bedroom 13	No	Yes
3 : FR5 - 100mm Expanded Polystyrene Clad	6.9	E	Bedroom 14	No	No
3 : FR5 - 100mm Expanded Polystyrene Clad	9.8	N	Bedroom 14	No	No

Internal wall type

Type	Area (m ²)	Insulation
1 : FR5 - Internal Plasterboard Stud Wall	103.1	
2 : FR5 - Internal Plasterboard Stud Wall	17.2	Glass fibre batt: R2.5 (R2.5)

Nationwide House Energy Rating Scheme* Certificate

Certificate Number: VJSTCCMC6Y

Date of Certificate: 7 Mar 2018

★ Star rating: 6.1



Building Features

Floors

Location	Construction	Area (m ²)	Sub floor ventilation	Added insulation	Covering
Kitchen/Living 1	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	62.5	Enclosed	0.0	none
Kitchen/Living 1	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	10.1	Enclosed	0.0	none
Garage 2	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	5.7	Enclosed	0.0	none
Garage 2	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	16.4	Enclosed	0.0	none
Day 3	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	3.2	Enclosed	0.0	none
Day 4	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	2.3	Enclosed	0.0	none
Unconditioned 5	Waffle Pod : 375-85: 375mm waffle pod, 85mm concrete (R0.9)	5.1	Enclosed	0.0	none
Bedroom 6	Timber	12.8	Enclosed	0.0	none
Night 7	Timber	4.7	Enclosed	0.0	none
Night 8	Timber	5.4	Enclosed	0.0	none
Day 9	Timber	13.5	Enclosed	0.0	none
Day 10	Timber	4.7	Enclosed	0.0	none
Day 11	Timber	1.6	Enclosed	0.0	none
Day 12	Timber	6.6	Enclosed	0.0	none
Bedroom 13	Timber	11.9	Enclosed	0.0	none
Bedroom 14	Timber	11.8	Enclosed	0.0	none

Ceiling type

Location	Material	Added insulation	Roof space above
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	0.0	No
Kitchen/Living 1	Plasterboard	5.0	No

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Building Features

Garage 2	Plasterboard	0.0	No
Garage 2	Plasterboard	5.0	No
Day 3	Plasterboard	5.0	No
Day 4	Plasterboard	5.0	No
Unconditioned 5	Plasterboard	5.0	No
Bedroom 6	Plasterboard	5.0	Yes
Night 7	Plasterboard	5.0	Yes
Night 8	Plasterboard	5.0	Yes
Day 9	Plasterboard	5.0	Yes
Day 10	Plasterboard	5.0	Yes
Day 11	Plasterboard	5.0	Yes
Day 12	Plasterboard	5.0	Yes
Bedroom 13	Plasterboard	5.0	Yes
Bedroom 14	Plasterboard	5.0	Yes

Ceiling penetrations

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

Location	Number	Diameter (mm)
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Roof type

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

Nationwide House Energy Rating Scheme* Certificate

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Additional information

Explanatory notes

About this report

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

General Information

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

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

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

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

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

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

Accredited Assessors

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

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

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

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

Disclaimer

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

Contact

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

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